Addendum

Additional Submissions for the Record
and
Additions to the Record

for

Joint hearing entitled, “Impacts of the Proposed ‘Waters of the United States’ Rule on State and Local Governments” held February 4, 2015, before the House Committee on Transportation and Infrastructure and Senate Committee on Environment and Public Works

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L.A. Times: Congress shouldn't muddy the waters on the EPA's Clean Water Act rule

By THE TIMES EDITORIAL BOARD*contact the reporter*

The Clean Water Act, which has been on the books since 1972,, has slowed the degradation of the nation's lakes, rivers and streams by blocking polluters from using waterways as sewers. Careful oversight by the Environmental Protection Agency has brought many damaged rivers back to health, restoring them as safe drinking water sources and wildlife habitats and allowing them to continue bringing fresh water to environmentally sensitive wetlands.

A pair of U.S. Supreme Court rulings over the last 15 years found some EPA interpretations of the act overly broad, but the court failed to offer clear guidance on what was permissible and left it to the agency to craft rules governing just which waters the act covers. After considering scientific studies demonstrating the interconnection of waterways, and after a long and painstaking rule-making process, the agency proposed a sensible rule and put it out for public comment in March. The comment period remains open through the middle of October.

The proposed rule is especially important in California and elsewhere in the West, where more than half of the rivers and streams are seasonal — swelling with rain in winter and carrying their water to marshes, lakes or the sea, but going dry in the summer. Such streams are the places in which salmon and steelhead spawn, and are often the sources of clean water used for drinking andagriculture. The agency is seeking to make it clear that these waterways are covered by the Clean Water Act and may not be polluted, dug up or filled in.

Now some members of Congress are carrying the dirty water of would-be polluters by attacking the agency's very public, transparent and evenhanded process. Their tool is a late amendment to spending bills that would prevent another agency — the Army Corps of Engineers — from recognizing or enforcing any change in federal jurisdiction over water pollution. The Army Corps helped the EPA craft the rule and issues permits for projects that comply with pollution laws.

Congress should butt out and let the rule-making process take its course, both because the rule as proposed would restore some (although by no means all) of the protections that seasonal and other intermittent waterways had for years, and also because a spending bill is a sneaky way to derail months of careful work, not just by environmental administrators but by members of the public who have been helping to bring clarity and predictability to the law. Sen. Dianne Feinstein (D-Calif.) deserves credit for keeping the amendment out of her subcommittee. Let's hope she can help keep the bill clean as it moves through the Appropriations Committee later this week.

Pittsburgh Post-Gazette:Logic runs through it: An EPA rule will clarify its authority on water

April 8, 2014 12:00 AM

The interconnection of the natural world has long been part of human wisdom. “All the rivers run into the sea,” notes Ecclesiastes, and they do this even if they are streams that do not flow all year. As long as water flows downhill, pollution in one place can be carried to another.

So it makes sense that the Environmental Protection Agency has long sought to recognize this reality. But Supreme Court rulings in 2001 and 2006 have confused the understanding of which waterways can be subject to EPA rules. On March 25 it issued a proposal to clarify that intermittent streams near bigger ones will be covered.

Although the 1972 Clean Water Act gave the EPA power to regulate pollution in “navigable waters,” Congress defined those broadly as “the waters of the United States, including the territorial seas.” In 1985, the Supreme Court held that a wetland next to a body of navigable water was subject to the EPA.

But in 2006 Associate Justice Antonin Scalia said that the EPA’s power did not extend to saturated fields miles from a bigger body of water. Out of the confusion of this case and another earlier comes the proposal of the new clarifying rule.

Specifically, the proposal states the most seasonal and rain-dependent streams are protected, as are wetlands near rivers and streams. Other types of waters that may have more uncertain connections to downstream water will be evaluated in a case-by-case analysis. In sum, thousands of miles of headwaters, streams and wetlands will return to EPA oversight.

The EPA says it worked with stakeholders who have sought clarity, but the rule is being opposed by more than a dozen GOP senators, led by Pennsylvania's Pat Toomey, with the support of some farmers. He denounced the EPA's action as a "terrifying power grab," saying the "new position seems to be that a puddle from your garden hose will ultimately end up in a navigable waterway."

No, that is just over-the-top rhetoric speaking. With science on its side, the EPA isn't interested in regulating puddles or ditches. It is not seeking to shield any new waters not historically covered under the Clean Water Act. It just wants to get on with the job of protecting the environment, which has benefited Americans hugely over the years.

Fox News Latino: Opinion: Protecting Clean Water For Our Families, Communities And Businesses

By *Ruben Guerra*
Published May 05, 2014
Fox News Latino

When I was 10, my father would take us kids to Bakersfield every day in the summertime to pick fruits and vegetables. We'd then sell those watermelons and oranges in East L.A. That experience was the start of my entrepreneurialism, and it sparked my concern for our environment. I believe it is important that our government protect clean water, which is essential for our families, communities, and businesses.

In Los Angeles County, approximately one-third of our drinking water comes from the San Gabriel Mountains, which is a key reason why there is strong congressional and community support to permanently protect the San Gabriel Mountains and watershed.

Throughout the state of California, we have a tragic history of inequity when it comes to clean water. For many Latino communities especially, industrial pollution and water contamination is pervasive. Ensuring all people can access safe drinking water is an American value and the driving force behind the community-led "Human Right to Water" law in California, which said, "Every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes."

A new rule from the Obama Administration continues these efforts to protect our clean water.Called "Waters of the US" the proposed new rule from the Environmental Protection Agency was announced March 25 after years of study and consultation. If enacted, the rule would protect the streams that flow into our rivers, farms, and drinking water supplies from toxic pollution. It clarifies that these headwaters streams and wetlands are again entitled to protection under the Clean Water Act.

For years, uncertainty about which bodies of water are protected by law created loopholes that put our clean water supplies at risk. Several confusing Supreme Court rulings meant no protection from pollution for the headwaters streams and wetlands that provide drinking water for 1 in 3 Americans.

The “Waters of the US” rule clears up that confusion by safeguarding the sources of our water supplies and ensures every community and every American is again entitled to clean water.

Latino farmers and farmworkers depend on clean water and sustainable farming practices to produce healthy food. Clean water is critical for businesses that manufacture goods, and those that simply provide clean water for their employees’ morning coffee. It is perhaps most important to have clean water for our families, and the riverside parks and waterways where our children play.

For the Latin Business Association and the 800,000 Latino-owned businesses we represent, the rule simply makes sense. Business depends on certainty – whether you are selling watermelons or widgets. This rule provides certainty for businesses that need to know where the reach of the law begins and ends, and that the source of their water supplies will be protected.

The public has been invited to comment on the rule through the end of July. I urge the Obama administration to finalize this rule and protect clean water for us all.

The Hill: Regulations can be good for business: Look at clean water

By Eric Henry

When I testified in front of the House Subcommittee on Water Resources and the Environment on June 11, I offered a somewhat new perspective: a business owner asking for *more* regulations.

But this perspective is actually growing. In fact, my testimony in support of the Environmental Protection Agency's (EPA) "Waters of the U.S." rule reflects a more widespread view among business owners: that regulations can create economic growth opportunities while at the same time protect important assets upon which businesses rely.

For example, companies across a wide spectrum of industries rely on clean water to produce safe, high-quality products. My business, TS Designs, is but one of them. We make T-shirts and need clean water so farmers can deliver the high-quality cotton that goes into our shirts.

Growing up in Burlington, N.C., taught me the importance of water. Burlington used to be a large textile town, with a number of mills being powered by the nearby Haw River. That river became so polluted that I couldn't see how the community would ever be habitable again -- especially when textile production began to move overseas.

Now the communities around the river are experiencing a revival. People are flocking to Alamance County, and a major part of that is a new protection for the Haw River.

That is thanks to the EPA's work under the Clean Water Act.

But over the past few years, the Supreme Court handed down a pair of decisions making the EPA's job harder. With the business community and policymakers asking for more clarity, the EPA had no choice but to come up with new rules to clarify what their power is under the Clean Water Act. Loopholes in the current Clean Water Act had made it possible to dump waste into many small streams and tributaries without fear of prosecution. In many cases, the loophole has rendered the EPA (and its sister agency on clean water issues, the U.S. Army Corps of Engineers) unable to protect communities

You may think that business owners are against this kind of rule. After all, doesn't the business community always speak out against regulations? Like I said, it may seem that way, but it's changing. Many owners understand that their businesses are at risk of disruption if intermittent waterways and adjacent wetlands are disrupted.

Polling from the American Sustainable Business Council (ASBC) found that 92 percent of small business owners supported regulations to protect our air and water from contamination by toxic chemicals. And before you dismiss that as a skewed study, keep this in mind: 47 percent of the respondents were self-identified Republicans.

Of course when you think about it, this shouldn't be too surprising. While many businesses rely on clean water, from food production to manufacturing and tourism, even companies that don't have a direct connection to water, are helped when water is clean. And with every company that continues grow, and create jobs, our economy gets stronger and benefits everyone.

Who benefits when our waters get contaminated? Not small businesses like mine. It would just make it harder for us to operate. And the communities we rely on wouldn't benefit, either. A spill like the one on the Elk River earlier this year can cost communities tens of millions of dollars *a day*. There's no economic upside to that.

But there is an economic upside to regulations like these. According to one estimate from the National Resources Defense Council (NRDC), these rules could offer anywhere between $388 million and $514 million in economic benefits, compared to only $162 million to $278 million in costs. Even in the worst-case scenario, that kind of return is something a business owner would jump at.

That's why I told Congress that businesses need this kind of action from the government. I may have been the only business owner in the room telling them that today, but I'm not the only one who wants it.

Huffington Post: Safeguarding Our Water Supplies

Maite Arce

Posted: 04/17/2014 5:23 pm EDT Updated: 06/17/2014 5:59 am EDT

There is a saying the Southwest: "El agua es vida." Water is life. A proposed new rule from President Obama's Administration would safeguard our water supplies -- benefiting our families, environment and local economies.

The Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers have opened a 90-day comment period on a proposed a rule, "Waters of the U.S.," which protects the nation's rain-dependent streams and wetlands from pollution under the Clean Water Act. These streams are the headwaters of drinking water supplies for 1 in 3 Americans, and provide wildlife habitat and outdoor recreational opportunities for all of us.

Greater protections for our nation's water supplies will help address some of the larger health issues that affect the Hispanic community as a whole. Obviously, clean drinking water is essential for everyone, but Hispanics face disproportionate health hazards largely due to poor environmental health.

Access to clean water is an issue of equity. Latinos are 165 percent more likely to live in U.S. counties with unsafe drinking water, lead and mercury contamination and other threats to human health, according to the American Lung Association.

It's of little surprise then when we see a poll like the 2012 National Latinos and the Environment Survey, which ranks pollution of our air and water resources as a top environmental concern for Latino voters nationwide. Sixty-one percent say it's among the top two environmental issues for them and their families. According to the 2014 Colorado College poll, 75 percent of Western voters agree pollution of rivers, lakes and streams is a serious problem.

Moreover, our streams and river systems are an integral part of our Hispanic heritage and outdoor way of life. An earlier Colorado College poll found more than 9-in-10 Western Latino voters (94 percent) say outdoor recreation such as fishing, picnicking, camping and visiting national parks and monuments are important to them and their families. In addition to enjoying the outdoors, protecting nature -- God's creation -- is our moral responsibility.

Not everyone agrees. Industry groups and some members of Congress claim the proposed "Waters of the U.S." rule will "negatively impact economic growth." Despite this rhetoric, I believe these enhanced protections for our drinking water need not come at the expense of

jobs. In fact, 87 percent of Latinos surveyed by Colorado College believe we can protect land and water while still having a strong economy - we don't have to choose one over the other. Instead, this common-sense proposed rule will strengthen protections for our nation's streams and wetlands, which in turn support tourism and sustainable agriculture. Businesses dependent upon the nation's $646-billion outdoor recreation economy and manufacturers requiring reliable clean water supplies will benefit from this proposal.

As President Obama said in the State of the Union: "My administration will keep working with industry to sustain production and job growth while strengthening protection of our air, our water and our communities."
I urge the President to keep this promise to our families, communities and local economies and strengthen protections for our clean water for future generations.

The Hill: Fiscal conservatives should love wetlands

By David Jenkins and Steve Ellis

The Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers recently announced a proposal to clarify the scope of the Clean Water Act with respect to wetlands and other key watershed features. It has instantly met with howls of opposition by development interests, property rights groups, the American Farm Bureau, and a number of lawmakers.

Leaving aside the specifics in the proposal, lost in this hubbub is any serious consideration of how wetlands are important to our nation's fiscal health and to the wallets of American taxpayers.

Wetlands, because of their unique ability to trap, store, filter and slowly release storm water, preform a number of essential functions. They reduce the frequency and severity of flooding, help maintain water quality, replenish underground aquifers, and protect against drought.

When wetlands are lost to development it inevitably leads to costly infrastructure projects—such as dams, levees, diversion channels, storm sewers, and sewage treatment plant upgrades—designed to perform the same services that the wetlands had performed for free.

Why would any fiscal conservative want to make that swap?

Not only do taxpayers foot the bill for the initial construction of this infrastructure, but they end up on the hook to maintain it in perpetuity.

The American Society of Civil Engineers estimates that over the next two decades it will cost roughly $2 trillion to adequately maintain the nation's existing flood control, wastewater and drinking water infrastructure.

Infrastructure costs are only part of the picture. When wetlands are replaced with roads, parking lots, buildings or even farmland—storm water runs into rivers and streams more quickly, increasing the frequency and severity of flooding.

In many watersheds, flood levels historically witnessed once every 100 years are now occurring much more frequently. With that additional flooding comes increased property loss, more federal disaster assistance, and higher flood insurance costs.

The government-run National Flood Insurance Program (NFIP) provides an interesting case in point. The NFIP was created in 1968 to provide affordable flood insurance to at risk homeowners in exchange for a local commitment to reduce flood risk. Instead, flood risk and property damage claims have continued to rise and the subsidized NFIP - which takes

in roughly $3.5 billion in premium revenue annually - is more than $24 billion in debt to American taxpayers.

Wetlands loss not only contributes to flooding, it also worsens the impacts of drought. Rapid storm water runoff diminishes the ability of rivers, lakes and underground aquifers to maintain adequate water levels, reducing the availability of water during dry periods. This also tends to spawn costly infrastructure projects.

Since our nation's founding more than 50 percent of its wetlands have been lost, and they continue to disappear at a rate of more than 80,000 acres per year. The unsubsidized hydrologic services they once provided have been replaced with a fiscally nightmarish combination of aging infrastructure, government payouts and unsustainable programs.

We're not saying never build anywhere, but projects must take into account the fiscal benefits of wetlands. Fiscal conservatives, those committed to spending tax dollars responsibly and holding down the cost of government, should lead the way in reversing this trend and start making wetlands a key tool for saving taxpayer dollars.

That means resisting the pleas of narrowly focused parochial interests who seek free hand to pave, build or plow over our remaining wetlands, while often looking to the Army Corps of Engineers, Department of Agriculture, or other federal programs to cover the costs. It means crafting responsible policies that will actually prevent further wetlands loss and encourage restoration.

To do otherwise—as past experience shows us—exacts a permanent toll on the nation's fiscal health, and an equally permanent tax burden on the American people.

Washington Post: The Environmental Protection Agency is swimming in murky water

By Editorial Board July 8, 2014

LAWMAKERS, MOSTLY but not only Republicans , are seeking to undermine the twin foundations of Environmental Protection Agency authority: the Clean Air Act and the Clean Water Act . In both cases, Congress should back off.

The agency badly needs clearer rules on which bodies of water it has the power to regulate. This clarification has been needed since a pair of Supreme Court rulings last decade left murky the definition of "waters of the United States," a core Clean Water Act term. Environmental groups complain that this uncertainty has led agency personnel to hold off on enforcing the act in places where it almost certainly has jurisdiction. Everyone can agree that the EPA can regulate the Chesapeake Bay and the large rivers that feed into it. But what about the streams that lead into those rivers? The wetlands and ponds adjacent to them? More isolated headwaters that are hydrologically related? The EPA claims authority over all of these.

Many Republicans condemn that claim as a lawless and virtually limitless power grab — "The Obama EPA is trying every scheme they can think of to take control of all water in the United States," Sen. John Barrasso (R-Wyo.) said — rather than a good-faith effort to lawfully reassert federal control over significant waterways. It's true that the agency's plan would expand the scope of Clean Water Act regulation. But it also would expand the number of exceptions. Besides, the proposal is contingent on an extensive scientific review confirming the ecological need to regulate upstream. The EPA reckons that the benefits of resource preservation and pollution control would offset the added regulatory costs. It's past time for this definitional line to be drawn,

and lawmakers' objections aren't convincing enough to justify forcing the EPA to start over. If lawmakers don't like the call the EPA is making, they should clarify the terminology themselves.

Then again, having an unconvincing case almost certainly won't stop lawmakers from trying to end another EPA initiative — cutting greenhouse-gas emissions. The agency last month announced rules governing emissions from existing power plants, the largest sources of planet-heating carbon dioxide in the country. The plan would slash power sector emissions by 30 percent by 2030, based on 2005 levels. EPA regulation is not the best way to achieve emissions cuts. It is cumbersome and will be subjected to legal attacks. But the United States needs a serious national greenhouse gas policy. Unless the critics endorse a better idea — such as a sizable carbon tax — simply handcuffing the EPA will be counterproductive.

The Hill: Ranchers and farmers for new EPA water rule

By Bill Eikenberry

As a third-generation rancher deeply involved in water resource issues, I feel I must push back against groups like the American Farm Bureau Federation making misleading statements against the new Clean Water Act ruling. Given the importance of clean, reliable water resources for agriculture and rural America, I want to make it clear that these lobbyists do not speak for me or countless other ranchers like me who require secure, clean water resources.

Clean and safe water is about the very last thing we take for granted. We need it for irrigating our crops, feeding our livestock, and for supporting our very way of life. In rural America, every day ranchers, farmers, sportsmen and rural communities count on healthy streams, rivers and wetlands. In fact, when my family moved West from Missouri in the early 1900s in a covered wagon, they chose Wyoming for their homestead based on its water resources.

That's why I and other ranchers and farmers across the U.S. are profoundly disappointed by the news that a DC-based group billing itself as the “voice of agriculture” is disingenuously attacking the clean water ruling. The Farm Bureau does not speak for me. Nor does it speak for a large chunk of ranchers, farmers and rural Americans, who recognize the need for the balanced water policy set forth by EPA’s new rule.

The new clean water rule would bring safer drinking water to rural America, where about a third of our rivers, streams and wetlands are too polluted for drinking, or even swimming and fishing. This poses serious health concerns for millions of Americans. The clean water rule also promises to make life easier on the farm, by way of simpler and more relevant water policies, which have been marred in recent years by Supreme Court politics.

Although the Clean Water Act has been enormously successful in cleaning up half of the polluted waters in America since 1972 (some rivers were so polluted they were spontaneously catching on fire), the Supreme Court recently saw fit to limit the Act to just the bodies of water deemed “navigable.” That meant that the countless tributary, ephemeral and upland streams, lakes, and wetlands that feed directly into downstream bodies of water were no longer protected. To ranchers, farmers and rural communities that count on these bodies of water for drinking, fishing, swimming and irrigation, this ruling was arbitrary, confusing, and nearly impossible to follow.

Without the clarifications offered by EPA and the U.S. Army Corps, vast miles of U.S. waterways critical to the health and livelihoods of rural America have been vulnerable to pollution and contamination.

Based on style and substance, it's obvious that the folks behind the disingenuous, misleading clean water attacks are more practiced at talking with reporters and working the

hallways of Congress than harvesting crops, mending fences or using our waterways. If reporters want to get the real scoop on what the new clean water ruling means for agriculture, they should get out into rural America and talk with the ranchers, farmers and local decision makers there.

I would really like to see Congress and the folks over at the USDA find a way to stand up to attacks against the clean water ruling – instead of allowing a few folks to push legislation that would undermine our clean water supplies. The EPA's announcement last week that it would expand its public comment period another three months should be welcome news to the broader agricultural community. It will allow us to get better organized and come together to demonstrate that fancy, inside-the-beltway lobbying groups don't speak for everyone. Some of us actually like clean water.

Denver Post: Why Colorado's headwaters matter

By David Nickum

There is a bedrock natural law that anglers and most people understand as common sense- all waters are connected. If we trash or pollute a creek upstream, it could affect downstream conditions as well.

That's why the newly proposed rule from the Environmental Protection Agency and Corps of Engineers to restore the coverage of the Clean Water Act is so important to Colorado's quality of life.

For more than 30 years, the Clean Water Act has helped to ensure that America's waters are clean, fishable and healthy. But a few years ago, a pair of Supreme Court rulings left more than 60 percent of America's streams without assured protection under the Clean Water Act. Specifically, the rulings brought into question CWA coverage for many smaller seasonal and headwater streams that may not flow year-round.

Colorado is a headwaters state and we understand that these headwater creeks, while small, are vital to the health of our watersheds, wildlife, and water supply. Their health shapes the condition of everything else downstream. They serve as the lifeblood of Colorado's recreation economy.

In Colorado alone, about 75 percent of rivers and streams-some 76,000 miles of waterways- are seasonal or ephemeral in nature and thus could fall outside the net of CWA protection, putting them at the mercy of filling and dredging operations, oil spills, toxic industrial waste and unregulated development.

For hunters, anglers and other outdoors enthusiasts, supporting the Clean Water Act is a no-brainer. Trout Unlimited is a science-driven organization, and it's clear that healthy headwaters mean healthy fisheries and better fishing and outdoor opportunities.

In the arid West, so many of our watersheds are characterized by these smaller headwater and temporary streams. They might not look like much, but they have immense biological and habitat value, including as critical spawning and rearing habitat for native trout. Even those that are at times dry play a critical role in the larger ecosystem.

Some critics have raised fears that this rule is a federal power grab that would lead to heavy-handed regulation of every agricultural ditch and puddle. Those fears are unfounded. The

move simply restores the original intent and longstanding practice of the CWA, leaving intact exemptions for regular farming activities.

Trout Unlimited works closely with farmers, ranchers and landowners across the West, including here in Colorado, on projects that improve ranch operations and stream habitat. We understand the need to protect our agriculture economy-and that's true, as well, of Colorado's outdoor recreation industry, which generates more than $13 billion in consumer spending each year and directly supports 125,000 Colorado jobs. Our urban water supplies, too, depend on healthy watersheds that are fed by these headwater streams and creeks.

As Colorado and the region struggle with drought and water scarcity, it's never been more evident that all of us depend on clean, healthy sources of water.

Our waters, large and small, are interconnected-and to pretend otherwise is to invite disaster. When we allow polluters to dump toxins or trash upstream waters, we can expect pollution and devastation downstream, in our most prized rivers and streams.

Let's support the Clean Water Act's commonsense protection of our most precious heritage-our home waters.

Tampa Bay Times: Editorial: Victory for clean water

A federal judge brought long-awaited clarity and common sense last week to the state's age-old practice of pumping polluted water into South Florida's Lake Okeechobee. U.S. District Judge Kenneth Karas' finding that the practice violated the Clean Water Act is a victory for public health and Florida's environment, and it should prompt South Florida water managers to quit wasting the tax money spent cleaning up the Everglades basin by continuing to contribute to its pollution.

For decades, the South Florida Water Management District has pumped water from canals along sugar-farming areas near the shoreline into Lake Okeechobee, both to prevent flooding and to boost levels in a lake that serves as a drinking water source for millions in South Florida. While water management district officials say the pumping is rare, environmental groups sued, seeking to force the district to obtain federal permits before pumping fertilizer-laden farm runoff back into the lake.

Friday's ruling from New York's Southern District came in a consolidated case that had grown from a decade of litigation in Florida. In his ruling, Karas held that the U.S. Environmental Protection Agency was required to regulate the practice under the Clean Water Act. The judge said that EPA had no authority to issue a blanket exemption to the permitting process. Though he invited the EPA to narrow the rules for allowable discharges, the judge nonetheless affirmed the public purpose behind the Clean Water Act — and the need for the federal government to enforce it.

The ruling puts the water management district and the EPA on notice that their first obligation is to public health, not to agribusiness. The excessive nutrients wouldn't flow to the lake without the state pumping them there. And recirculating these excessive nutrients hurts the entire basin. The ruling affirms the role the federal government needs to play in ensuring state compliance with the Clean Water Act. And it should crack down on future abuses by clarifying when operators must seek a discharge permit.

The district and the EPA should respond in good faith and not seek to appeal the ruling or delay the impact on procedural grounds. The state has already lost more than a decade on what should be a shared public goal of removing these chemicals from the South Florida watershed.

Officials should instead craft a permitting process that seeks to keep this pollution from public water bodies — a solution more in keeping with the simultaneous and costly effort by the state and federal governments to clean up and restore the Everglades. The environmental community can be a partner. These agencies need to reach beyond the lawyers and chart a course for improving the state's ecosystem and drinking water supply. And it shouldn't take another lost decade.

Detroit News: Michigan needs new clean water rule

Do you hunt or fish in Michigan? Do you swim in Michigan's lakes or rivers? Do you drink Michigan's water?

If you answered yes to one or more of the above questions, then you have a direct personal stake in the outcome of a recently announced proposal from the Environmental Protection Agency (EPA). The EPA wants to restore Clean Water Act protections to nearly two million miles of streams and millions of acres of wetlands, which benefit communities and recreational users in Michigan and across the U.S. That means closing a loophole that has allowed polluters to dump waste into many small water bodies without repercussions. All water flows downstream; pollution dumped into upstream wetlands and streams eventually makes its way into downstream lakes and rivers.

The relevance of this proposal to your life is as close as the faucet in your kitchen. An estimated 1.4 million people in Michigan get drinking water from utilities that rely on the headwater streams and small tributaries that would be protected under the new EPA rules.

If you look across Michigan, the potential impacts are impossible to miss. Residents of Isabella and Gratiot Counties rely on these smaller water bodies for 100 percent of their drinking water; in Macomb and Sanilac Counties, it's 69-78 percent; in Berrien County, 33 percent.

And, of course, these are some of the waters that feed Lakes St. Clair, Superior and Michigan, increasing the impact in the Great Lakes State.

This is no small issue. In the Midwest, at least 46,000 miles of streams would benefit from these restored protections by closing a loophole that gives polluters a pass. In EPA's Region 5, which includes Michigan, the agency was forced to downgrade or not pursue pollution cases in 29 different cases because of the "uncertainty about EPA's jurisdiction over the receiving waters." EPA only went after three Clean Water Act enforcement cases in Region 5 over the same 18 months period. This proposal would improve the agency's ability to do its job, by granting it the authority to keep smaller streams, tributaries and wetlands free of pollution.

Beyond drinking water, Michigan's small streams and wetlands also serve as the lifeblood of outdoor recreation, hunting and fishing. Michigan has more than 1.74 million anglers who spent nearly $2.5 billion on the sport in 2011. Michigan is second only to Florida in terms of tourist fishing destinations. In that same year, almost 350,000 out-of-state anglers spent more than $325 million in Michigan. Six locations in the state are on Bassmaster magazine's recently released national list of the 100 best bass lakes of 2014. All of that economic activity is largely dependent on clean and healthy aquatic habitat.

We can't have healthy lakes and rivers without protecting the small streams and wetlands that feed them. Small and seasonal streams and wetlands filter pollutants, protect against flooding, and serve as habitat for fish and wildlife. The Great Lakes need your help.

The EPA's new proposal is open to public comment through July 21. Often times in these situations, the loudest voices are those motivated by financial gain to oppose changes. That's why people like you and me need to take the time to get involved in the EPA's public comment period by supporting this proposal.

Portland Press Herald: Maine Voices: Clean Water Act protections vital to Maine environment, economy, people

Mainers who care about water quality should contact the EPA during a public comment period.

BY **NICK BENNETT**

AUGUSTA — Do you hunt or fish in Maine? Do you swim in Maine's lakes or rivers? Do you drink Maine's water? Do you own or work for a company that uses water?

If you answered "yes" to one or more of the above questions (and who among us wouldn't?), then you have a direct personal stake in the outcome of proposed clean water rules from the Environmental Protection Agency and the Army Corps of Engineers.

The agencies' proposal would restore Clean Water Act protections to vital streams and wetlands that benefit people and the environment in Maine and across the United States. A public comment period on the rules is now open until Oct. 20.

The relevance of these rules to your life is as close as the faucet in your kitchen. More than 400,000 people in Maine drink water provided by utilities that rely on surface water supplies. Protecting the small tributary streams and wetlands upstream from these water supplies is critical to keeping them clean, and the proposed rules will help do this.

Beyond drinking water, the small streams and wetlands across our state serve as the lifeblood of our outdoor recreation: hunting and fishing. In 2011, people spent nearly $600 million to fish and hunt in Maine. Small streams provide critical habitat for the king of all Maine sport fish: brook trout.

Maine wetlands filter pollutants that would otherwise harm the clean water that brook trout need to survive. They also supply productive habitat for waterfowl and make Maine a great place to duck hunt! Simply put, the clean water rules will be a big plus for both Maine's environment and its economy.

Another big plus of the clean water rules: They will help minimize flooding. Wetlands act as natural water storage ponds; when they are paved over, all of their water has no place to go and is much more likely to threaten Maine towns and homes. Wetlands in Maine and across the continental United States save as much as $30 billion in annual flood damage repair costs.

Clarifying protection for small streams and wetlands, as the new rules will do, is important because of two muddled U.S. Supreme Court decisions in 2001 and 2006. Although the decisions did not require broad reductions in Clean Water Act protections, this has happened in practice across the country. As a result, nearly 2 million miles of streams that don't flow year-round and millions of acres of wetlands do not have full and clear Clean Water Act protection.

Our watersheds are all connected, and water flows downstream. It simply isn't possible to maintain high water quality in our lakes and rivers without protecting the small streams and wetlands that feed into them.

All of this is why you should care about the new clean water rules. Many industries are already starting a huge lobby campaign in Washington to kill the initiative. In fact, the U.S. Senate may soon vote on an industry-backed amendment that would stop the clean water rules from moving forward.

Maine's senators, Susan Collins and Angus King, will have the opportunity to stand up for clean water by voting against this dirty water amendment. If such an amendment passes, clean water in Maine and around the country will suffer.

Mainers who care about clean water should contact the EPA in support of the rules. For information about the rules and how to weigh in, seehttp://www2.epa.gov/uswaters.

The bottom line is that we can't have healthy lakes and rivers without protecting the small streams and wetlands that feed them. Small streams and wetlands filter pollutants, protect against flooding and serve as critical habitat for fish and wildlife.

Whether you're fishing in Moosehead Lake, enjoying a streamside hike, fishing for brookies in a cool, clear stream or just expecting clean water when you turn on your tap, you should thank the Clean Water Act. And you should do one more thing: Support the EPA and the Army Corps as they work to make the Clean Water Act strong for future generations.

Capital Journal: Clean water is critical for SD outdoors

Guest Columnists By Rich Widman and Chris Hesla

June is “Great Outdoors Month” in South Dakota, thanks to a declaration by Governor Dennis Daugaard. Throughout the month, state parks will offer bird walks, outdoor cooking demonstrations, fishing derbies and other activities. And the great outdoors is BIG in South Dakota: Across the U.S., 38 percent of the population participates in wildlife-associated recreation. In South Dakota, the figure is 54 percent of our citizens, according to GF&P statistics.

Yet, in Congress this month, some U.S. Senators are attempting to block an effort by the Environmental Protection Agency (EPA) and the U.S. Corps of Army Engineers, that would protect the “great outdoors” wetlands of our Prairie Pothole region, as well as headwaters of many of nation’s great trout streams and clean water drinking sources. We need to stop that misguided action.

Over the last few years, the U.S. Supreme Court has issued rulings that emphasized the need to clarify language that protects the safety of our drinking water supplies, wetlands and headwaters streams. Knowing they needed to clear things up and provide certainty for farmers, the EPA and Corps of Engineers last month posted the draft “Waters of the US” rule for public comment.

But now – with a bit of political maneuvering – some politicians are attempting to derail this clean water rule that would restore longstanding Clean Water Act protections to some of the nation’s most important waters and wetlands. When final, the rule will maintain exemptions for regular farming activities while reestablishing Clean Water Act protections for the wetlands and streams that provide drinking water for 1 in 3 Americans.

As a bonus for sportsmen and anglers, these same wetlands and streams provide critical habitat in our Prairie Pothole region for ducks, pheasants and fish, thereby helping to sustain the strong hunting and fishing economy of South Dakota. (insert SD economic stat…)

Whether you enjoy clean water for drinking, or wildlife habitat for hunting and fishing I urge you to join me in supporting the proposed Waters of the US rule. And I ask South Dakota U.S. Senators John Thune and Tim Johnson to do so, as well. All policy-makers should.

It’s easy to take South Dakota’s great outdoors for granted, but we must heed cautionary tales from elsewhere in the country. Sadly, more than half of the nation’s streams and rivers remain impaired by pollution and habitat loss. And our nation has been losing wetlands at an alarming rate. The most recent national assessment of wetland trends documented a 140 percent increase in the rate of wetland loss between 2004 and 2009. This was the first documented acceleration of wetland loss since the Clean Water Act was enacted more than 40 years ago.

These are repeated warnings to all of us of the fragility of our Prairie Pothole region, headwaters streams and drinking water supplies. And good reasons to safeguard them. The public comment period for this clean water rule extends through the end of July, allowing sufficient time for sportsmen, small business owners and others who care about keeping drinking water and wildlife habitat free from pollution to share their support.

June is Great Outdoors here in South Dakota, and we should all take a stand now to protect our important natural resources.

Rich Widman, Brookings, is president and Chris Hesla, Pierre, is executive director of the South Dakota Wildlife Federation.

The Daily Review:Water, water everywhere...

The Cuyahoga River no longer catches fire as it flows through Cleveland, which is a testament to the effectiveness of the Clean Water Act of 1972. That infamous event in June 1969 led to passage of the clean-water law, even though it was not nearly as severe as a similar fire in 1952, which might have leveled the city if not for a wind shift.

Unfortunately, the wind shifted in 2001 and 2006 relative to the Clean Water Act, when the Supreme Court created ambiguity as to the Environmental Protection Agency's jurisdiction over about 2 million miles of streams and several million acres of wetlands.

In the ensuing years, as first reported by The New York Times, the EPA has not pursued more than 1,500 pollution cases due to indistinct jurisdiction. In Pennsylvania over six years, the EPA dropped four enforcement cases and downgraded six cases because of what the agency called "uncertainty about EPA's jurisdiction over the receiving waters."

At questions are streams that sometimes are dry, even though many of them flow into public water supplies when running, some remote headwaters and large bodies of standing water - such as the "Prairie Pothole" region of the Great Plains - that do not flow into streams.

The EPA and the Army Corps of Engineers have proposed regulations to partially restore their original jurisdiction under the Clean Water Act, although that jurisdiction would not be as extensive as it was prior to the 2001 Supreme Court decision.

Critics contend that the proposal is a vast expansion of federal regulatory authority but that is not the case. It is a restoration of authority as originally authorized by Congress. It would maintain a host of existing exemptions for agriculture, for example.

Narrow interests such as the mining industry and developers have begun to lobby hard against the changes. But water, which flows across and under the landscape, is the classic broad public interest. Congress should act in that interest by approving the changes.

The Scranton Times-Tribune: Restoring clean water

BY THE EDITORIAL BOARD
Published: June 10, 2014

The Cuyahoga River no longer catches fire as it flows through Cleveland, which is a testament to the effectiveness of the Clean Water Act of 1972. That infamous event in June 1969 led to passage of the clean-water law, even though it was not nearly as severe as a similar fire in 1952, which might have leveled the city if not for a wind shift.

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AZ Central: Clean Water Act is remarkably successful

Steve Pawlowski , Special for The Republic

In a recent guest column, Rep. David Schweikert, R-Ariz., attacked the Environmental Protection Agency and its proposed rulemaking to define "waters of the United States" and to ensure consistent implementation of the Clean Water Act protections in Arizona ("EPA oversteps its authority with sweeping new water rule," Opinions, May 23).

Congressman Schweikert mischaracterizes the EPA rulemaking, the underlying science and the Clean Water Act.

Let's begin with the Clean Water Act itself. In 1972, Congress enacted the Clean Water Act with broad bipartisan support in order to protect the "waters of the United States." The country had huge water pollution problems, and rivers such as the Cuyahoga in Ohio were so polluted that they actually caught on fire. The Clean Water Act has been remarkably successful over the past 40 years at improving water quality and preventing water pollution, including here in Arizona.

The Clean Water Act establishes the basic structure for limiting discharges of pollutants into our waters and provides legal authority for states to establish water-quality standards for lakes, rivers and streams to protect water quality for drinking-water sources, recreationand agricultural irrigation and to maintain and protect water quality for fish and wildlife. The EPA, in partnership with the states, implements Clean Water Act programs to maintain, protect and restore the biological, physical and chemical integrity of the nation's waters, including waters that do not flow year-round or consistently, which describes the vast majority of Arizona's streams.

The Clean Water Act prevents water pollution but also provides critically important funding to implement programs to control erosion and improve watershed health. The examples of how the act has protected Arizona's waters are numerous and varied.

Just one example involves Clean Water Act grant funding for an erosion-control project on the Hackberry Ranch near Safford. Boy Scouts and Americorps employees installed 540 sediment-retention structures on ephemeral stream channels (these are streams that flow only when there is rain) crossing grazing land in the Whitlock Valley watershed, which drains into the Gila River.

The project was implemented to improve conditions on about 300 acres of grazing land. The sediment-retention structures and range-management improvements funded by the grant have reduced soil erosion by an estimated four tons of sediment per acre per year. The success of this Clean Water Act project is being shared with other ranchers in the area. It wouldn't have happened if

the scope of the Clean Water Act did not apply to the small ephemeral streams of the Whitlock Valley watershed.

Simply put, the Clean Water Act is the only law that protects surface-water quality in Arizona. Our state would be in a world of water pollution hurt without it.

PennLive: Support the Clean Water Act in Pennsylvania

By Jeffrey Ripple

Last month, the Army Corps of Engineers and Environmental Protection Agency proposed a rule to clarify which bodies of water are covered under the Clean Water Act.

As an avid trout angler, and the owner of a business that conducts land surveys, land development plans, and permitting plans, I see the importance of the Clean Water Act in my personal professional life.

Central to the proposed rule is the protections offered to intermittent and ephemeral streams, which may flow only part of the year. Despite their seasonal flows, they are incredibly important as spawning habitat and for rearing juvenile fish, such as Pennsylvania's native brook trout. In addition, whether these streams contain fish or not, they are the building blocks for larger downstream rivers. Historically, they were clearly protected by the Clean Water Act for three out of the four decades of its existence, but these protections were lost in a series of Supreme Court decisions.

The history of the Clean Water Act in Pennsylvania is certainly worth noting. In the 1970s, the idea that a river like Little Juanita would be fishable or swimmable was almost impossible to believe. Today it's a renowned trout stream thanks to the Clean Water Act. The same could be said of the Three Rivers outside of Pittsburgh which now regularly hosts a bass fishing tournament. The EPA and Corps' rule is not an "overreach" of the federal government, but a simple restoration to the way the Clean Water Act was implemented as cleaned up these streams. These waters that are important for anglers across the state were protected, they lost those protections, and now, through this proposal, they are regaining them. It's that simple.

My business regularly works with a variety of industries in permitting and development. I am not opposed to natural gas pipelines or hydraulic fracturing, I only wish for it to be done in a way that protects our best fisheries and ecosystems. Deciding which waters are or are not covered by the Clean Water Act not only protects good fish habitat, but offers better clarity to regulated industries.

Anglers such as me understand the challenges faced by industry, but we also intimately know how important it is to protect small streams. We worry that if developers do not

follow the right rules when building infrastructure, they will leave behind a legacy like that of Pennsylvania's numerous abandoned mines, where the state and conservation groups are left to clean up a polluted mess. We're still recovering from the damage done by mines that are decades and even a century old. The Stonycreek River was named the "River of the Year" for Pennsylvania in 2012 despite being completely polluted by acid mine drainage in the early part of the last century. Today because of the Clean Water Act, much of the river supports healthy fish populations and even wild rainbow trout.

At the end of the day, we're not just looking out for our personal hobbies. There are 1.1 million anglers in Pennsylvania, and in 2011 they spent $485 million on equipment and trips. That doesn't count the license money that goes back to conservation, the taxes they pay, or the impact they have when dollars spent at gas stations, motels and outfitters trickle throughout the community. In addition to the economic benefit of hunting and fishing, protecting these waters matters for Pennsylvania's urban areas. The drinking water of more than 8 million people depends on intermittent, ephemeral, and headwater streams.

Whether you're fishing for brook trout in a small headwater stream, bass in the Allegheny, or just enjoy having clean water when you turn on your tap, you should thank the Clean Water Act, and you should support the EPA and Corps of Engineers as they try to make the law as strong for future generations as it has been for ours.

Jeffrey Ripple, environmental committee member, Pennsylvania Trout Unlimited resides and works in Berlin, PA as a professional land surveyor and fly fishing guide. He was born and raised in the Laurel Highlands.

The Montana Standard: Treat waters with care

by Jim Klug

Montana's fishing season is just getting started, and after a heavy winter, our rivers and streams look to be in great shape for the coming summer season.

Already, area guides and outfitters are booking up for the coming months, and area fly shops and retailers are busy selling gear. Thanks to some common-sense guidance from the Environmental Protection Agency and U.S. Department of Agriculture, we'll be assured of catching healthy fish in clean rivers protected from pollution.

Over the last few years, the U.S. Supreme Court has issued a few rulings that make it unclear as to the safety of our drinking water supplies, wetlands and headwaters streams. Knowing they needed to clear things up and provide certainty for farmers, the EPA and USDA last month posted the draft "Waters of the U.S." rule for public comment. When final, the rule will maintain exemptions for regular farming activities while re-establishing Clean Water Act protections for the wetlands and streams that provide drinking water for 1 in 3 Americans downstream.

As a bonus for sportsmen and anglers, these same streams provide critical habitat for trout and other fish, thereby helping to sustain my business and many others throughout Montana.

Founded in 1999, Montana-based Yellow Dog Flyfishing Adventures books and arranges guided fishing trips throughout Montana, Idaho, Alaska, Oregon, Idaho and the world. We support efforts to protect and preserve gamefish and the wild places where fish live because this company and our way of life depend on it. And when it comes to the economics of sportfishing, outfitting and outdoor recreation, we're not the only ones.

Annual retail sales in Montana that are directly related to sportfishing exceed $350 million. Sportfishing also generates more than $36,895,000 in state and local tax revenue and is responsible for more than 5,000 Montanan jobs. Outdoor recreation as a whole generates $5.8 billion in consumer spending in the state of Montana each year and is directly tied to 64,000 Montana jobs.

As a businessman, I see the value of this clean water rule to my bottom line. When you take into account the importance of sportfishing and outdoor recreation to Montana's economy, I am guessing that there are a lot of others that would agree. I support the proposed Waters of the U.S. rule, and urge U.S. Sen. Jon Tester, D-Mont., and Sen. John Walsh, D-Mont., and Rep. Steve Daines, R-Mont., to do so as well. All policy makers should.

It’s easy to take Montana’s pristine waters for granted, but we must heed cautionary tales from elsewhere in the country. Charleston, West Virginia, is still cleaning up after a toxic spill a few months ago that polluted the Elk River and the state capitol’s drinking water. The cost to small businesses, municipalities, wildlife habitat and families is still being tabulated.

Here in Montana, at the urging of Tester and former Sen. Max Baucus, who voiced concerns for our drinking water, the EPA is studying the risk of contamination from the shuttered Columbia Falls Aluminum Co. plant.

According to media reports, the EPA has found that the “Flathead River and Cedar Creek were impacted by cyanide and manganese. Additional testing will be completed to determine the extent of river contamination and whether it has impacted the fish population.”

These are repeated warnings to all of us of the fragility of our headwaters streams and drinking water supplies. And good reasons to safeguard them. The public comment period for this clean water rule extends through the end of July, allowing sufficient time for sportsmen, small business owners and others who care about keeping drinking water and wildlife habitat free from pollution to share their support.

The Hill: Wave of phony charges over new clean water safeguards

By Peter Lehner - **06/17/14 06:31 PM EDT**

Beat me with the truth, the saying goes, don't torture me with lies.

Officials at the Environmental Protection Agency and the U.S. Army Corps of Engineers must be longing for a little slap of truth these days, after being pummeled with misstatements, wild exaggerations and, yes, untruths about their latest proposal to keep our tap water clean and our rivers, lakes and beaches safe for swimming and fishing.

The proposed action is a long overdue clarification of which streams and wetlands are protected by the Clean Water Act.

After considerable scientific study, the EPA came to the unassailable conclusion that because small, intermittent streams and nearby wetlands feed into larger lakes and rivers that people use for drinking water, fishing and recreation, those waters should also be protected from pollution. And the EPA and the Corps produced some common-sense protections to cover those streams and wetlands.

Almost immediately, opponents started making extreme statements about "government overreach," "the biggest government land grab ever," and "an end to farming as you know it," even though the change simply restores protections to waters that long had been covered.

You'd never know from this overheated rhetoric that the proposal would leave fewer waters protected than was the case under President Reagan or that many tributary streams had been protected against pollution by federal law since William McKinley was president in 1899.

Much of this over-the-top criticism has come from oft-cited polluters, like the mining industry. Yet, some of the most strident charges have come from agribusiness interests. One writer declared, "The 370-page rule may as well be written in farmers' blood." The irony is that, thanks to numerous exemptions in the law and the regulations, agriculture is actually the least regulated of any sector. But no doubt some polluters are happy to see the powerful farm lobby, well, carrying water for them.

The comment period for the new proposal will close in October, but some in Congress aren't waiting. They're already offering legislation to block the initiative, riding this flood of misinformation. So let's part the waters of myth and get down to the truth.

• **Claim:** The American Farm Bureau Federation tweets that the proposal "gives the fed gov control over all farming and land use."

• **Truth:** The clean water safeguards explicitly exempt irrigated areas, farm ponds and dozens of other agricultural practices. They also reduce coverage of “ditches,” a favorite Farm Bureau talking point.

• **Claim:** The Farm Bureau says certain permitting exemptions for agriculture apply only to land that has been continually farmed since 1977.

• **Truth:** This is simply wrong. There is no 1977 trigger date for the exemptions, and they are available to anyone engaged in “normal farming,” which allows for crop rotations, fallow fields and other practices that may vary over time.

• **Claim:** The Farm Bureau alleges that under this initiative “nearly every drop of water that falls will be regulated by the federal government.”

• **Truth:** The Clean Water Act clearly applies only to “waters,” not all water. That doesn’t change with these new safeguards. The law doesn’t regulate, and never has, the mere use of water, but instead simply makes it illegal to pollute certain bodies of water without proper safeguards.

• **Claim:** The agencies are evading court rulings and congressional intent.

• **Truth:** The clean water proposal restores protections consistent with two Supreme Court decisions, in 2001 and 2006, that called into question just which waters are covered by the Clean Water Act of 1972 but authorized the agencies to protect waters when the science supports it. For nearly 30 years prior, throughout the Nixon, Reagan and Bush I eras, these small streams and wetlands, which feed into drinking water systems serving 117 million Americans, were protected, as Congress intended.

More examples abound. But clearly the truth wouldn’t frighten anyone, so the opposition isn’t sticking to it. The facts are too prosaic: The agencies relied on a large body of scientific studies to propose a modest, common-sense rule that would restore protections to many waters that existed for nearly three decades.

More facts: Small and seasonal streams and wetlands filter pollutants, protect against flooding, and serve as habitat for fish and wildlife. A single acre of wetland can store 1 million to 1.5 million gallons of flood water. This initiative is backed by conservationists, hunters, fishers, people of faith, business leaders and even the National Farmers Union, a family-farm group, which calls it “ag-friendly.”

Congress should not succumb to the hype. Let the EPA and the Corps do their jobs protecting the safety of America’s waters.

Lehner is executive director of the Natural Resources Defense Council, an international environmental advocacy organization based in New York City.

Citizens Campaign: 117 Million Americans: Your Drinking Water is at Risk

By BRIAN SMITH

More than 40 years ago, Congress made a promise to protect and improve our nation's waters for future generations by passing the Clean Water Act (CWA). However, since 2001, Supreme Court decisions and federal guidance changes have weakened the CWA by limiting federal protections over wetlands and small streams. As a result, many wetlands and small streams are being filled, polluted, or destroyed with no legal consequence. Rollbacks to the CWA have:

- Threatened drinking water supplies of more than 117 million Americans;
- Removed protections for at least 20 million acres of wetlands across the nation;
- Put 59% of all stream miles in the continental United States at risk; and
- Put a multi-billion dollar economy founded on clean water at risk. Anglers alone generated nearly $115 billion in economic activity in 2011, breathing life into rural communities and supporting more than one million jobs.

After more than a decade of advocacy by CCE and our clean water partners throughout the nation, the US Environmental Protection Agency and U.S. Army Corp of Engineers recently proposed a new clean water rule that would restore CWA protections to wetlands and small streams. Finalizing the proposed rule is critical to protecting clean water in New York, Connecticut, and the nation.

While protecting clean water may seem like a no-brainer, powerful special interests are spreading misinformation and working to defeat this commonsense measure. Last week, my CCE colleague Sarah Eckel and I traveled to Washington, D.C., to meet with members of the New York Congressional delegation, and set the record straight on the EPA's clean water rule. We made it clear that New York needs this rule because without it, the following is at risk:

- The drinking water of 11 million New Yorkers;
- 55% of New York's streams;
- 90% of Great Lakes wetlands; and
- A $2.6 billion fishing industry.

The streams and wetlands protected by the proposed rule are critical to the health of our most treasured water bodies such as the Great Lakes, Finger Lakes, Long Island Sound, Delaware River, Susquehanna River, and the Hudson River. Countless small streams and wetlands provide the freshwater that flows into these regional economic engines and emblems of our cherished ways of life. If we do not protect this incredible network of waters, we cannot hope to restore to health these larger lakes, rivers, and bays.

While we brought this message to our elected officials in Washington, it is critical that the public also speak up for clean water. Please take action (it takes less than a minute!) and send a comment in support of the clean water rule!

Capital Press: Clear water, clear rules

By Dennis McLerran

For the Capital Press

Under the proposed Clean Water Act rule, identification and protection of these waters will be more consistent for government and businesses alike.

The U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers recently proposed a draft rule that would make protecting our precious water resources more clear and consistent. It would also make it easier for farmers and businesses to understand if they need permits before filling wetlands or altering streams. This long-awaited rule will be good news for Western waters.

Here's what the rule gets us: Better clarity about what's protected and what isn't. Under our proposed rule, identification and protection of these waters will be more consistent for government and businesses alike.

For example, the proposed rule would keep intact all of the existing Clean Water Act exemptions for agricultural activities that farmers count on. Along with the proposal, we worked with USDA to expand agricultural exemptions, including more than 50 conservation practices that will benefit both land and water resources.

It's a little known fact, but drinking water for about 30 percent of Northwest residents comes from high mountain, "headwater" streams, many of which are dry for part of the year. These waters are critical here in the Northwest, where some 143,000 miles of intermittent and ephemeral streams represent nearly half of all the stream miles in the region. We can't afford to have the protected status of these waters compromised by confusion.

Water is the lifeblood of this region. Whether we're talking about Lake Coeur d'Alene, the Columbia River, the Bristol Bay Watershed or Puget Sound, each of these gems has deep historical, spiritual or economic importance to all of us. That's precisely why this rule is so important for agriculture, there's so much at stake.

Our waters do more than nourish people and sustain fish and wildlife — they are the very backbone of our economy. Northwest farmers and ranchers need clean water to grow the fiber, food and fuel that we all run on. The wetlands and headwater streams this proposed rule would protect are the same that provide cool, clean water for irrigation and stock water during the long summer months. With the hotter and drier effects of climate change already scorching areas of the West, every drop of water becomes critically important.

To get this rule "right," we need everyone to be part of the conversation. We're holding discussions right now across the country and gathering advice to help shape the final rule. We need to hear your voice in order to arrive at a rule that both protects our waters and makes sense. If you'd like to learn more about how the rule really reads and how it will work, don't hesitate to give your local EPA office a call and someone will work with you.

We're proud of the progress we've made to protect water quality and water resources over the last 40 years. This proposed rule will help us get closer to what we're all after: Clean, healthy wetlands and cool headwaters so future generations can enjoy the same places, the same opportunities, we treasure today.

Summit Daily: Writers on the Range: Let's protect all our nation's water

The Environmental Protection Agency recently proposed a new rule to define the term "the waters of the United States" as used in the federal Clean Water Act. If you care about protecting our nation's waters and wetlands, and if you care about government efficiency, then you should support this rule. Here's why.

For largely historical reasons, when Congress passed the Clean Water Act in 1972, it used the phrase "navigable waters" to describe the scope of the law, defining that term to mean "the waters of the United States." One can easily read this definition expansively, and indeed, the congressional report that accompanied the law expressed Congress' desire that the phrase "be given the broadest possible constitutional interpretation."

The agencies primarily responsible for carrying out the Clean Water Act — the EPA and the U.S. Army Corps of Engineers — initially settled on a narrow definition, but after a court rebuffed that approach, they adopted a much broader definition that included even natural ponds used by migratory birds. Clear legal support for this expanded rule is found in the U.S. Constitution's Commerce and Treaty clauses.

The U.S. Supreme Court has entertained questions about the scope of the Clean Water Act on three separate occasions. The first was in 1985, when a unanimous Court embraced a broad reading of the law.

Sixteen years later, however, the makeup of the Court had changed, and in a narrow 5-4 decision it held that law did not encompass isolated ponds used by migratory birds. The justices reached this result in the face of evidence that Americans spend more than a billion dollars annually on commercial activities relating to migratory birds. Perhaps the most striking thing about this decision was the majority's insistence on giving controlling weight to the phrase "navigable waters," when Congress had already defined the term as "the waters of the United States." And to meet the Court's "navigable waters" test, the government had to show a significant connection to traditional navigable waters — those deep or wide enough to support trade or travel.

The majority insisted that this narrow reading was necessary because the government's claims raised "significant constitutional questions." Yet the Court never bothered to analyze those questions. Had it done so, it seems unlikely that it would have found a problem. Another five years passed before a badly split Court doubled down on its narrow interpretation of the law. The case involved a rogue developer who had blatantly

disregarded state and federal requests to obtain permits before filling in certain wetlands that were immediately adjacent to tributaries of navigable waterways.

These decisions have fostered considerable doubt about when and where the law applies. This uncertainty encourages agencies already reeling from severe budget cuts to limit claims of jurisdiction to avoid the case-by-case determinations that invite administrative and judicial challenges. The bureaucratic chaos that this creates is not only costly but also harms our waters by allowing polluting activities to take place without government oversight or regulation.

Here's the thing. Polls show that most Americans care deeply about protecting all of our nation's waters, whether or not they connect to navigable bodies of water. Most also believe that people or companies that dump pollutants or otherwise foul our waters should be regulated. Unfortunately, the Supreme Court's unnecessarily crabbed reading of the Clean Water Act stands in the way of such regulation.

An obvious solution is to amend the Clean Water Act to clarify what Congress originally intended. Congress came close to doing that only a few years ago. But the current gridlock in Washington virtually assures no progress on the legislative front.

The best alternative is to invoke the government's rulemaking powers to minimize the uncertainty and protect as much water as we can. That is what this rulemaking is all about. It is a modest proposal, but one that will end the now-cumbersome case-by-case assessments for all non-navigable tributaries of navigable waterways as well as their adjacent wetlands. This covers the vast majority of our nation's waters. For other waters that fail this test, decisions can still be made on a case-by-case basis.

Chief Justice John Roberts, who sided with the majority in the two most recent cases, has lamented that federal rules might have avoided the current state of affairs. He suggests that rules would provide "guidance meriting deference under our generous standards." If he truly believes this, he could provide the decisive vote to support a more expansive reading of the law.

Let's test this theory by getting behind this proposed rule. Comments are due by Oct. 20, 2014.

Mark Squillace is a contributor to Writers on the Range, a syndicated opinion column service of High Country News (hcn.org). He is a professor of law at the University of Colorado Law School. Contact him at mark.squillace@colorado.edu. For information on EPA's proposed rule defining "waters of the United States," go to http://water.epa.gov/lawsregs/guidance/wetlands/CWAwaters.cfm

New York Times: Joni Ernst Fights for Dirty Water in Iowa

By DAVID FIRESTONE

Joni Ernst, the winner of the Iowa Senate Republican primary on Tuesday, has a briefcase full of the usual shopworn, hard-right policies: no same-sex marriage, no reform of immigration, no federal minimum wage, no Education Department, no progressive tax code. She still clings to the idea of private accounts for Social Security.

But one of her positions, expressed at a recent debate, demonstrates a particularly pernicious and little-known crusade of the modern Republican Party: she opposes the Clean Water Act. She called itone of the most damaging laws for business.

That a Senate nominee could take this position, even more than the others, shows how far Republican candidates have drifted from the party's old moorings. In 1972, the Clean Water Act passed with full bipartisan support, and is widely regarded as one of the most successful environmental acts ever passed. It doubled the number of rivers, streams and lakes suitable for fishing and swimming. It drastically reduced the amount of chemicals in drinking water, and substantially increased the size of protected wetlands. Rivers no longer catch fire.

The law's value is so obvious that it shouldn't even be necessary to defend it. But in Iowa, it remains a divisive issue, and Ms. Ernst's offhand remark was a clear signal to the state's big agricultural interests of which side she is on.

Iowa's waterways are notoriously dirty, the result of runoffs from vast livestock operations and crop fertilizer. The problem has become worse in recent years with a sharp increase in the global demand for pork, leading to enormous hog farms that pack tens of thousands of pigs into small spaces. Last year, the Des Moines water utility had to turn on, for the first time, the world's largest nitrate-removal plant to get the chemical — the result of manure and fertilizer pollution — out of people's taps. (Excessive nitrates can cause cancer and miscarriages, and are linked to "blue baby syndrome," in which infants suffocate.)

"The issue is the quality of the water in the Raccoon and the Des Moines" rivers, Bill Stowe, the waterworks manager, told the Des Moines Register last year. "This trend is absolutely off the scale. It's like having serial tornadoes. You can deal with one, you can deal with two, but you can't deal with them every day."

For years, the state's Department of Natural Resources, which is in the pocket of big agriculture, didn't deal with the runoff problems. And two years ago, the Environmental Protection Agency told the state that it was violating the Clean Water Act and must immediately do a better job. State farm operations and politicians have bridled at the moderate increase in regulation that resulted, and last year House Republicans passed a

bill that would undermine enforcement of the Clean Water Act, giving the states much more power to set their own rules. (Fortunately the bill was never taken up in the Senate.)

Ms. Ernst wants to take the seat of Senator Tom Harkin, who is retiring after compiling a strong liberal and pro-environmental record. For Iowans who worry about what's coming out of their faucets, she has a great deal of explaining to do.

Flyrod + Reel Online: Myth Busting about Clean Water Protection

The National Farmers Union continues to address myths about the common-sense clean water rules while a diverse coalition including sportsmen, small businesses, evangelicals, and agricultural groups are working to spread the word.

Factsheet HERE **Phony Objections to Clean Water Protection Rule: Myths and Facts about Agriculture and the Proposal, Switchboard** – "…I'm going to explain here how agriculture will be affected by a new proposed rule from EPA and the Army Corps of Engineers to protect streams, wetlands, and other water bodies under the Clean Water Act. The short answer -- there's nothing to see here, and the industrial opponents' claims to the contrary are either mistaken or disingenuous…"

Guest opinion: EPA seeks clearer clean water rules, Billings Gazette – "Recently, the Environmental Protection Agency and the U.S. Army Corps of Engineers proposed a rule that will make the protection of water resources more clear and consistent, and easier for businesses that need permits. This long-awaited rule is good news for Montana…The stakes are particularly high in Montana, where more than 300,000 miles of intermittent and ephemeral streams represent about 83 percent of all the stream miles in the state. These high-quality headwaters and streams provide our drinking water, support fisheries and sustain our communities. We can't afford to have the status of these waters compromised by confusion…"

Hunters, fishermen standing up for our NC streams, Raleigh News Observer – "It's spring in North Carolina, and that means many of the state's sportsmen are heading into the woods in search of turkey while anglers are planning their first fishing trips. We count ourselves among them and are eager to head to a small mountain stream to track down native Brook trout. As we prepare for our first trips, however, anglers and hunters in North Carolina and across the country should know the Environmental Protection Agency and Army Corps of Engineers have recently proposed a rule that will restore the protections of the Clean Water Act to some of our most important fish and game habitat. Many of the small headwater streams we're eager to fish may flow only parts of the year, such as the spring and fall, yet they are incredibly important spawning habitat for native brook trout and other species. Even for those who prefer to fish larger rivers, protecting these small headwaters means better water quality downstream for other anglers and even municipal water supplies. Water that starts its cascade in a brook trout stream ends up in the taps of thousands of North Carolinians' homes…"

EPA Wetlands Rule Makes Fiscal Sense, Roll Call – "The Environmental Protection Agency and U.S. Army Corps of Engineers recently announced a proposed rule to clarify the scope of the Clean Water Act as it relates to wetlands and other important watershed features… Before my fellow Republicans start down the path of trying to block this rule, there are a few considerations that, in the interest of prudence and fiscal sanity, they should be mindful of. First of all, this rule does not break new ground. For more than 30 years the Clean Water Act was clearly interpreted by Congress, the courts and the administrations of every president since its enactment, to include all of our nation's important surface waters. Even with that clear understanding by the agencies charged with administering the law, the nation still lost wetlands at a rate of 60,000 acres per year. Since Rapanos, the rate of wetlands loss has averaged more than 80,000 acres per year. Secondly, the notion that this proposed rule infringes on private property rights and represents some kind of "land grab" just doesn't hold water. The Clean Water Act protects people's rights and their property.

Broad Support for Clean Water Protection Rule: Farmers and Small Business Owners, Switchboard – "In March, the EPA and Army Corps of Engineers proposed a new Clean Water Protection Rule, an action that will restore clear protections to many small streams and wetlands that clearly are covered under the Clean Water Act…Despite objections from big polluters and their allies and Congress, public support for the Clean Water Protection Rule is clear and growing. There's a simple reason for that. The proposed rule—officially

known as the Waters of the U.S. Rule-- does not broaden the law's historic coverage, but would be a significant step towards returning the Act to its original purpose—to protect clean water in streams, wetlands, and other bodies for healthy drinking water, a strong economy and recreational benefits for everyone…"

Take a look at EPA's factsheet about Waters of the U.S.

Billings Gazette: Guest opinion: EPA seeks clearer clean water rules

By SHAUN MCGRATH

Montana is famous for its wild rivers. No one understood the importance of Western rivers more than the iconic author, Wallace Stegner — who spent his youth in Montana – when he famously said: “Water is the true wealth in a dry land.”

Recently, the Environmental Protection Agency and the U.S. Army Corps of Engineers proposed a rule that will make the protection of water resources more clear and consistent, and easier for businesses that need permits. This long-awaited rule is good news for Montana.

For four decades, the Clean Water Act has protected our right to safe drinking water and pristine places to hunt, fish, swim, and play. The law doesn’t just apply to large waters like the Missouri, the Yellowstone, or Flathead Lake; it also protects the smaller streams and wetlands that weave together in a vast, interconnected system.

Unfortunately, over the last decade, the Clean Water Act has been bogged down by confusion. Two complex court decisions narrowed legal protections and muddled the understanding of what waters are — or are not — covered under the law. Protections have been especially confusing for those smaller, vital streams and wetlands. That's why this rule is so important. Based on sound science, we're proposing a rule that clarifies which waters are protected — with an eye toward those critical waters upstream.

The stakes are particularly high in Montana, where more than 300,000 miles of intermittent and ephemeral streams represent about 83 percent of all the stream miles in the state.

These high-quality headwaters and streams provide our drinking water, support fisheries and sustain our communities. We can’t afford to have the status of these waters compromised by confusion.

Economy runs on water

They also help sustain a strong economy. Montana’s farmers and ranchers need clean water to produce the fuel, food, and fiber that we rely on. Water is also a vital resource for everything from wood and paper manufacturing to metal processing and beer-making. Rivers, wetlands, and lakes also help make communities, from Miles City to Kalispell to Bozeman, world-class destinations for fishing, hunting, skiing, and a host of other outdoor activities that account for more than $5.8 billion in consumer spending every year and more than 64,000 jobs and $400 million in state and local tax revenue.

Some may think that this rule will broaden the reach of EPA regulations – but that's simply not the case. The proposed rule does not protect any new types of waters, nor does it broaden the historical coverage of the Clean Water Act. In fact, the rule maintains existing exemptions for the agricultural activities that farmers count on. Along with the proposal, we recently worked with the U.S. Department of Agriculture to expand exemptions to include 56 conservation practices that benefit land and water resources.

Speak up on proposal

But to get this rule right, we need everyone to be part of the conversation. We're holding discussions around the country and gathering input to help shape the final rule. The people of Montana have made a lot of progress over the last four decades. Together, we’ve reduced pollution from large industrial sources. We’ve made huge investments in revitalizing watersheds impacted by historic mining activity. Cities and towns have worked hard to clean up riverfronts and to make them focal points for redevelopment.

But we still have a ways to go. We need to do what we can to clear the way for the Clean Water Act to do its job. This rule helps secure the wealth we derive from Montana’s waters — upstream and downstream — so our children's children can enjoy the same treasured places we enjoy today.

Green Biz: Businesses need clean water, too: Why we need the EPA's help

Zach Bernstein

Every time you turn on the tap or sit down at a restaurant, you can count on getting a clean glass of water. It's so common that we tend to not think about it. It's usually only when something goes wrong — like if you lived near the Elk River in West Virginiaearlier this year — that this can change.

Overall, though, that doesn't happen too often in the United States. One reason is because the Environmental Protection Agency has tools such the Clean Water Act to protect the health of our waterways, and the people who rely on them. The EPA also has an administrator, Gina McCarthy, who has shown a willingness to use them while working to balance the concerns of environmentalists and businesses alike.

In recent years, there have been some challenges. The Supreme Court handed down two decisions on the Clean Water Act in 2001 and 2006; since then, enforcing the Act's provisions has become more complex. For businesses, this has been incredibly frustrating, because they don't know what to expect from the government — and if businesses crave one thing, it's certainty.

That's why we're glad the EPA and Army Corps of Engineers put out new draft rules for the Clean Water Act last month. This action finally will give us the confidence we need to know that our access to clean water will be protected.

A lot of industries rely on the consistent availability of clean water. Some, such asagriculture or fishing or tourism, are fairly obvious; others, such as clothing and technology, are not. But this is not something only a handful of businesses worry about. Losing access to clean water as a resource can make the difference between a company thriving and failing.

The benefits go further than that. People who drink dirty water get sick. When workers have to take time off to recover, that makes a company less productive and drives up health care costs for everyone — and those costs already are too high.

Despite what you may have heard, environmental protection and economic growth do go hand in hand. A report from the EPA and Army Corps of Engineers found that restoring protections to tens of millions of acres of waterways could add close to $400 million to the economy. There are so many benefits to this that it should be a no-brainer.

Who profits from polluted water?

Now for the flip side: Which industries benefit from contaminated water? If you're struggling to think of one, that's because no business benefits when our waterways are contaminated. The Elk River spill ended up costing $19 million each business day, andcontinued to affect the community after the chemical dispersed. The companyresponsible for the spill ended up filing for bankruptcy.

So the idea that businesses don't want this doesn't make sense. Many rely on water for their success, and consumers rely on many of the products they sell. What the EPA is doing will save jobs, not kill them.

Of course, we'll still hear the same chorus of voices claiming that the EPA is putting out yet another job-killing regulation. But the business community has as much to gain from this as anyone.

These are not some ill-conceived rules, nor an attempt at a power grab. They don't give the agency any power that isn't already granted by the Clean Water Act. They're based on a thorough review of more than 1,000 pieces of scientific literature. They are, in short, exactly the kind of rules the government should be coming up with.

There's a 90-day comment period once the rules are published in the Federal Register, which could happen as early as this month. When that happens, we can expect a lot of comments telling the EPA to water down the rule (no pun intended) in the name of the business community.

But that would be wrong. What we need is for the business community to step up and make clear that this proposed rule will protect our livelihoods.

You only miss something like water when it's gone. We need the EPA to make sure that doesn't happen.

Live Science: Defining the 'Waters of the United States' (Op-Ed)

Greg Munson, Gunster | April 17, 2014 02:48am ET

The administration of U.S. President Barack Obama is changing a key provision in the Clean Water Act (CWA) rules, with widespread impacts expected around the country. On March 25, the U.S. Environmental Protection Agency (EPA) and the Army Corps of Engineers released a draft rule defining "waters of the United States" under the CWA.

The act applies to all "waters of the United States" so the new rule effectively defines its reach, and the newly released rule appears unlikely to end the controversy triggered by an earlier, leaked version.

The CWA affects many aspects of federal and state regulation , such as industrial discharges to waters, federal endangered species review and mitigation required by the Army Corps' wetlands permits, all of which are subject to third-party legal challenge. Changes to the definition can therefore have far-reaching impacts on agriculture, industry and development. The rule is the most significant CWA development since the Supreme Court weighed in on the same topic in 2006, and appears to be a significant expansion in the nation's primary environmental law related to water.

Defining the terms

The new rule makes some significant additions to the existing rule, including an extensive subset of definitions of words appearing in the original and new definition of "waters of the United States."

In addition to the so-called traditional waters covered by the CWA, such as waters used in commerce and interstate waters, the new rule also adds a new category for "other waters," defined as those that, either alone or with other "similarly situated" waters in the "region," have a "significant nexus" to existing traditional waters. A significant nexus is "significantly affect[ing] the chemical, physical, or biological integrity of a water" in the traditional categories, where such effect is "more than speculative or insubstantial."

This language is based on the Supreme Court's decision in *Rapanos v. United States* from 2006, although *Rapanos* didn't define "similarly situated," which is now defined in the new rule. Specifically, similarly situated waters are waters that "perform similar functions" and are sufficiently close to a traditional water that they can be

"evaluated as a single landscape unit." According to the rule's preamble, a region refers to the watershed of the traditional water. [How Clean Air Act Made Atlanta Rains Rebound]

For the first time, the rule also defines "tributary" and "neighboring waters," terms used to identify waters of the United States in the existing rule. Tributary means a water with a bed, banks and an ordinary high water mark (itself defined) that "contributes flow, directly or through another water" to a traditional water. Canals and ditches are specifically identified as waters of the United States unless excluded elsewhere in the rule. This provision is a significant change in drafting, although not necessarily in substance, from the leaked version which specifically identified stormwater and agricultural ditches as waters of the United States and generated substantial concern for farmers.

Neighboring waters are defined to include waters in the floodplain and riparian areas, which are themselves defined. Waters of the United States must, under *Rapanos*, have a significant nexus with traditional waters. The agencies say that the scientific report accompanying the rule shows that the vast majority of waters in the floodplain or riparian area have a significant nexus with traditional waters and are therefore appropriate for categorical inclusion within the CWA. States with a large amount of flat terrain or coastal marshes, like Florida, can expect this provision to work a significant expansion in the CWA.

Another new feature of the rule is a list of waters that are not considered waters of the United States. According to the agencies, these exclusions existed in the rule, in guidance documents, or in practice, but were never explicitly listed in one location in the rule. These explicit exclusions appear to be a response to concerns generated from the leaked version about the rule's impact on agriculture, although it seems doubtful that the exclusions will, in fact, resolve those concerns.

Stages to implementation

The scientific report accompanying the rule is undergoing review by EPA's Science Advisory Board. The agencies have said they will not finalize the rule until review is complete by the SAB, but it is not clear whether commenters will have the benefit of the SAB review in time to submit their own comments. The rule should be published soon in the Federal Register, and will kick off a 90-day public comment period.

On the whole, the rule appears to be seize every opportunity left open after the *Rapanos* ruling to expand the reach of the CWA.Moving forward without the benefit

of the SAB final review also leaves the impression of a pre-determined agenda. The Agencies would be well served to slow down, heed concerns about their categorical approach, and achieve their stated and worthy goal of increased clarity by seeking the middle ground.

NWF: 7 Reasons to Protect America's Waters

from Wildlife Promise

The Administration has published a proposal to restore Clean Water Act protections to America's most vulnerable streams and wetlands. Unfortunately, this proposal is already coming under attack from the mining industry and others unwilling to take responsibility for polluting and destroying our waters for their personal gain. Here are seven reasons Americans should support the proposed rule to protect our waters.

Headwater streams

Even big rivers start small. Headwater streams are important for fish, amphibians and invertebrates and affect water quality downstream. They supply most of the water in rivers and were protected by the Clean Water Act for decades. Unfortunately two convoluted Supreme Court decisions, actions of the previous administration and inaction

Intermittent streams

An intermittent stream is a stream that occasionally runs dry. In the Western half of the country, the majority of streams and creeks meet this description. For example, over 80% of streams in New Mexico flow intermittently. But creeks and streams that are no longer clearly protected by the Clean Water Act feed into **drinking water supplies for one-third of all Americans**.

Wetlands

For the past decade, an estimated 20 million acres of wetlands have been left unprotected following the problematic Supreme Court rulings. In the five years immediately following the rulings, the rate of wetlands loss accelerated by 140 percent. The EPA's proposed rule would restore protections for millions of acres of wetlands that will in turn protect Americans from floods, improve water quality, and provide habitat for fish and wildlife.

Way of Life

Millions of jobs and billions of dollars in economic activity are at stake. Roughly half of all Americans participate in outdoor sports and total spending on these activities comes close to $650 billion annually, $200 billion from hunting and angling alone.

Agriculture

The new rule has generous exemptions for all normal farming and ranching activities, including plowing, seeding, harvesting, and the construction of stock ponds and irrigation ditches. A number of farm organizations and farmers and ranchers have spoken out in favor of the rule. Unfortunately the Farm Bureau has repeatedly mischaracterized this proposed rule's impacts on the agricultural community.

Still Needing Protection

The proposal stops short of restoring Clean Water Act protections for many natural wetlands that that are not adjacent to rivers and streams, such as prairie potholes, Carolina bays, and playa lakes. These vital habitats were once protected under the Clean Water Act and, as the science demonstrates, they should be again.

Future Generations

To make sure that America's waters and wildlife populations remain healthy and resilient for future generations, the Environmental Protection Agency and the Army Corps of Engineers need to finalize this proposed rule and clearly define which water bodies are "waters of the United States" and therefore protected by the Clean Water Act.

Clean Water Action: Clean Water? We're in it for the Long Haul

by Jonathan A. Scott, editor, Clean Water Currents

Since 2002, Clean Water Action has doggedly fought an uphill battle to restore Clean Water Act protections for some of America's most important water resources. On March 25, 2014, the Obama Administration announced it was finally taking action to fix the problem.

When was the last time you thought about your water? We've made so much progress since the early 1970s when Clean Water Action first got started, it's easy to see how almost anyone in the U.S. might make the mistake of taking clean water for granted.

Don't do it! *"An awakened local citizenry will always be needed to support the tough stands officials will have to take to get the water clean."* Clean Water Action's founder, David Zwick, wrote these words back in 1972, but they're just as true today.

Nevertheless, it can happen to the best of us. Back in the fall of 2002, when a senior member of our DC-based staff first started reporting rumors that the Bush Administration was going to propose some behind-the-scenes regulatory changes that could gut the Clean Water Act, many on our team were skeptical – at first.

After all, what politician would want to mess with one of the most successful environmental laws ever, the Clean Water Act, and right around the time of the law's 30th anniversary, no less. In addition to betraying the public trust – who out there does not care about clean water? – such a move would surely be political suicide.

Soon enough, however, the rumors became ugly reality, as President Bush's Environmental Protection Agency quietly introduced its proposal to strip Clean Water Act protections from wetlands, lakes, ponds, streams and watersheds around the country.

Why is this such a big deal? It's simple, really. You can't protect all of the waters of the United States, as the Clean Water Act was enacted by Congress to do, if you leave some of the most important water resources unprotected.

If the water you care about – say your drinking water source – is "protected" but everything upstream is left vulnerable to pollution and development, then your water may not really be protected at all.

Weakening the Clean Water Act in this manner creates a horrible precedent. If this is allowed to happen to a law with near-universal appeal that has delivered huge environmental and economic benefits felt by most Americans, what about other environmental and health protections? Which laws would be next on the chopping block?

Clean Water Action and allies mobilized rapidly to sound the alarm. In a few short months more than 30,000 Clean Water Action members and tens of thousands more from other environmental, conservation and sporting organizations had weighed in. The overwhelming message delivered to EPA and the White House: keep the Clean Water Act strong and effective.

By the end of 2003, more than 200,000 citizens had called and written letters. 26 U.S. Senators and 218 Representatives on both sides if the aisle joined together to oppose the rollback. Many of them signed to sponsor a bill that would permanently block the weakening changes, the Clean Water Restoration Act. In late December 2003, four days after a White House meeting with angry sportsmen, the Administration withdrew its proposal.

That was a major win for Clean Water Action and allies. But the battle turned out to be far from over. A polluter-friendly Supreme Court ruling in 2001 and another in 2006 gave cover for the back-door continuation of the policy the Bush White House had publicly backed away from. In withdrawing its formal proposal to weaken Clean Water Act protections, the Administration left in place its less-formal "guidance" leaving the same high-stakes water resources – thousands of miles of creeks, streams, natural ponds, and millions of acres of wetlands – exposed to destructive development and pollution.

As a result, drinking water sources serving more than 117 million Americans remain at risk. Clean Water Action has campaigned relentlessly, steadily building momentum for fixing this problem ever since.

Changes in Congress dimmed the prospects for winning passage of the Clean Water Restoration Act or successor bills to restore the Clean Water Act's historic protections for smaller streams, ponds and wetlands. If such a vote were to be held today, in a U.S. House of Representatives whose leadership has some of the worst anti-environment voting scores ever compiled by the nonpartisan League of Conservation Voters, the outcome would not be a good one. This same body has voted repeatedly to undermine a whole host of water and health protections. Only veto threats from President Obama and a more reasonable U.S. Senate have held them at bay.

Over the past 12 years, hundreds of thousands of Clean Water Action members and others have told EPA and the White House they support – and demand – action to protect our water and our health.

Now the Obama Administration has taken a strong stance, determined to lead on protecting water and health even if polluters and their allies in Congress might prefer to see the Clean Water Act remain in its current, weakened state. Since the damage started with actions taken under a previous Administration, the common-sense corrective actions now proposed by President Obama's EPA and U.S. Army Corps of Engineers can settle the matter definitively.

There's still time to make a difference for clean water and restore the nation's historic commitment to clean water for fishing, swimming and drinking.

How the story turns out is up to us – Clean Water Action members and allies can make the winning difference. We have a few short months to demonstrate the overwhelming support that exists for protecting clean water.

We're in this for the long haul, but the time for action is now. Want to make a difference? Here's how:

Donate Now – We're up against some of the most powerful and well-heeled polluters on the planet.

Take Action Now – Make your voice heard so there's no mistaking where the public stands on this critical clean water issue.

Media Matters: Conservative Media Prefer Fear Mongering To Clean Water

DENISE ROBBINS

Fox News and other conservative media are calling a new proposal to protect waterways "one of the biggest land grabs" ever that will give a government agency "control of all private property." The rule, which could help protect the drinking water of 117 million Americans, would only resolve which bodies of water are protected from pollution under the current jurisdiction of the Clean Water Act.

On March 25, the Environmental Protection Agency (EPA) **announced** a draft **proposal** to clarify which bodies of water are under the protection of the Clean Water Act (CWA), to "increase CWA program predictability and consistency." The new rule, proposed jointly with the Army Corps of Engineers, follows research **showing** that streams, wetlands, and other relatively small bodies of water "are connected to and have important effects on downstream waters," so they necessitate protection from pollution under the Act as it stands today.

Conservative media, claiming that the EPA is overextending its reach, are forecasting drastic consequences that simply aren't true. Examiner.com**accused** the government agency of "veritable land theft" by "expanding government control," and predicted that "it won't be far for the EPA to declare control over any land that gets wet or is rained upon." Breitbart **called** it "one of the biggest land grabs by the federal government ever perpetrated on the American public." And on the March 26 edition of Fox News' *Fox & Friends First*, co-host Heather Childers introduced the rule by saying "It's not your land -- The EPA's latest move that gives them control of all private property." Childers went on to **assert** that the clarification "could be one of the biggest private property grabs in history, according to Republicans. The EPA wants control of all bodies of water, no matter how small, even if they're on private property."

But EPA administrator Gina McCarthy **clarified** in a press call that the proposed regulation will "not expand the Clean Water Act... it does not protect any new types of water that have not historically been covered under the Clean Water Act." Rather, the new rule will clarify that the Clean Water Act covers the streams and wetlands that have the potential to pollute currently protected waterways, bodies of water that have been in "**legal limbo**" for over 10 years. **Two Supreme Court rulings** in 2001 and 2006 failed to provide any real clarity on the subject, and raised questions about the applicability of the CWA that are still **unanswered** (sub req) -- according to many lawyers, the 2006 ruling only **resulted** in "confusion." McCarthy explained about the recent clarification, "this is about streamlining the process and saving money. We're providing certainty about what's in and what's out."

Relatively minor water sources, including the intermittent, ephemeral streams and headwaters included in the EPA's draft proposal, affect the drinking water of about **117 million people**. But without the needed clarity proposed by the EPA, companies that dump pollution into smaller streams which lead into larger waterways -- rather than dumping into the waterway itself -- **are exempt** from the Clean Water Act. As a result, water pollution rates have been increasing.

The EPA proposal came on the same day that the House **passed** a bill that would allow coal mining waste to be dumped into streams, a ruling that was overlooked by Fox News.*

**Based on a search of internal video archives for "coal" on March 25-26.*

Billings Gazette: Guest opinion: Speak up now to keep Montana waters clean

By LAND TAWNEY

If you live in Montana, there's a very good chance you are like me and love being outside to enjoy the beauty our great state has to offer. In fact, according to The Institute for Tourism and Recreation Research, nearly three-fourths of Montana residents vacation within the state, many of whom participate in outdoor recreation activities. We cherish our public lands and clean rivers and streams and research found on www.mt.gov shows that nearly 50 percent of us fish, compared with only 13 percent nationally.

Yet, in Congress this month, some U.S. senators are attempting to block an effort to protect our world-class headwater streams that provide cold clean water for trout and our Prairie Pothole Region that acts as the duck factory for the nation. Not only do our streams and potholes provide outstanding fish and wildlife but they also provide clean water for drinking and agriculture. We need to stop this misguided action.

Over the last few years, the U.S. Supreme Court has issued rulings that emphasized the need to clarify language that protects the safety of our drinking water supplies, wetlands and headwaters streams. Knowing they needed to clear things up and provide certainty for farmers, the Environmental Protection Agency and Corps of Engineers posted the draft "Waters of the U.S." rule for public comment.

But now – with a bit of political maneuvering – some politicians are attempting to derail this clean water rule that would restore longstanding Clean Water Act protections to some of the nation's most important waters and wetlands.

When final, the rule will maintain exemptions for regular farming activities, a vital part of Montana's economy and heritage, while re-establishing Clean Water Act protections for the wetlands and streams that provide drinking water for 1 in 3 Americans. Here in Montana the EPA estimates nearly one quarter of us rely on intermittent streams for drinking water.

As a bonus for hunters and anglers, these same wetlands and streams provide critical habitat for ducks, pheasants and fish, thereby helping to sustain the strong hunting and fishing economy of Montana. Research shows that the total economic impact for fishing, hunting and wildlife viewing in our state is more than $3 billion annually and is responsible for producing nearly 10,000 jobs.

This is about a lot more than grabbing your fishing rod and heading to the stream to fish. It's about the long-term economic viability of our state.

I urge you to join me in supporting the proposed Waters of the U.S. rule. And I ask Montana Sens. Jon Tester and John Walsh and Rep. Steve Daines to do so, as well. All policy-makers should.

Sadly, more than half of the nation's streams and rivers remain impaired by pollution and habitat loss. And our nation has been losing wetlands at an alarming rate. The most recent national assessment of wetland trends documented a 140 percent increase in the rate of wetland loss between 2004 and 2009. This was the first documented acceleration of wetland loss since the Clean Water Act was enacted more than 40 years ago.

These are repeated warnings to all of us of the fragility of our headwaters streams, Prairie Pothole Region and drinking water supplies. And good reasons to safeguard them. The public comment period for this clean water rule extends through Oct. 20, allowing sufficient time for sportsmen, small business owners

and others who care about keeping drinking water and wildlife habitat free from pollution to share their support.

It is critical to the well-being of our state to take a stand now to protect our important natural resources. We call it the “Last Best Place” for a reason, let’s keep it that way!

U.S. News & World Report: Clean Water Is Good for Business

America's small business owners want to see better regulation of water pollution.

By David Brodwin

In 1969, the Cuyahoga River in Ohio caught fire for the 13th time in its sad 100 year history as an industrial dump and sewer. The fire, commemorated in song, spurred the creation of the Environmental Protection Agency in 1970 and the passage of the Clean Water Act soon after.

The EPA has since cleaned up many of America's rivers, lakes and bays. But now a thorny jurisdictional problem has arisen that hampers EPA efforts to stop the remaining pollution. Small business owners appreciate the value of clean water and they want the problem fixed.

Pretty much everyone agrees that the EPA has always had authority to limit pollution of America's "navigable" year-round waterways. But people disagree about the EPA's jurisdiction over other waterways. What about small streams that are not themselves navigable but which drain into navigable waters? What about seasonal rivers? (In the southwest, where most rainfall comes in winter months, many rivers are seasonal.) What about shallow wetlands that drain into navigable rivers?

Recent Supreme Court decisions have thrown into question the fate of waters that are not themselves navigable but which feed the waters we depend on for drinking and agriculture. Major polluters have taken advantage of this legal limbo. In some cases, all they've done is move a pipe a few hundred feet so instead of dumping toxins directly into a navigable river, they dump into a stream that flows directly into the river. Clearly this was not the intent of the Clean Water Act.

Now the EPA is fighting back with a proposed ruling called "Waters of the United States" or "WOTUS." Basically, WOTUS states that bodies of water that feed into navigable rivers and lakes are themselves off-limits to polluters. The EPA considers this ruling to be not an expansion of authority but a clarification. It simply reinstates how the law was applied before the Supreme Court stepped in. Opposing voices claim that the WOTUS rule is in fact a bid by the EPA to greatly expand its power.

The EPA isn't helping its case with some of the wonky language it uses in its "clarification." For example, it says that regulated waters should include "other waters, including wetlands, provided

that those waters alone, or in combination with other similarly situated waters, including wetlands, located in the same region, have a *significant nexus* to a water identified in paragraphs (s)(1) through (3).” It’s easy to understand how opponents can mock this, and how a farmer might be concerned. The EPA’s opponents, for their part, are making matters worse with absurd and untrue claims, saying, for example, that the EPA ruling would regulate the puddles that form in your driveway after a rain.

America’s small business owners want to see better regulation of water pollution. American Sustainable Business Council recently completed a scientific poll of small business owners with two to 99 employees, spanning a wide range of industries across the U.S. 80 percent of small business owners favor federal protection of upstream headwaters and wetlands as proposed in the WOTUS rule.

Moreover, support for clean water was broad and deep regardless of political affiliation. 78 percent of Republicans and 73 percent of independents joined 91 percent of Democrats in calling for federal rules to apply to headland waters and wetlands.

Even though some business owners — particularly farmers — express worries about the details of the wording, there is broad agreement that industries cannot be trusted to self-regulate on questions of water pollution (see chart at right).

Finally, business owners recognize the practical value of clean water. 67 percent voiced concern about the harm that water pollution can inflict on their business. And 71 percent of them agreed that strong clean water protections contribute to a healthy economy and local jobs.

Kit Wood, Owner of Green Plate Catering, a local, in-season, food purveyor based near Washington, D.C. put it more personally: “Like for many in the food industry, clean water is essential to my business. All of our local farmers depend on clean water of course, and we need clean water for our food preparation. I don’t want to use bottled water to boil rice.”

The Denver Post: Clean Water Act is worth bolstering with new rule

By Karn Stiegelmeier

We all want to protect Colorado's iconic mountain streams that provide clean water to drink and clean water to fish, without unnecessary overregulation. A recent proposal from the Environmental Protection Agency and Army Corps strikes that balance. The new rule would restore important protections for waterways and reduce administrative burdens in permitting processes. While admittedly technical, this is an important step forward.

The Clean Water Act is all about restoring and maintaining healthy waterways throughout the United States. But it protects only those waters that meet the definition of "waters of the United States." Two Supreme Court rulings over the last 15 years muddled the distinction between waters that were covered under the Clean Water Act and those that weren't. Those rulings resulted in significant additional red tape, time and expense to the permitting processes.

Specifically, in 2009, Denver-based officials with the EPA reported that it takes their office three times as long to process a permit request after the Supreme Court decisions.

Many in Colorado and around the nation clamored for a remedy for the confusion and delays. The federal agencies issuing the proposed rule are currently accepting comments on how this first draft might be improved. The proposed rule, while not perfect, seeks to bring some clarity back to the process. Local governments and individuals around the state should submit comments on how the rule could be made better.

Many government and agricultural leaders have already opposed the rule-making in its entirety, providing little or no feedback on how the rule might be improved. There has been broad misinterpretation of this rule clarification as burdensome "over-regulation." In fact, the proposal is precisely the opposite.

The proposed rule does not expand federal jurisdiction beyond its historic limits, but instead restores protections for some waters brought into question after the Supreme Court rulings. For example, in 2009 the Corps determined a 12-acre high altitude wetland in Park County was outside of federal jurisdiction because a manmade ditch interrupted the historic connection with the nearby stream. This wetland certainly would have received protection from water pollution before the Supreme Court decisions, and rightfully should under the proposed rule. Without protection under the Act, pristine sites like this wetland may be

dredged, filled, and developed without any federal agency oversight, to the detriment not only of the wetland but also the neighboring stream, communities, and economies.

Second, many ditches have been under Clean Water Act jurisdiction since the 1970's. The Act requires permits for some activities occurring on some ditches because they drain into natural waterways and affect the health of those waters. These ditches should be regulated under the Act, as they have historically, to protect the rivers into which they drain.

In fact, for the first time, the proposed rule would clearly exempt ditches which had been a concern. The rule actually explicitly restricts applicability of the Act to only those ditches that flow into another waterway, exempting ditches that do not flow annually or irrigate only dry lands without returning flows to another waterway.

Finally, the federal agencies also maintain a long list of activities that can receive expedited permits because those activities do not pose a significant threat of water pollution, such as small-scale road maintenance. The proposed rule will not change which activities receive expedited permits.

Healthy waterways benefit the whole state by protecting and enhancing recreational opportunities. For those of us living and working in Summit County, protecting our waters means protecting our clean water and our tourism economy. The proposed rule is a thoughtfully crafted, urgently needed clarification to protect Colorado's waterways.

Karn Stiegelmeier is a Summit County commissioner.

The Reading Eagle: Opinion: Contrary to Pa. Farm Bureau, farmers do support clean water rules

Wednesday July 16, 2014 12:01 AM

Brooks Mountcastle

As someone who grew up spending summers picking tomatoes, bailing hay and milking cows in Chester County, last week's opinion headline about farmers and clean water ("**EPA 'waters' rules will impact farmers**," Berks Country, July 9) caught my eye.

No one has a deeper understanding of the importance of clean water and an ethic of stewardship for our land, water and the rest of the natural world on which we all depend than the farmers that I have met.
So I was surprised to read in Carl T. Shaffer's fictional piece that farmers everywhere are opposing new clean water rules proposed by the U.S. Environmental Protection Agency and the Army Corps of Engineers. Really?
You would think that farmers would be among those most supportive of this modest proposal. This common-sense proposal aims simply to restore long-standing protections for streams and wetlands - protections that had been in place for decades, extending through the Nixon and Reagan administrations and lost only about a decade ago.
The water resources at stake provide drinking water for 1 in 3 Americans, and clean water is as essential for farming and farm communities as it is for everyone else. A closer read suggests that perhaps it is not so much farmers who oppose these clean water rules as it is the Federal Farm Bureau Federation and some of its state counterparts, such as the Pennsylvania Farm Bureau, whom the author represents. Why the Farm Bureau would decide to take the "dirty water" position and advocate on behalf of some of the nation's largest polluters in this debate and against the administration's clean water rules is something of a mystery.

More than 250,000 people from around the country have already weighed in to support the EPA/Army Corps clean water proposal, and I suspect those numbers include more than a few farmers.

There are plenty of good reasons for farmers to support this proposal. For starters, this rule does not change a farmer's ability to plow, cultivate, seed, perform minor drainage and harvest.

A farmer can do any of these activities until the cows come home. That's because this clean water proposal explicitly maintains all current exemptions for farming under the Clean Water Act and goes even farther, codifying additional waters that are to be explicitly exempted from clean water permitting requirements.

When the Farm Bureau and others advocating the "dirty water" side in this debate argue that EPA is proposing to regulate pathways and ditches that are only wet when it rains, or that farmers and landowners will suddenly be restricted from all kinds of activities on their own lands, they're simply myth making. These myths have become so common the EPA has created "Ditch the Myth" at www2.epa.gov/uswaters to separate fact from fiction. We believe science and the facts should guide good policy when it comes to clean water.

The proposed rule is based on more than 1,000 scientific peer-reviewed studies. Those studies found conclusively that the chemical, physical, and biological integrity of downstream waters are inextricably linked to activities upriver. Protecting wetlands and headwaters is the single most important action to protect downstream waters. Today, the public cannot take comfort knowing the Department of Environmental Protection is walking the beat along Pennsylvania's 83,000 miles of rivers and streams, as Shaffer noted, because, under the Corbett administration, they are not.

This clean water rule would fix the Clean Water Act by making it once again clear that these precious water resources deserve our protection.

Farmers will not be the only ones to see the benefits from the proposal to protect clean water. All Pennsylvanians who rely on rivers and streams for their drinking water are impacted by the proposal because it restores protections to 10,720 miles of streams in Pennsylvania that 63 percent of our residents depend on for drinking water. Recognizing the importance of protecting these streams, Philadelphia and Pittsburgh have passed resolutions in support of the Clean Water rule.

The benefits of the rule, such as ecosystem services provided by waters and wetlands that would be protected, far surpass the costs.

Putting aside the benefits that wetlands provide for flood control, filtering pollution and recharging groundwater supplies, the Clean Water rule will also be a boon to Pennsylvania's outdoor recreation economy. The U.S. Fish and Wildlife Service reports that Pennsylvania residents and nonresidents spent $2.8 billion on wildlife recreation, including $485 million on fishing, in 2011. More than 4.6 million Pennsylvanians participated in wildlife recreation activities in 2011.

It's OK for the Pennsylvania Farm Bureau to "make hay while the sun shines" and try to muddy the waters, but it should not keep its members and your readers in the dark about the benefits of EPA's Clean Water rule.
Clean Water Action encourages readers to learn more about the proposed clean water rule at **www.cleanwater.org/protect-clean-water**, or **www2.epa.gov/uswaters** to view the proposed rule

Great Falls Tribune: EPA’s wetland rules make sense

FAL

As the folks in Ohio found out recently, clean water matters. Even though Montana is one of the most rural states in the country, our population is always growing. This means more land needs to be developed for homes, businesses, schools and roads.

Development is inevitable, but Montana’s clean water supplies for drinking and farming/ranching as well as our prized hunting and fishing opportunities are at risk unless we take smart precautions now to protect our headwater streams and vanishing wetlands.

In addition to our drinking water, wetlands provide valuable fish and wildlife habitat. They help control floods and erosion. They protect drinking water supplies. Wetlands are particularly important in eastern Montana, where they provide a crucial stopping point for waterfowl and a much-needed oasis for elk, deer, upland birds and pronghorn on the arid prairies.

Wetlands have an economic benefit. Habitat for waterfowl and other wildlife means revenue from hunting, fishing and other outdoor recreation. Hunting and fishing generate about $1.4 billion a year for Montana’s economy, supporting 16,000 jobs statewide. This economic activity in turn produces about $210 million in tax revenues. Many towns depend on the economic influx during hunting season to fuel their economies all year long.

In recent years, the loss of wetlands in Montana has been exacerbated by misguided Supreme Court rulings about which waters are protected by the Clean Water Act. As a result, there has been a great deal of confusion about which rules apply.

To clarify which streams and wetlands are protected under the Clean Water Act, the Environmental Protection Agency has proposed a draft rule called “Waters of the U.S.” which would reinstate protections and clarify definitions for wetlands and other waters under the Clean Water Act.

All land-use activities currently exempted under the Clean Water Act remain so under the proposed rule, including numerous everyday agricultural activities. The rule is simply a concerted effort to more clearly define which waters and activities *are not*regulated by the Clean Water Act. In fact, the proposal clarifies these exemptions better than any time in the law’s 40-year history. This will provide legal certainty to developers, landowners, farmers and ranchers, and others frustrated by ambiguity of the law of late.

This is how government should work: through clear rules that protect the environment while providing certainty to developers. Unfortunately, despite the common-sense value of this proposed rule, some people are already throwing around a lot of baseless criticism.

This isn't surprising, given the level of heated political rhetoric these days. Outrageous claims about the rule are aimed more at inflaming public opinion against the EPA and the Obama administration than really improving the proposal.

Anyone who has a concern about the clean water rule should engage in the process to make it better. Taking potshots to score political points doesn't help anyone, and it belittles the importance of wetlands and wildlife to Montana's economy.

Montana's streams and wetlands should be protected for the benefit of everyone who depends on clean water.

This includes hunters, anglers, farmers, ranchers, Main Street Montana businesses and anyone who wants to be able to pour a glass of clean water for our kids to drink.

If you agree, now is the time for you to contact your member of Congress and the EPA and tell them so.

Public comment on the clean water rule is being accepted at **epa.gov/uswaters.**

Sun Sentinel: Don't reduce protection for endangered waters

August 29, 2014|By Sun Sentinel Editorial Board

Florida's leaders would be poorly cast in a Hollywood blockbuster called "Guardians of the Waterways."

Many of the state's rivers and springs have been in a steady decline for years from pollution and excessive groundwater pumping. Yet lawmakers failed again this year to pass legislation to protect and conserve water, even though there was a bipartisan plan to do both.

Now one of Florida's members of Congress, with the support of the state's agriculture commissioner, is pushing a bill that would curtail federal authority to protect state waterways — presumably because Florida has been doing such a swell job.

"Florida can better regulate its waters than bureaucrats in D.C.," said Panama City Republican Steve Southerland, sponsor of the grandiosely titled Waters of the United States Regulatory Overreach Protection Act.

The bill would block a proposed Environmental Protection Agency rule intended to bring much-needed clarity to which streams and wetlands are subject to protection under the federal Clean Water Act. Instead, the bill would let states decide which waterways should be protected.

But Florida hasn't earned the right to be trusted with more control. Even with springs and rivers in decline, Gov. Rick Scott and lawmakers have weakened water protections. They've slashed funding for the regional districts charged with protecting and conserving water.

Wetlands are a vital link in Florida's water supply. They store and filter water, and replenish aquifers, streams, rivers and lakes. They provide flood protection and habitat for wildlife. They are critical to the life cycles of many fish and birds.

Federal authority to protect wetlands has been in question since a pair of U.S. Supreme Court decisions in 2001 and 2006. Members of Congress and groups representing farmers and other affected industries asked the EPA for clarification.

Seeking to rally public opposition to the EPA rule, Southerland, Agriculture Commissioner Adam Putnam and other critics have mischaracterized the measure as a federal power grab. In fact, the rule wouldn't expand federal protection beyond waterways historically covered under the Clean Water Act.

Nevertheless, the agricultural industry, including Big Sugar, and other business groups have lined up behind Southerland's bill. Reducing federal water protections would reduce their costs — but at what cost to the environment and the public?

Southerland and Putnam are among the Republican officeholders in Florida whose credibility on water issues has been compromised since reports this month of their taking secret hunting trips to Texas organized and at least partially bankrolled by U.S. Sugar. The sugar industry regularly leads the fight in Tallahassee against state water regulations.

Congress needs to reject Southerland's bill. Leaders from Florida, of all states, shouldn't stand in the way of a federal effort to reinforce protection for water.

Times Leader: Support EPA's clean water rule for sake of Pennsylvania's businesses

William Barton and Jamie Gauthier

It doesn't matter what industry you're talking about, businesses rely on clean water to produce safe, high-quality products.

In 2001, the Philadelphia Brewing Co. acquired a 38,000-square-foot brewery facility on the city's Frankford Avenue, filling a space that had long been vacant and bringing new life to a changing commercial corridor. Today, the wildly successful brewing company employs 30 and pays family-sustaining wages. It is also part of Pennsylvania's fast-growing craft beer industry, which contributes more than 20,000 jobs and $2 billion annually in revenue to the state's economy.

This industry, like so many others, depends on clean water. Water powers many of the businesses that underpin our economy, and it is essential that the water is of good quality. However, streams and waterways that service businesses and residents are at risk for pollution and destruction.

We need to protect this vital resource. There is an opportunity to do that now through support of the Environmental Protection Agency's proposed "Waters of the U.S." rule.

Consider just how important water is to our economy. Pennsylvania is a national leader in food production and agribusiness. This industry accounts for $32 billion in shipments, ranking fourth in the nation.

The Keystone State also stands as the seventh largest manufacturing economy in the United States, with 550,000 Pennsylvanians employed in that industry. Fishing activities generate $4.7 billion a year in revenue and support 43,000 Pennsylvania jobs.

There is also a growing sector of our economy made up of businesses working to keep our waters clean. Through Philadelphia's landmark Green City, Clean Waters stormwater management plan, the Philadelphia Water Department will be investing $2 billion over the next 25 years in green stormwater infrastructure, while catalyzing significant private investment in this area as well. Many of the region's engineers, landscapers, landscape architects, contractors and material suppliers are benefiting from Philadelphia's investment in clean water.

And these are only a few examples. All of our state's industries, and the jobs that they support, are reliant on clean water.

That's why the Sustainable Business Network of Greater Philadelphia supports the EPA's proposed rule.

The Clean Water Act was designed to protect our waterways from harmful discharges. But a pair of Supreme Court decisions in 2001 and 2006 threw the law's enforcement ability into legal limbo. The "Waters of the U.S." rule would clarify that most seasonal and rain-dependent streams, as well as wetlands near rivers and streams, are protected waterways.

The EPA's proposal will clarify the agency's jurisdiction, giving businesses the added certainty they've been asking for since the Supreme Court's decisions. And let's be clear: The EPA doesn't get any extra authority from this rule. If it wasn't covered before, it won't be covered once the final rule is complete.

Water pollution is not some far-off problem. In the past year alone, we've seen spills in West Virginia and North Carolina that have devastated local economies. If we don't protect our waterways, our local economy will suffer as well.

And small business understands that. Recent polling from the American Sustainable Business Council found that 80 percent of small business owners supported the proposal, including clear majorities of self-identified Independents and Republicans. Clean water isn't a partisan issue. It's an economic one.

Businesses across the state should join Philadelphia Brewing Co. and hundreds of other members of the Sustainable Business Network in supporting this rule by submitting their comments to the EPA. Let's act now to protect our water and our economy.

Tallahassee Democrat: Let’s keep cleaning up Florida’s water

Manley Fuller and Jan Goldman-Carter My View

Floridians love water, whether it’s fishing, boating, swimming or stretching back to soak in a beautiful sunset over Apalachee Bay.

And one might say that our water loves us back. The recreational fishing industry alone supports 79,200 jobs in our state.

Then there’s tourism, a whopping $70 billion industry and a major driver of our state’s economy. Millions of people head to the Sunshine State to relax on our sparkling beaches, boat on our lakes and admire the wonders of the Everglades.

But all these waters are in jeopardy.

The Florida Department of Environmental Protection reports:

• The growth in urban development over the past decades has caused extensive habitat loss in aquatic areas and has affected the viability of fisheries in many estuarine areas.

• Right now, 28 percent of the state’s rivers and streams, 25 percent of the state’s lakes and 59 percent of the square miles of estuaries have poor water quality.

• Algal blooms and red tides like one currently threatening the west coast of Florida are increasing in frequency, duration and magnitude and could become an even greater threat in the future.

The message should be loud and clear: We need to do all we can to protect our rivers, lakes and estuaries if we want to keep our economy strong.

The federal Environmental Protection Agency is currently taking comments on a proposal to do just that. The Clean Water Act, which passed with strong bipartisan support in 1972, has helped keep much of the nation’s water clean and unpolluted for 42 years. But two controversial Supreme Court decisions have left it unclear if the law applies to smaller bodies of water, such as headwater streams and smaller wetlands.

Why should Floridians care about these small streams and wetlands? All our waters are interconnected. Headwater streams are where our rivers begin. Small streams and wetlands can trap sediments, nutrients and pollutants — keeping our downstream waters clean and safe for drinking and recreation. The health and productivity of the Apalachicola River, the bay and the eastern Gulf of Mexico depend upon sufficient flows of clean water coming from the many small

streams and wetlands that feed into the river upstream in Georgia and the Florida Panhandle. When wetlands are filled and streams are channelized and polluted upstream, the entire river system suffers — along with all those who depend on it.

In Bay County, for example, more than 75 percent of the stream miles are currently in this legal limbo and therefore at increased risk of pollution.

Furthermore, one acre of wetland can store up to 1.5 million gallons of flood water. A few more intact wetlands might have helped cities in the Panhandle during the unbelievable rains in May. And while that was an exceptional event, flooding in the Panhandle is not: North Florida's Escambia and Santa Rosa counties have some of the highest flood damage costs in the U.S.

Why then is Congressman Steve Southerland championing a bill to block this protection of our waterways and wetlands? Furthermore, Congressman Southerland's inaccurate claims — alleging that the proposal will regulate sprinkler puddles — smacks of election year fear-mongering.

The EPA proposal itself is fairly clear. It specifically carves out exceptions for normal agriculture uses while bolstering protections for our waters. Read the rule for yourself and make a comment to the EPA at http://www2.epa.gov/uswaters.

As a supporter of reduced government spending, Southerland should be backing the proposal instead of attacking it. Healthy streams and wetlands clean our waters and boost our economy. Without those services, government will spend more money to deal with problems caused by flooding and pollution.

Southerland's constituents benefit daily from clean water and healthy wetlands. The EPA proposal would simply eliminate confusion, reinforce the original intent of the Clean Water Act and protect the waters that benefit Florida's economy. It deserves Floridians support.

Manley Fuller is president of the Florida Wildlife Federation. Jan Goldman-Carter is senior manager, wetlands and water resources, at the National Wildlife Federation.

Huffington Post: Don't Think of a Clean River

Margie Alt

It's mystifying, but the debate over the U.S. Environmental Protection Agency's proposal to restore Clean Water Act protections to 60 percent of the nation's rivers and streams has centered mostly on ditches.

That played out last week in Congress, when the House passed a bill, H.R. 5078, to block EPA's proposed clean water rule.
The rule isn't about ditches. But if it isn't, what is it about, and why are the opponents so worked up over it?

Here's what the polluters don't what you to know: it's all about our rivers.

Americans care about our rivers, from the Hudson to the Mississippi to the Colorado. We fish in them, swim in them, paddle in them. They're where we take our kids to summer camp. They provide us with drinking water.

When our rivers were catching on fire 40 years ago, Congress passed the Clean Water Act with overwhelming support to restore and protect them.

But practically from the get-go, developers, oil companies, factory farms, and other polluters tried to poke holes in the law. They filed lawsuit after lawsuit to press their case, focusing not so much on our beloved rivers, and more on the lesser known wetlands and streams linked to them.

They found their winner with John Rapanos. The Michigan developer, in spite of a cease-and-desist letter from the state's environmental agency, paved over 22 acres of wetlands to build a strip mall, and took his case all the way to the Supreme Court. In 2006, the divided Justices took his side.
Their ruling created a gaping loophole in Clean Water Act that has left 2 million miles of headwaters and streams and 20 million acres of wetlands without guaranteed protection for nearly a decade.

This isn't just a hypothetical. In the past several years, federal officials have let hundreds of polluters off the hook because these smaller waters are in legal limbo. When Chevron dumped thousands of gallons of crude into a creek that ultimately flows into the Brazos River in Texas, the company got off without even a fine. In Connecticut, when citizens sued to protect wetlands that filter the Farmington River a federal court ruled they had no case.

That's why for years, clean water advocates and throngs of others, from mayors and farmers to hunters and anglers, have been advocating closure of this loophole. At last, in March, the EPA proposed a rule to restore protections to the rivers and streams that help provide clean drinking water to 117 million Americans. The proposal has already drawn broad support from hundreds of thousands of citizens, more than 1,000 local elected officials, small businesses and farmers.
Opponents are almost gleefully spreading the misinformation that rule will protect ditches; it won't. What they are really worried about are waters the rule will protect.
It will protect the mountain headwaters that coal-mining companies bury in toxic waste, and the streams over which power companies build dangerous coal ash ponds.

It will protect the wetlands through which the oil and gas industry has run thousands of miles of pipelines in Louisiana, and the wetlands that developers like Rapanos want to drain and fill for strip malls.

It will protect the network of streams that feed into iconic waterways like the embattled Chesapeake Bay, where corporate agribusinesses produce 100 million pounds of chicken manure each year.
It will protect all the waters draining into drinking water sources like Lake Erie, wherepollution-induced algae contaminated drinking water for nearly half a million people in metro Toledo last month.
These are the wetlands, streams, and headwaters that are at stake; and these are the waters upon which the health of our rivers depends. These are the waterways the Clean Water Act protected before the polluters got their way in court.

That's why Big Ag is fighting this rule so hard. That's why the U.S. Chamber of Commerce and the developers are fighting so hard. That's why the oil and gas industry is fighting so hard. And that may be part of why one of the top contributors to Rep. Steve Southerland, the lead sponsor of HR 5078, is none other than Koch Industries.

These next few months are critical for getting these restored protections across the finish line. The House having just had its say, we must now defend our waters againstattacks in the Senate. Meanwhile, Americans will have the chance to make their voices heard during a public comment period until at least mid-October. So this fall, I will join with the oil companies, the developers, and other polluters on at least one message to all of you: don't think of a clean river.

Daily Camera: Clean water proposal helps recreation economy

By Nick Payne

POSTED: 09/21/2014 01:00:00 AM MDT

I was fortunate to move to Colorado a number of years ago — for the fishing. I've put my academic and field training in fisheries, wildlife and conservation biology to use serving as a field representative for the Theodore Roosevelt Conservation Partnership — and as a sportsman navigating Colorado's Gold Medal trout streams.However, these bodies of water are at increased risk because of confusing decisions from the Supreme Court about the jurisdiction of the Clean Water Act.

Fortunately, there is a rule being proposed by the Environmental Protection Agency and Army Corps of Engineers that clears the "muddied" waters and again ensures we have rules in place to protect the waters that supply drinking water to nearly three out of every four Coloradans. The agencies are in the process of taking input from the public right now on how to improve it.

I support the efforts to clarify the Clean Water Act because I've seen first-hand that our headwaters streams and outdoor way of life depend on clean water. For sportsmen, this proposed rule is critical. In addition to reducing flooding, filtering pollution, and recharging underground aquifers, clean, productive wetlands and headwater streams here in Colorado provide essential habitat for fish and wildlife.

A few weeks ago I had the pleasure of fishing one of my favorite Colorado spots, a beautiful mixture of public lands only a few miles downstream from the headwaters of the mighty Colorado River. The river was just coming out of peak runoff and with a well-placed streamer I was able to catch and release two nice, chunky brown trout. Likely third or fourth year, these two fish were healthy and striving because the water on which they rely was also clean and productive. This stretch of the Colorado River is in great shape because it's being managed properly, while other stretches remain vulnerable.

In addition to luring new residents like me, that kind of great fishing fuels our outdoor recreation economy. Hunting and fishing in Colorado is a $1.5 billion industry, contributes $150 million in state and local taxes each year, and employs nearly 19,000 Coloradans. That means this rule also matters to our economy.

The proposed clean water rule comes at a critical time for our outdoor heritage: Nearly 60 percent of stream miles nationwide are at increased risk from pollution — particularly small

streams with the cleanest, coolest water. Moreover, our nation has been losing wetlands at an alarming rate. The most recent national assessment documented a 140 percent increase in the rate of wetland loss between 2004 and 2009 to development, in-filling, pollution and other threats. These areas are crucial for overall watershed health and waterfowl habitat.

Yet instead of working for clean water, some members of Congress are actively trying to scuttle the EPA's and Army Corps' deliberative process. I urge Senators Udall and Bennet to stand up to these misguided efforts — and stand with sportsmen for Colorado jobs, pristine habitat and conserving our outdoor heritage for generations to come.

Brooklyn Daily Eagle: Clean water rules, important for beer and the economy

By Steve Hindy

For the Brooklyn Daily Eagle

As every beer drinker knows, pure water is a key ingredient in beer. It's also key to most businesses, and as illustrated by our local history, failure to protect clean water can hurt many businesses — and the regional economy.

In the early 19th Century, Brooklyn became an important center for brewing because German immigrants were drawn to the crystal clear spring water of the Brooklyn-Queens aquifer. By 1898, there were 45 breweries in Brooklyn.

That was the year Brooklyn became part of New York City. Some lament this as "The Great Mistake." But in fact, Brooklyn had no choice, and water was part of the reason. Back then, Brooklyn was an industrial powerhouse, home to manufacturers of air conditioners, paints, iron and steel products, glass, pharmaceuticals, soda, clothing, oil, kerosene and gas, and just about every product demanded by a growing city.

There was little government regulation of these industries. The Brooklyn-Queens aquifer had become polluted and the industries, including the breweries, needed a source of clean water. (Today, we are paying for that era with the costly clean-ups of many parts of Brooklyn and Queens — the Gowanus Canal and Newtown Creek are examples.)

New York City had tapped into the vast water sources of the Delaware River Basin and the Catskill Mountains — the tremendous watershed that connects Upstate New York, Pennsylvania and the Mid-Atlantic states to the Chesapeake Bay. For all the storied municipal corruption in New York City in the 19th Century, it is amazing that the city leaders had the vision to create the Croton Aqueduct and the remarkable water system that makes the city famous for its water today.

Sadly, this new source of clean water wasn't enough to save New York City breweries, which went the way of the dinosaurs because national brewers in the Midwest were able to make beer cheaper and ship it across the country. The last two New York City breweries, Schaefer and Rheingold, closed in 1976.

But the craft brewing revolution — a return to locally produced beer with a rainbow of flavors and styles — has brought brewing back to New York City. Today there are 23 small brewing companies in the city. All rely on that miraculous, largely invisible New York City water system.

My company celebrated its 25 anniversary in 2013. We will make close to 100,000 barrels of beer in the city this year. We will brew 200,000 barrels in a brewery in Utica, NY. We are considering building a new brewery in Staten Island to support the rapid growth of our exports. Staten Island affords us proximity to the New York-New Jersey port and rail service.

Our forefathers didn't take good care of their water sources. We need to make sure we learn from their mistakes, or else we may not make it another 25 years. We recognize just how important clean water is to our

business, and we're not alone. Recent polling commissioned by the American Sustainable Business Council (ASBC) shows just how unified the small business community is on this.

The highlight of the poll: 71 percent of small business owners say that protecting clean water is necessary to ensure economic growth. Another key finding: Two-thirds were worried that water pollution could impact their businesses in the future.

But a third finding is even more important, because it shows overwhelming support for a proposed rule from the Environmental Protection Agency (EPA) called "Waters of the US." The proposed rule would protect upstream waters that flow after a rain or only during certain seasons. It is a critical clarification to existing rules, but is opposed by some lobby groups who say they represent business interests. The poll found however that 80 percent of small businesses support exactly the same protections as in the proposed rule.

We agree, and that's why we endorse the EPA's efforts.

Clean water is a small business issue. This poll proves that, and our past failures prove why we need the government to protect it.

The Pueblo Chieftain: Rule critical for Colorado

Alfonso Abeyta

As a fifth-generation rancher/farmer, business owner and advocate of Colorado's rural economy, I know first-hand the importance of clean, reliable water to our way of life. That's why I believe the 42nd anniversary of the Clean Water Act in October represents an important milestone for Colorado's water resources.

If water is the lifeblood of agriculture, as is commonly pronounced, clean water would have to be its backbone. After all, it's not just abundant, reliable water resources that we count on for our livelihoods, economy and health. That water must also be clean and safe.

Underscoring how far we've progressed as a state and nation on our water challenges, when the Clean Water Act was passed in 1972 a full two-thirds of our waterways were too toxic for fishing and swimming — let alone drinking.

Some of our rivers, such as the Cuyahoga in Ohio, were so polluted from the chemicals and toxins being thoughtlessly dumped into them that they were literally catching on fire. Obviously no one wants to live near or rely on such waters. As such, the Clean Water Act passed Congress with bipartisan support to tackle these critical challenges.

Thanks to the Clean Water Act, we now have half as many polluted bodies of water as we did in the 1970s. Today most of us are able to drink from the tap and fish or swim the local river or lake without having to think too much about the safety of the water.

But we still have further to go.

Despite the success of the Clean Water Act, we have real water challenges ahead of us. For instance, one-third of American waterways are still too polluted for fishing, swimming or drinking. These toxic waterways are located in all regions of the country, including right here in Colorado.

One key to improving this situation is addressing critical loopholes in our water policies.

For instance, the Supreme Court severely hampered the effectiveness of the Clean Water Act in 2001 and 2006 rulings that limited protections just to waterways deemed "navigable." As a result, countless miles of tributary and seasonal streams, rivers,

wetlands — bodies of water that feed directly into our water supplies — have gone unprotected.

The politically motivated Supreme Court rulings are clearly against the spirit and intent of the Clean Water Act, and our water resources have suffered as a result. Adding insult to injury, as it turns out, such arbitrary water policies that are not based on logic, common sense or real-world realities are darn near impossible for agricultural water users to follow.

The good news is that the Environmental Protection Agency (EPA) has recently targeted this harmful loophole, with its "Waters of the United States" rule. Under this proposal, the Clean Water Act will again account for the tributary, seasonal and adjacent bodies of water that feed directly into our water resources.

The new rule also maintains helpful exemptions for ranchers and farmers irrigating crops. Win-win landowner actions that lead to cleaner water, more sustainable farming practices and increased profits would also be incentivized.

Following the closing of the extended public comment period on the clean water rule on Nov. 14, Colorado's congressional delegation should commit to ensuring that the EPA and the White House finalize the rule without delay.

Agricultural producers, rural communities and diverse water users across America are counting on it.

Alfonso Abeyta is a fifth-generation rancher and farmer born and reared on his family farm on the Conejos River near Antonito. He is the founder of Conejos County Clean Water, an advocacy group.

Indianapolis Star: Pence too hasty in rejecting EPA clean water rules

Erika D. Smith

Of all the things to get mired in a narrow political debate, having clean water shouldn't be one of them. One would think that finding ways to protect the most basic necessity of life on Earth would be something we could all agree on.

Not so much.

Instead, in Indiana, it seems like those in power are finding ways to do the opposite.

Last week, Gov. Mike Pence issued this humdinger of a statement: "Congress did not intend for the Clean Water Act to apply to every instance where a drop of water touches the Earth. There are limits on federal authority, and the EPA and the Army Corps of Engineers have overreached with their proposed Waters of the United States rule."

He was talking about an effort to enact new guidelines for the Clean Water Act that would spell out exactly which bodies of water fall under the U.S. Environmental Protection Agency's jurisdiction.

The EPA swears this is a "clarification," not an "expansion" of its authority.

Pence doesn't believe the EPA. Instead, he sides with an number of critics who worry that farmers will be subject to costly new laws and unnecessary red tape.

The governor does have a point. Few things involving the federal government come without strings. If the new guidelines are enacted, will some Hoosiers have do things they don't want to do to satisfy the EPA? Almost certainly.

But that's not the question we should ask.

The question we should ask is will these refined guidelines — or redefined guidelines, if you're in Pence's camp — push Indiana to have cleaner water? And will the pain of inconvenience be worth the gain of a better quality of life?

The answer to both questions is yes.

Because here's the truth: We need the EPA to demand more from us because we have a problem with clean water in Indiana.

While Pence is busy doing a lot of fear-mongering about the EPA wanting new ways to control every “drop of water” that “touches the Earth,” our waterways are a mess under existing EPA rules.

Every year in Central Indiana, for example, billions of gallons of raw sewage and storm runoff mix and flood our rivers and streams. The problem is finally getting fixed — only after years of nagging by the federal government — but it will take several more years to complete. In addition, thanks to the state’s numerous industrial plants, we have contaminants, such as PCB and mercury, in many of our waterways.

I’d have less of a problem with Pence’s knee-jerk reaction to reject anything federal if we were doing a good job on our own. But we’re not. So forgive me if I don’t have a lot of faith in our state’s desire to police its own pollution without the EPA’s prodding.

Still, an effort to clean up our water has sprung up mostly on its own.

Reconnecting Our Waterways, run by a collection of stakeholders in Central Indiana, is working to restore the White River, Pogue’s Run, Pleasant Run and Fall and Eagle creeks. The goal is to once again make the bodies of water a resource for residents — and the initiative has caught on with surprising popularity, particularly among the younger educated workers so many states are trying to attract.

It would be nice if we could see that type of thinking reflected in Pence’s administration from time to time.

With things such as clean water and clean air, we should talk about more than dollars and cents. It’s not just an economic development question. It’s a quality of life question — and ultimately, it’s also an economic development question because living in a state rife with pollution isn’t attractive either. Take it from me. I grew up in the burning-river town of Cleveland.

Sure, we want jobs. But I think most of us would also like to drink the water coming out of our faucets without fear. There has to be a balance.

SOUTHERN ENVIRONMENTAL LAW CENTER

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November 12, 2014

Via* www.regulations.gov *and email to ow-docket@epa.gov

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Attention: Docket ID No. EPA—HQ—OW—2011—0880

Re: Comments On "Definition of 'Waters of the United States' Under the Clean Water Act, Proposed Rule," 79 Fed. Reg. 22188-22274.

Dear Administrator McCarthy and Assistant Secretary Darcy:

In the proposed rule on the definition of "waters of the United States" under the Clean Water Act (proposed rule) the U.S. Environmental Protection Agency (EPA) and the Army Corps of Engineers (Corps) go far to clarify the extent of geographical jurisdiction of the Clean Water Act. As such, the Southern Environmental Law Center and the following environmental groups—

Alabama Rivers Alliance	Atlanta Audubon Society
One Hundred Miles	Harpeth River Watershed Association
Cahaba River Society	Congaree Riverkeeper
Choctawhatchee Riverkeeper	Wetlands Watch
Hurricane Creekkeeper	Friends of the Rivers of Virginia
Friends of Hurricane Creek	Roanoke River Basin Association
Upstate Forever	Virginia League of Conservation Voters
Georgia River Network	Chattahoochee Riverkeeper
Environment Virginia	Center for a Sustainable Coast
Catawba Riverkeeper Foundation	Satilla Riverkeeper

Savannah Riverkeeper	Flint Riverkeeper
Waccamaw River Keeper	Conservation Voters of South Carolina
South Carolina Wildlife Federation	North Carolina Coastal Federation
Environment Georgia	Friends of Reedy Creek
SC Coastal Conservation League	Save Our Saluda
St. Marys EarthKeeper	Black Warrior Riverkeeper
Alabama Rivers Alliance	Cahaba Riverkeeper
Glynn Environmental Coalition	SOURCE
Tennessee Citizens for Wilderness Planning	Greenlaw
Ogeechee Riverkeeper	Tennessee Riverkeeper
Tennessee Environmental Council	Friends of Little Cahaba
Tennessee Chapter Sierra Club	Coosa Riverkeeper
Charleston Waterkeeper	Wild South
Altamaha Riverkeeper	Mobile Baykeeper
Tennessee Clean Water Network	

—strongly support your efforts to finalize the definition for "waters of the United States." Please accept our comments on the proposed rule, which we set forth below.

Summary of Major Comments

A. The proposed rule is long overdue.

This rulemaking is critical because it is imperative that the wetlands regulatory program be administered and enforced in a clear and definitive manner. The meaning of the words "navigable waters" and "waters of the United States" have been debated since Congress passed the Clean Water Act in 1972. Although the agencies have developed regulatory definitions for these terms in the past, we now have the benefit of a well-developed body of case law, as well a well-developed body of scientific knowledge to shape the definition. It is time that the agencies revise the current 1986 regulatory definition and put in place a definition that takes into account the legal and scientific developments that have transpired over the last three decades. If we are to

have a long-term resolution to the waters of the United States issue, it needs to happen with this rulemaking.

B. The proposed rule is consistent with the law.

Congress intended the regulatory agencies to interpret the term "waters of the United States" broadly. The legislative history of the Act demonstrates that in passing the Act, Congress meant to protect all the nation's waters. And the U.S. Supreme Court has ruled on the scope of these protections; each time the Court has upheld a broad interpretation of the Act. The proposed rule honors these decisions as well as the original intent of Congress.

C. It was appropriate for the regulatory agencies to choose the Kennedy test over the Scalia test.

There is no requirement that the agencies apply both the Kennedy and Scalia tests. The agencies were free to use their discretion to choose the test that would bring the most clarity to the program. Also, it is the Kennedy test that is more firmly grounded in science.

D. The Kennedy test only requires one of the criteria—chemical, physical, or biological—to establish a significant nexus.

Some commenters have suggested that in order for a water to be jurisdictional, it must have a chemical, physical, *and* biological nexus with a downstream traditional navigable water (TNW). Although this is not true and would be inconsistent with the purpose of the Clean Water Act, the agencies must make a better case as to why the correct reading is "or" not "and."

E. Because the significant nexus test is directly linked to traditional navigable waters, the basis of the term "traditional navigable waters" must be further explained.

To be jurisdictional, "other waters" must have a significant nexus to traditional navigable waters. The concept of traditional navigable waters and how these waters are determined is not explained sufficiently in the proposed rule. Case law is the only source for a meaning of this term, yet the cases vary greatly in what constitutes a traditional navigable water. Since the term traditional navigable waters is so critical to applying the significant nexus test, the agencies should provide a complete foundation for that concept both in the preamble to the final rule and in guidance after the rule is finalized.

F. Sufficient scientific studies exist to establish Carolina Bays, Delmarva Bays, and other coastal depressional wetlands as waters of the United States by rule.

The Environmental Protection Agency's Office of Research and Development concluded in its Connectivity Report[1] that it almost had enough scientific evidence to support defining coastal depressional wetlands, such as Carolina Bays and Delmarva bays, as waters of the United States by rule. The attached report reveals that there is a substantial additional body of scientific studies that more than adequately establishes that these depressional wetlands are connected in a significant way to traditional navigable waters. Thus, the final rule should find coastal depressional wetlands are waters of the United States by rule.

G. Sufficient scientific studies exist to establish pocosins as waters of the United States.

The agencies also sought comment on whether other waters such as "pocosins" should be considered waters of the United States by rule. Again, there are numerous studies that go beyond the Connectivity Report that demonstrate that the scientific basis exists for finding such waters jurisdictional by rule.

H. The definition of the term "tributaries" is confusing.

The term "tributaries" should be redefined so that it is clear that for the purposes of this rule wetlands, lakes, and ponds that contribute flow to a tributary system are clearly included in the term and thus do not require case-by-case jurisdictional analysis.

Organization of Comments

In the comment section we begin by describing how the definition proposed for "waters of the United States" is consistent the Congressional intent behind the Act, as well as the judicial decisions that have interpreted the Act. We include a short summary of that history in the comments as well as a more complete summary as Exhibit A. In the remainder of our comments we go through each section of the proposed rule tracking the various proposed regulatory provisions and addressing the various agency requests for comments pertaining to them. In Exhibit B we discuss traditional navigable waters and historic commerce. Exhibit C is a report on

[1] U.S. Environmental Protection Agency, *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence*, 2013. [hereinafter Connectivity Report].

the connectivity of depressional wetlands. And Exhibit D is a report that includes a discussion on the connectivity of pocosins.

Background

1. Congress intended the term waters of the United States to be interpreted broadly.

By passing the Clean Water Act in 1972,[2] Congress made sweeping changes in how water would be regulated in this country. Previously, the states were in charge of keeping pollutants out of our waters. Because so many states were reluctant to impose controls on factories, sewage treatment plants, and other sources of pollutants, this experiment ended poorly. For example, leading up to the passage of the Clean Water Act the Cuyahoga River in Cleveland was so polluted that it caught fire multiple times. And Lake Erie, the fifth largest body of water in this country, had to be put on life support because it was so choked with pollutant-caused algal blooms that fish could not survive in its waters.

In defining the scope of the Act, Congress said that the Act would apply to all "navigable waters," which it defined as the "waters of the United States." Although the Act does not go further to explain these terms, the legislative history clearly does. For example, as the House Committee Report for the Act provides:

> One term the committee was reluctant to define was the term "navigable waters." The reluctance was based on the fear that the interpretation would be read narrowly. However, this is not the committee's intent. The committee fully intends that the term "navigable waters" be given the broadest possible constitutional interpretation unencumbered by agency determinations which have been made or may be made for administrative purposes.[3]

When EPA promulgated its regulations in 1973 to implement the Section 402 of the Act, it defined waters of the United States broadly as the following:

[2] In 1972 the "Clean Water Act" was still labeled the "Federal Water Pollution Control Act Amendments of 1972." It was not until the Act was amended in 1977 that the Act was renamed the Clean Water Act.

[3] *Additional Views of Representative Edgar and Representative Myers, H.R. Rep. No.* 95-139, at 54 (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

> (1) All navigable waters of the United States;
>
> (2) Tributaries of the navigable waters of the United States;
>
> (3) All interstate waters;
>
> (4) Intrastate lakes, rivers and streams which are utilized by interstate travelers for recreation and other purposes;
>
> (5) Intrastate lakes, rivers and streams from which fish or shellfish are taken and sold in interstate commerce;
>
> (6) Intrastate lakes, rivers and streams which are utilized for industrial purposes by industries in interstate commerce.[4]

In this definition, EPA recited almost every connection possible between water and commerce.

The Corps adopted a much more conservative approach and in its regulations stated that Corps jurisdiction under Section 404 of the Act would only extend as far as its Section 10 jurisdiction under the Rivers & Harbors Act of 1899. This narrow interpretation of the CWA was overturned in the courts soon thereafter.[5] Using a phased approach, the Corps regulations soon came in line with the EPA definition of waters of the United States.[6]

When the CWA was amended in 1977, the Section 404 program suffered an incredible amount of scrutiny within both houses of Congress, yet when the dust settled, Congress did not alter its definition for navigable waters, and thus, left intact the EPA and Corps definitions for that term as well. Instead of changing the jurisdictional scope of the Section 404 program, it carved out exemptions for certain activities involved in normal farming, ranching, silviculture, and mining.[7]

[4] 38 Fed. Reg. 13527, 13529 (May 22, 1973).

[5] *Natural Res. Defense Council v. Callaway*, 524 F.2d 79, 83-85 (2d Cir. 1975).

[6] *See also* 40 Fed. Reg. 31319, 31320 (July 25, 1975); 33 C.F.R. § 209.120(d)(2) and (e)(2) (1976).

[7] Pub. L. No. 95-217 (1977); 123 CONG. REC. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)) at 939-40; 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

2. The three U.S. Supreme Court decisions that interpret waters of the United States, also allow for a broad definition of that term.

A. *Riverside Bayview Homes*

When *United States v. Riverside Bayview Homes, Inc.* was decided, many thought that the question about how broadly the CWA protections were to extend was settled for good—the CWA was meant to protect all the waters of the United States. The case involved adjacent wetlands that were far removed from the shores of Lake St. Clair in Michigan, yet the Court determined that these wetlands were waters of the United States.[8] In its unanimous decision, the Court held that the Corps was properly within its administrative discretion when it determined that wetlands adjacent to a "navigable waterway" are jurisdictional even if they are not regularly flooded by overflow from the traditional navigable waters. The Court concluded that "it was a permissible interpretation of the Act" to conclude that the term "waters of the United States" encompasses "all wetlands adjacent to other bodies of water over which the Corps has jurisdiction."[9]

Drawing from the legislative history of the Act, the Court stated that, "Protection of aquatic ecosystems, Congress recognized, demanded broad federal authority to control pollution, for 'water moves in hydrologic cycles and it is essential that discharge of pollutants be controlled at the source.'"[10] Finally, the Court found it instructive that attempts during the 1977 amendments to broaden the definition of waters of the United States failed.[11] The Court unanimously concluded its decision by stating that it "was persuaded that the language, policies, and *history* of the Clean Water Act compel a finding that the Corps has acted reasonably in interpreting the Act to require permits for the discharge of fill material into wetlands adjacent to the 'waters of the United States.'"[12]

B. *Solid Waste Association of Northern Cook County*

The EPA and the Corps interpreted the *Riverside Bayview* decision to give them the authority to regulate all waters across the country where there was a federal hook. The result was

[8] 474 U.S. 121, 106 S.Ct. 455 (1985).

[9] *Id.* at 135.

[10] *Id.* at 132-33 (citing S. Rep. No. 92-414, at 77 (1972), *reprinted in* 1972 U.S.C.C.A.N. 3668, 3742).

[11] *Id.* at 135.

[12] *Id.* at 139 (emphasis added).

language in the 1986 joint EPA and Corps regulations that provided that the protections of the CWA reached any water that would be used for migratory bird habitat.[13]

This so-called migratory bird rule was challenged when the Solid Waste Agency of Northern Cook County (SWANCC) decided that it wanted to construct a solid waste landfill in an abandoned gravel mine outside of Chicago. The Corps initially declined to assert jurisdiction over the SWANCC site, but when the Corps discovered that migratory birds frequented the numerous ponds at the site, the Corps decided to assert jurisdiction, and ultimately denied the permit because it posed a potential threat to drinking water supplies and destroyed unmitigatable habitat for migratory birds.[14] When *SWANCC* reached the Supreme Court, a divided 5-4 Court held that the "migratory bird rule" was not an allowable basis for asserting jurisdiction and that the ponds were "a far cry, indeed, from the 'navigable waters' and 'waters of the United States' to which the statute by its term extends."[15]

In short, the Court said that the agencies had been too aggressive in its interpretation of waters of the United States. But the Court refused to draw any line short of the migratory bird rule. Thus, the *SWANCC* Court identified a problem with the regulatory program, but did little to fix it.

In 2003, the Bush Administration published a guidance document that retracted Corps and EPA jurisdiction under the CWA far beyond what the *SWANCC* Court directed. For example, this post-*SWANCC* guidance directed Corps and EPA staff *not to assert jurisdiction over "isolated" waters* without first obtaining permission from headquarters.[16] No similar instructions were issued to get permission before *allowing* unregulated pollution or destruction of these waters by determining that they were not subject to Clean Water Act jurisdiction. More importantly, in practice, the 2003 guidance led to the loss of resources. Whenever the agencies themselves determined that waters were "isolated," intrastate, and not traditionally navigable–even where the waters had uses other than as habitat by migratory birds–the waters were found to be non-jurisdictional. According to the EPA, about 20 million acres of wetlands were placed at risk of losing federal Clean Water Act protections under the 2003 policy.[17]

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[13] 51 Fed. Reg. 41206, 41217 (Nov. 13, 1986).

[14] *Solid Waste Agency of N. Cook Cnty. v. U.S. Army Corps of Eng'rs*, 531 U.S. 159, 165 (2001).

[15] *Id.* at 173.

[16] 68 Fed. Reg. 1991, 1997-98 (Jan. 15, 2003) ("field staff should seek formal project-specific HQ approval prior to asserting jurisdiction over waters based on other factors listed in 33 CFR 328.3(a)(3)(i)–(iii)").

[17] *See* Eric Pianin, *Administration Establishes New Wetlands Guidelines*, The Washington Post, Jan. 11, 2003, at A05.

C. *United States v. Rapanos*

In *Rapanos* the Solicitor General argued to the U.S. Supreme Court that the CWA encompasses and protects the non-navigable tributaries of the traditional navigable waters and the wetlands adjacent to these tributaries. The *Rapanos* petitioners and others argued that the CWA does not protect non-navigable tributaries and only covers those wetlands directly adjacent to traditional navigable waters.[18] In its decision the Court split 4-1-4.[19]

The four-justice plurality opinion, which was written by Justice Scalia, concluded that:

> [T]he phrase "the waters of the United States" includes only those relatively permanent, standing or continuously flowing bodies of water 'forming geographic features' that are described in ordinary parlance as "streams[,] . . . oceans, rivers, [and] lakes." The phrase does not include channels through which water flows intermittently or ephemerally, or channels that periodically provide drainage for rainfall.[20]

The opinion also would require wetlands to have a "continuous surface connection" to jurisdictional waters to be protected.[21]

Justice Kennedy, who cast the lone middle vote, wrote in his opinion that for a water to be protected by the CWA it has to have a physical, biological, or chemical effect on a traditional navigable water in order to be protected, in other words, it must have a significant nexus with that downstream water.[22] In determining whether a particular water is jurisdictional, Kennedy stated that it was proper to look at the cumulative impact of a water on the nearest downstream traditional navigable water taking into account other similarly situated waters in the region.[23]

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[18] The petitioners in *Carabell* case advanced a more limited argument, claiming that it was impermissible for the Corps to regulate a wetland as "adjacent" to a protected water body – and therefore subject to the Clean Water Act – if it lacked a hydrological connection with the water body. Brief of Petitioners at 12-13, *Carabell v. U.S. Army Corps of Eng'rs*, (Dec. 2, 2005).

[19] *Rapanos v. United States*, 126 S.Ct. 2208 (2006).

[20] *Id.* at 2225 (plurality opinion) (citation omitted).

[21] *Id.* at 2226.

[22] *Id.* at 2248.

[23] *Id.*

Since *Rapanos*, numerous courts have wrestled with the question of which opinion (or opinions) contains the controlling rule of law. For instance, in the First and Eighth Circuits, a water is protected under the Clean Water Act if it meets either the plurality standard or the "significant nexus" standard.[24] In the Eleventh Circuit, a water may only be covered consistent with the "significant nexus" standard.[25] The Seventh and Ninth Circuits both have ruled that the "significant nexus" standard is a sufficient basis to uphold jurisdiction, but have not ruled out the use of the plurality standard in appropriate circumstances.[26] The Second, Fifth, and Sixth Circuits have reached decisions in which they left to a later case the resolution of whether one of the standards or both are valid jurisdictional triggers.[27]

In the proposed rule, as described further below, the agencies rely exclusively on the Kennedy significant nexus test to determine whether a water is jurisdictional or not.

Specific Comments

In our comments the proposed language for the definition of "waters of the United States" appears in bold italics, see immediately below. We have also included those agency requests for comments to which we respond. There are some agency requests for comments that we do not address.

[24] *United States v. Johnson*, 467 F.3d 56 (1st Cir. 2006); *United States v. Bailey*, 571 F.3d 791, 799 (8th Cir. 2009).

[25] *United States v. Robison*, 505 F.3d 1208 (11th Cir. 2007), *reh'g denied*, 521 F.3d 1319 (11th Cir. 2008); *see also United States v. Freedman Farms, Inc.*, 2011 WL 1884000, *7 (E.D.N.C. 2011) (denying reconsideration of jury instruction based exclusively on Justice Kennedy's "significant nexus" standard).

[26] *United States v. Gerke Excavating, Inc.*, 464 F.3d 723, 724-25 (7th Cir. 2006) (discussing both standards and concluding that Justice Kennedy's is narrower view except in "rare cases[s]" and concluding that Justice Kennedy's test "must govern the further stages of this litigation"); *N. Cal. Riverwatch v. City of Healdsburg*, 496 F.3d 993, 999-1000 (9th Cir. 2007) (replacing prior opinion characterizing Justice Kennedy's test as "the controlling rule of law" with one that says it is "the controlling rule of law for our case"); *but cf. United States v. Moses*, 496 F.3d 984, 990 (9th Cir. 2007) (decision issued three days prior to revision of *Healdsburg* opinion cites the initial *Healdsburg* opinion and characterizes Justice Kennedy's test as "the controlling rule of law").

[27] *Cordiano v. Metacon Gun Club, Inc.*, 575 F.3d 199, 215-16 (2d Cir. 2009); *United States v. Lucas*, 516 F.3d 316, 327 (5th Cir. 2008) (concluding that evidence is sufficient for jury to convict under plurality, "significant nexus," or dissent tests, but not indicating which standard, if any, controls); *United States. v. Cundiff*, 555 F.3d 200, 210 (6th Cir. 2009).

Proposed definition of waters of the United States:

(a) For purposes of all sections of the Clean Water Act,* 33 U.S.C. 1251 *et seq. and its implementing regulations, subject to the exclusions in paragraph (b) of this section, the term "waters of the United States" means:

(1) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

Comment: Although the agencies did not seek comments on this provision that defines traditional navigable waters, it is important that the agencies give this concept more attention. In addition to this comment, we have provided a more in-depth analysis of this issue in Exhibit C.

How traditional navigable waters are determined is important because this concept is inexorably tied to the concept of significant nexus. In making a significant nexus determination the first question is always where is the nearest traditionally navigable water? Whether that water is two miles or two-hundred miles from the water in question can make a significant difference. Yet it is far from clear in many cases where the nearest traditionally navigable water is located.

There are three separate lines of cases that define traditionally navigable waters: (1) Commerce Clause cases, (2) Admiralty cases, and (3) Equal Footing Doctrine cases. And within the Commerce Clause line of cases there are four sub-lines of cases: (1) regulation of commerce cases, (2) Federal Power Act (FPA) cases, Rivers & Harbors Act (R&H Act) cases; and navigational servitude cases. Across this country under these varying authorities waters have been determined to be navigable or non-navigable based on the circumstances at hand.

Undoubtedly when a significant nexus determination is made the applicants, consultants and agencies involved will be looking to see how the stream, creek, or river at issue has been classified in the past based on whatever information is most readily available. In many cases the Corps will turn to the navigability studies that it has completed under the R&H Act. However, these studies are often outdated. For example, one such study in Georgia set the head of navigation 70 miles downstream of where it should be, because the author of the report did not apply the historic commerce test. The section of river at issue had been in commercial use well into the 1900's.

To address this issue, we recommend the following:

1) The agencies should include a section in the preamble expanding on the one in the proposed rule at 79 Fed. Reg. 22200 (April 21, 2014) that explains in further detail all of the different sources of the term "traditional navigable water" and that points out that they are all equally applicable in making a significant nexus determination. The section should also explain that the nearest traditional navigable water determination should be based on the most inclusive information available.

2) The agencies should make it clear that only one prong of the traditional navigable water test is needed to qualify a water as a traditional navigable water, i.e., the historic commerce test is enough on its own.

3) The agencies should make it clear in the preamble that the Corps' navigability reports hold no more sway than any other navigability test.

4) The preamble should also explain that the Corps must consider any information in making traditional navigable determinations, such as information on historic commerce, introduced by the third parties during a permit process. And that if the Corps judges that third-party information to be legitimate, it cannot be trumped by, for example, a Corps navigability report.

5) In addition to including this information in the preamble, the Corps should state in the preamble that it will be issuing a regulatory guidance letter further explaining the traditional navigability test.

(2) All interstate waters, including interstate wetlands;

The proposed rule states that the agencies will assert jurisdiction over all interstate waters, consistent with the agencies' current regulations defining "waters of the United States." This means that the agencies will assert jurisdiction over waters that that cross state boundaries even if they would not otherwise be considered traditional navigable waters. It also means that jurisdiction would extend to stream reaches upstream and downstream of the point where a water crosses a state line. And it means that waters would be covered if they have a significant nexus with an interstate water. We agree with every element on this approach because it treats interstate waters in a manner consistent with the Clean Water Act.

(3) The territorial seas;

No comment.

(4) All impoundments of waters identified in paragraphs (a)(1) through (3) and (5) of this section;

No comment.

(5) All tributaries of waters identified in paragraphs (a)(1) through (4) of this section;

Agency Comment Request: *The agencies request comment on . . . the definition of tributaries and provide a clear explanation of their lateral and upstream extent.*[28]

Comment: It is confusing to define tributaries as including an ordinary high water mark and then almost immediately carve out exceptions to that rule for wetlands and other waters that may lack an ordinary high water mark. We suggest the following definition instead:

For the purposes of the rule, the term "tributary" means:

1) a water (such as a stream, creek, or river) that has a bed and bank and ordinary high water mark and that contributes flow to other jurisdictional waters either directly or through another water or a discrete conveyance; or

2) a nonlinear water (such as a wetland, lake, or pond) even if it does not possess a bed or bank or ordinary high water mark as long as it contributes flow to other jurisdictional waters either directly or through another water or a discrete conveyance.

To the extent that there is concern that such a definition would cover insignificant features such as puddles, gutters, and upland roadside ditches, the agencies could define waters to exclude such features. Or preamble language could be drafted to address this issue.

Agency Comment Request: *The agencies request comment on . . . how [other features in a tributary system should be treated]*.[29]

[28] 79 Fed. Reg. 22188, 22203 (April 21, 2014).

[29] *Id.* at 22204.

Comment: The overall approach used in this proposed rule should apply in this context too—define what is jurisdictional and what is not. Gullies, rills, and non-wetland swales could be considered either non-jurisdictional components of the tributary system or simply not part of the tributary system. Either way, they should be defined as lacking the characteristics that make the other components of the tributary system jurisdictional. Such discussion should also point out that although such features may not be considered jurisdictional for purposes of Section 404, they may still be considered point sources under Section 402, as well as surface connections to establish significant nexus.

(6) All waters, including wetlands, adjacent to a water identified in paragraphs (a)(1) through (5) of this section; and

Comment: Although the agencies did not solicit comments on their general approach to adjacent waters, we offer the following:

The agencies approach would remedy the problem that arose in the drafting of the current post-*Rapanos* guidance. Under that guidance, which the proposed rule would replace, similarly-situated wetlands for the purposes of cumulative impact analysis are only considered together to the extent that they are adjacent to the same "reach" of a stream. This aggregation approach is perhaps the most damaging element of the post-*Rapanos* guidance. Moreover, the choice to unnecessarily limit the consideration of the cumulative effect that wetlands have on water quality when evaluating whether a "significant nexus" is present was inconsistent with the opinion from which the test is drawn. Justice Kennedy, in spelling out how the "significant nexus" standard should work in practice, clearly intended for the agencies to have the ability to continue to protect wetlands when they collectively affect water quality, and to apply that protection to all similar water bodies across a region. His opinion says:

- "[W]etlands possess the requisite nexus, and thus come within the statutory phrase 'navigable waters,' if the wetlands, either alone or *in combination with similarly situated lands in the region*, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable.'"[30]

- "Through regulations or adjudication, the Corps may choose to *identify categories of tributaries* that, due to their volume of flow (either annually or on average), their proximity to navigable waters, or other relevant considerations, are significant enough

[30] *Rapanos*, 126 S.Ct. at 2248 (emphasis added).

that wetlands adjacent to them are likely, in the majority of cases, to perform important functions for an aquatic system incorporating navigable waters."[31]

- "Where an adequate nexus is established for a particular wetland, it may be permissible, as a matter of administrative convenience or necessity, to *presume covered status for other comparable wetlands in the region*."[32]

The natural reading of these passages is that EPA and the Corps, using their expert judgment, can evaluate available information about specific wetlands, establish that a "significant nexus" is present, and then notify the regulated community and the public that wetlands of the same type over a specified geographic area will be considered protected waters. The agencies also can make, consistent with Justice Kennedy's opinion, similar jurisdictional judgments about wetlands adjacent to categories of tributaries which are important enough, given relevant characteristics (such as flow, position in the watershed, pollution burden, etc.), that the adjacent wetlands will likely have a significant water quality effect (physical, chemical, or biological) on downstream traditionally navigable waters.

Justice Kennedy's opinion includes strong indicators that he intended the "significant nexus" test to use a broad geographic analysis. For one, he says the government should examine similarly situated wetlands "*in the region*." In this context, there is no reason to believe that Justice Kennedy's focus on the effects across a "region" would be limited to a small area, much less an individual stream segment as is done in the current post-*Rapanos* guidance. To the contrary, the standard dictionary definition of "region" includes, *inter alia*, "[a] large, usually continuous segment of a surface or space" and "[a] large, indefinite portion of the earth's surface."[33] Second, Justice Kennedy clearly has a broad geographic view of what effects are important for water quality purposes; in rejecting the plurality's "dismissive" attitude toward the resources at issue in the case, Justice Kennedy gave an example of the importance of wetlands on a huge geographic scale: "Important public interests are served by the Clean Water Act in general and by the protection of wetlands in particular. To give just one example, *amici* here have noted that nutrient-rich runoff from the Mississippi River has created a hypoxic, or oxygen-

[31] *Id.* (emphasis added).

[32] *Id.* at 2249 (emphasis added).

[33] The American Heritage Dictionary of the English Language, (4th ed. 2004), *available at* http://dictionary.reference.com/browse/region; *cf.* U.S. Environmental Protection Agency, *Wadeable Streams Assessment: A Collaborative Survey of the Nation's Streams*, at ES-4 (2006) (describing agency's "assessment of the biological quality of wadeable, perennial streams and rivers across the country, as well as within each of three major climatic and landform *regions* and nine ecological *regions*, or ecoregions." (Emphasis added)).

depleted, "dead zone" in the Gulf of Mexico that at times approaches the size of Massachusetts and New Jersey."[34]

However, the existing post-*Rapanos* guidance acknowledges virtually none of this, by taking a narrow geographic approach and by failing to provide a mechanism for making categorical or regional jurisdictional assessments (i.e., it does not explain when it is appropriate to "presume covered status" for wetlands of the same kind in an area). This effectively makes Justice Kennedy's test, as interpreted in the post-*Rapanos* guidance, a far more demanding requirement than *Rapanos* dictates.

The proposed rule, however, is far more faithful to the elements of Justice Kennedy's opinion. In particular, the proposed rule concludes that an inclusive geographic scope is appropriate for the aggregation analysis. Under the proposed rule, the logical and scientifically valid "region" for determining whether similarly situated waters have a significant nexus is the watershed that drains to the nearest traditional navigable water or interstate water through a single point of entry. In addition, once the jurisdictional status for a particular water within a watershed has been established, field staff would apply significant nexus analysis for that water to any subsequent determinations if they establish (and document) that the water at issue is the same type and in the same watershed as the jurisdictional water.

We commend the agencies for including in the proposed rule some additional clarification about how to identify which wetlands are "adjacent" to covered waters, but believe that the draft's discussion of this issue can be improved further. First, we urge the agencies to clarify how field staff should consider floodplain location when evaluating adjacency. Although the draft indicates that waters within the riparian area or floodplain of a jurisdictional water will generally be considered adjacent, it does not specify which floodplain this includes. That is, it does not say that field staff should treat as "adjacent" any wetland within the 100-year (or some other period) floodplain of a jurisdictional water. We suggest the agencies provide this specificity, and suggest that the 100-year floodplain is an appropriate metric; it is also a criterion for which information should be readily available, as maps – outdated as many may be – are typically available for those areas.

We also support the consideration of whether resident species move between waters and wetlands as a factor in establishing adjacency between streams and adjacent wetlands. This analysis helps to ascertain the closeness of the relationship between these resources.

[34] *Rapanos*, 126 S.Ct. at 2246-47.

Finally, we suggest that the floodplain/riparian area tests only be used to include waters in the A(6) category, not exclude them. Our concern is that some Corps districts will use a floodplain that is overly restrictive for the A(6) category. Waters that are arguably adjacent, should not be excluded from this category if they have a significant nexus to a jurisdictional water and simply fall on the wrong side of the flood plain line. Of course, such a water, if it did not fall within another category of waters by rule, would still have to go through a case-by-case analysis.

(7) On a case-specific basis, other waters, including wetlands, provided that those waters alone, or in combination with other similarly situated waters, including wetlands, located in the same region, have a significant nexus to a water identified in paragraphs (a)(1) through (3) of this section.

Agency Comment Request: *This preamble also seeks comment on a number of other ways that the agencies might provide even greater clarity, certainty, and predictability in determining which "other waters" are and are not subject to CWA jurisdiction.*[35]

Comment: As provided in the comment on traditional navigable waters above on page 11, the agencies must clarify how the traditional navigable waters test should be performed. Unless guidance is provided, traditional navigable waters will not be evaluated in a consistent and reliable manner. Significant nexus tests, in turn, will also not be performed in a consistent manner.

Agency Comment Request: *As noted below, the agencies particularly intend to review the rule provisions related to "other waters" in light of this record, and are soliciting comment on several alternative approaches to applying the science and the law for determining whether "other waters" are similarly situated and have a "significant nexus" to a traditional navigable water, interstate water, or the territorial seas.*[36]

Comment: In light of the fact that it is likely that the final rule will be challenged soon after it is issued, we suggest that the agencies continue searching for additional scientific studies even after November 14, 2014. We also suggest that the scientific studies submitted as part of the comment process be included in the final Connectivity Report. In the span of two months a small team of

[35] 79 Fed. Reg. at 22192.

[36] *Id.* at 22197.

Masters students at the University of Georgia was able to amass an impressive list of additional scientific studies that were not contained in the original Connectivity Report. The reports that came out of this research are attached as Exhibits C and D. The science is out there to support the proposed rule, it is just a matter of continuing the search.

Agency Comment Request: *The agencies solicit comment on identifying subcategories of "other waters" that have a significant nexus to traditional navigable waters, interstate waters, and the territorial seas and could be jurisdictional by rule, and subcategories of "other waters" where a significant nexus or its absence could not be determined as a class and could be subject to a case-specific analysis under the rule. The Report indicates that there is evidence of very strong connections in some subcategories that are not included as jurisdictional by rule. The agencies solicit comment on making such subcategories of waters with very strong connections jurisdictional by rule as well as on making subcategories of waters that do not have such connections subject to a case-specific analysis or categorically non-jurisdictional under the rule. Such comment should explain with supporting documentation why a particular subcategory of "other waters" might or might not have a significant nexus to traditional navigable waters, interstate waters, or the territorial seas. (FR 22198).*

Comment: As described above, working with the Natural Resource Defense Council (NRDC), we solicited the help of a team of Masters of Ecology students from the University of Georgia to help us identify additional peer-reviewed scientific studies that demonstrate the connections that exist between certain types of "other waters" and jurisdictional waters. In our report we focused on Carolina Bays, Delmarva Bays, and other similar coastal depressional wetlands. In the report it commissioned, NRDC focused on vernal pools and pocosins. Both reports, which are attached as Exhibits C and D, conclude for their respective waters that more often than not there is sufficient scientific information to establish that the waters are connected either physically, chemically, or biologically to downstream traditionally navigable waters.

In issuing the final rule, we urge the agencies to review the reports attached to these comments. It is our position that when this research is combined with the Connectivity Report, the agencies will have the scientific foundation necessary to establish that coastal depressional wetlands (such as Carolina and Delmarva Bays), vernal pools, and pocosins should be defined as waters of the United States by rule. This, of course, would obviate the need to perform case-by-case analyses of these waters.

Comment: In addition to the two reports, we offer the following additional discussion on "other waters" and how they should be regulated. It is our underlying position that the EPA and Corps

should interpret existing law as broadly as possible. It is in the "other waters" category that the agencies appear to be treading the most cautiously. This is not surprising in light of the holding in *SWANCC*. In that case the Supreme Court squarely faced the question of how geographically isolated wetlands should be treated. Although the decision has been read in an expansive way by many, at bottom it says that the presence or absence of migratory birds at such wetlands cannot be the only basis of establishing jurisdiction.

Certainly the *Rapanos* decision has also affected how the agencies regulate geographically isolated waters. With the Scalia test that requires a "surface connection" and the Kennedy test that requires a "significant nexus," it is not surprising that EPA and Corps initially approached "other water" cases with caution. However, scientific studies now reveal how biological, hydrological, and chemical connections exist between most types of geographically isolated waters and other jurisdictional waters. In this section we focus on the types of "other waters" found in the Southeast and describe some of the connections that would render these types of waters jurisdictional.

Although geographically isolated waters may appear to be separated from surface waters, many of these waters are directly linked hydrologically to other wetlands or streams by shallow subsurface flows[37] or by intermittent surface flows during rain events.[38] The term "isolated" implies that there are ecological barriers between these wetlands that prohibit seed dispersal, animal movements, and wildlife reproductive success,[39] but this is also not so. Rather, many organisms travel from wetland to wetland and between wetlands and traditionally navigable waters while breeding, searching for food, or overwintering.[40]

Furthermore, these wetlands perform critical ecosystem services that, because of this connectivity, profoundly affect the chemical, physical, and biological integrity of downstream traditional navigable waters. The importance of wetlands cannot be understated. From their ecological richness to their ability to protect our communities from floods and filter drinking

[37] Allen E. Plocher et al., *Importance of Small Isolated Wetlands* (2003), http://illinois.sierraclub.org/take_action/inhs.pdf (Last viewed Nov. 2014).

[38] Joel Snodgrass et al., *Relationships Among Isolated Wetland Size, Hydroperiod, and Amphibian Species Richness: Implications for Wetland Regulations*, 14 Conservation Biology 414, 414-19 (2000).

[39] Ralph W. Tiner, *In Search of Swampland: A Wetland Sourcebook and Field Guide*. Rutgers University Press, New Brunswick, NJ (1998).

[40] Douglas E. Gill, *The Metapopulation Ecology of the Red-spotted Newt, Notophtalmus viridescens (Rafinesque)*, 48 Ecological Monographs 145, 145-46 (1978).

water, geographically isolated wetlands play a vital role in preserving ecosystem function in the United States.

Some of the wetlands most in danger of losing protection under the CWA are wetlands found in the southeastern United States like pocosins and Carolina bay wetlands. Pocosins, from the Algonquin word meaning "swamp on a hill," occur in the southeastern Coastal Plain from Virginia to North Florida.[41] Seventy percent of the nation's 3.14 million acres[42] of pocosins are found in North Carolina, where they comprise approximately 50 percent of the state's freshwater wetlands.[43] Broadly defined, pocosins encompass all shrub and forested bogs, Atlantic white cedar stands, and some loblolly pine stands on flooded soils. They are rainfall-driven and are usually not connected by streams to major rivers. However, they are often found adjacent to estuaries and have surface hydraulic connections have been linked to water quality and salinity gradients in these estuaries. Scientists suggest that because of this connection and because pocosins cover vast areas on the coast that "these wetlands are connected to regulated waters of the United States."[44]

Carolina or Delmarva bays are depressional wetlands found throughout the southeastern United States from Delaware to Florida, with most bays located in southeastern North Carolina, South Carolina, and northeastern Georgia. They occur in topographic depressions and are shallow and oval shaped, and their shape allows for surface water accumulation. Water sources may be precipitation, surface water flow, streams, or groundwater, and water may exit bays through evapotranspiration, outlets, or to groundwater recharge.[45] Many bays hold water only during part of the year. These bays are home to a wide variety of plants and wildlife, including frogs, salamanders, turtles, snakes and alligators. Migratory waterfowl and mammals like deer,

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[41] Curtis J. Richardson, *Pocosins: Hydrologically Isolated or Integrated Wetlands on the Landscape?*, 23 Wetlands 563, 563-76 (2003).

[42] *Friends of Pocosin Lakes National Wildlife Refuge: A Helping Hand to Wildlife*. (Apr. 4 2008). http://www.noolf.com/index.cfm/sid.356/nid.2218/do.s/p.2?action=&PageNum_get=2. (last visited Nov. 10, 2014).

[43] U.S. Department of the Interior, The Impact of Federal Programs on Wetlands , Vol. II,. *North Carolina: The Pocosins and Other Freshwater Wetlands*, http://www.doi.gov/oepc/wetlands2/v2ch16.html (last visited Nov. 10, 2014).

[44] Richardson, *supra* note 41.

[45] Savannah River Ecology Laboratory, University of Georgia, *Carolina Bays Fact Sheet* (2007), srel.uga.edu/outreach/factsheet/CarolinaBaysFS.pdf (last visited Nov. 10, 2014).

raccoons, and opossums also use the bays. Salamanders and frogs are prolific in the bays and are dependent on these wetlands for use as breeding sites.[46]

A. Chemical Connection

From a water quality perspective, so-called isolated wetlands are rarely completely isolated from other wetlands or traditionally navigable waters. Indeed, wetlands biologist Dennis Whigham suggests that "isolation is a term that is not very useful from an ecological perspective."[47] Geographically isolated wetlands are at times connected to other waters by groundwater flows, intermittent streams, or overland flows.[48] This connection has been found in bays,[49] pocosins,[50] and limesink wetlands.[51] Because of this hydrological connection, wetlands can have significant effects on the chemical quality of downstream waters. Wetlands can capture and store large amounts of water, acting as sponges. As they absorb flood water, run-off and rain, they filter pesticides, excess nutrients, sediment and other pollutants, protecting the health of downstream tributaries, rivers and wetlands.[52] For example, a 2010 assessment prepared for the U.S. EPA of geographically isolated wetlands in 88 counties of the Carolinas showed that these isolated wetlands stored significant amounts of water and in doing so captured heavy metals, nutrients, and carbon.[53] Accordingly, the loss of geographically isolated wetlands would potentially have negative effects on the quality of downstream waters and the ecological and human communities that rely on them.[54]

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[46] *Id.*

[47] Dennis F. Whigham and Thomas E. Jordan, *Isolated Wetlands and Water Quality*, 23 Wetlands 541, 541-49 (2003).

[48] *Id.*

[49] Ge Sun, et al., *Modeling the Climatic and Subsurface Stratigraphy Controls on the Hydrology of a Carolina Bay Wetland in South Carolina, USA*, 26 Wetlands 567, 567-80 (2006).

[50] Richardson, *supra* note 41.

[51] Stephen P. Ogsahl, *Organic Carbon Composition and Oxygen Metabolism Across a Gradient of Seasonally Inundated Limesink and Riparian Wetlands in the Southeast Coastal Plain, USA*, 76 Biochemistry 47, 47-68 (2004).

[52] Letter from Society of Wetland Scientists to Donna Downing, U.S. Environmental Protection Agency, Office of Wetlands, Oceans and Watersheds (April 16, 2003), http://www.sws.org/regional/northcentral/documents/swscommentsisolatedwetlands.pdf (last visited Nov. 10, 2014).

[53] *Assessing Geographically Isolated Wetlands in North and South Carolina: The Southeast Isolated Wetlands Assessment (SEIWA), Final Report*, Prepared for U.S. Environmental Protection Agency (Feb. 11, 2011).

[54] Whigham, *supra* note 47.

Another important example of chemical connectivity between upland wetlands and downstream estuaries and other traditionally navigable waters is the flow of primary production between them.[55] Because of this flow, many species that utilize estuaries benefit from the production of tidal marshes and wetlands even though they never occupy these areas. One study demonstrated that there was rarely a time when the estuarine taxa surveyed did not contain isotopic signatures of all primary producers in the region, including primary producers from distant marshes. The results indicate significant material flow from areas of primary production in marshes to estuarine and open water environments and that wetlands do not function in isolation when supporting estuarine secondary production, but rather are integrated components of larger systems.[56]

B. Physical Connection

As with chemical connectivity, some wetland biologists regard the term "isolated" to be inappropriate to describe wetlands, because many are hydrologically connected to other wetlands or TNWs through groundwater flows or intermittent overflows.[57] Hydrologic models of Carolina bay wetlands indicate that the bays are a flow-through wetland system, receiving ground water from the adjacent upland, but recharging the groundwater to lower topographic areas, especially during wet periods in winter months.[58] A later study of a similar area concluded that "the dynamic nature of the hydrology in this Carolina bay clearly indicates it is not an isolated system as previously believed."[59]

Pocosins demonstrate similar physical connections to downstream waters. Pocosins are both important water storage systems and a source of water for the Coastal plains, connecting them to downstream and coastal waters.[60] Because of surface overflow and because pocosins cover vast areas on the coast, wetland biologists consider these wetlands to be connected to

[55] Michael P. Weinstein et al., *Considerations of Habitat Linkages, Estuarine Landscapes, and the Tropic Spectrum in Wetland Restoration Design*, 40 Journal of Coastal Research 51, 51-63 (2005).

[56] *Id.*

[57] Ralph W. Tiner, *Geographically Isolated Wetlands of the United States*, 494, 494-516 (2003).

[58] Sun, *supra* note 49.

[59] Jennifer E. Pyzoha et al., *A Conceptual Hydrologic Model for a Forested Carolina Bay Depressional Wetland on the Coastal Plain of South Carolina*, 22 USA Hydrol. Process 2689 (2008).

[60] Richardson, *supra* note 41.

regulated waters of the United States.[61] In fact, a survey of U.S. Army Corps of Engineers personnel in North Carolina indicates that most pocosins are considered hydrologically connected to regional waters because they are the primary source of surface water flow on landscapes where they dominate.[62] In accordance with this understanding of physical connectivity, wetlands scientists urge the entire hydrologic system needs to be considered in establishing a definition of hydrologic isolation.[63]

Because of this physical connectivity, many of the ecological functions and benefits attributed to non-isolated wetlands are also accomplished by geographically isolated wetlands.[64] Geographically isolated wetlands perform extremely valuable ecosystem services by trapping and storing flood waters, and in doing so, protect our communities from the effects in severe storms and floods. Healthy wetlands have proven to be effective and natural ways to control floods. One study credits wetlands with $7.7 – 31 billion per year in flood control.[65] A single acre of wetland can store approximately 1 million gallons of flood water.[66] EPA has reported that it would cost $1.5 million annually to replace the natural flood control functions of a 5,000 acre tract of drained Minnesota wetlands alone.[67] Executive Order 11988, issued by President Carter directed federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative.[68]

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[61] *Id.*

[62] *Id.*

[63] Thomas Winter and James W. LaBaugh, *Hydrologic Considerations in Defining Isolated Wetlands*, 23 Wetlands 532, 532-40 (2003).

[64] Tiner, *supra* note 57.

[65] R. Jan Stevenson, *Protection of Small, Isolated Wetlands in Michigan* (Nov. 30, 2003), https://www.msu.edu/~bakerbe4/portfolio/writing/wetlandspaper.pdf (Last viewed June 2011).

[66] U.S. Environmental Protection Agency, *Wetlands: Protecting Life and Property from Flooding*, at 1 (May 2006), *available at* water.epa.gov/type/wetlands/outreach/upload/Flooding.pdf (last visited Nov. 10, 2014).

[67] U.S. EPA Wetlands Fact Sheet, EPA842–F–95–001 (Feb. 1995).

[68] The provisions of Executive Order 11988 of May 24, 1977, appear at 42 Fed. Reg. 26951, 3 CFR, 1977 Comp., p. 117. http://www.archives.gov/federal-register/codification/executive-order/11988.html (last visited on Nov. 11, 2014).

C. Biological Connection

Geographically isolated wetlands, including pocosins and Carolina bays, are biologically diverse ecosystems. The loss of such wetland habitats could have a serious impact on the survival of the species that depend on them. By protecting these wetlands, the Clean Water Act provided one of the few federal safeguards for the protection of these biodiversity resources. Out of the total of 274 at-risk plant and animal species supported by geographically isolated wetlands, 35 percent of species are not known to be supported by any other type of habitat. [69] Additionally, 86 plant and animal species listed as "threatened," "endangered," or "candidate" under the Endangered Species Act are found in geographically isolated wetland habitats.[70] Geographically isolated wetlands support biodiversity in two primary ways: by providing unique habitats that numerous organisms require to complete portions of their lifecycle, such as breeding or overwintering, and by supporting metapopulations on a regional scale.

Numerous species are dependent on geographically isolated wetlands in the southeast. Importantly, because all of these species travel between wetlands, they serve to link wetlands to one another and to other waters. The following are examples of studies that document the presence and movements of species of ducks, frogs, turtles, salamanders, fish, newts, and snakes in southeastern wetlands.

- Wood ducks living in the riverine wetlands of the Tennessee-Tombigbee Rivers and Waterway in Alabama and at Noxubee National Wildlife Refuge (NNWR) in Mississippi traveled to geographically isolated wetlands from these TNWs to geographically isolated scrub-shrub wetlands to breed.[71]

- Green treefrogs, which typically occur in permanent lakes, ponds, swamps and occasionally temporary ponds, were shown to interbreed with barking frogs, which dwell entirely in geographically isolated wetlands. Their hybrids will return to these geographically isolated wetlands to breed.[72]

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[69] P. Comer et al., *Biodiversity Values of Geographically Isolated Wetlands in the United States.* Nature Serve, Arlington, VA. (2005), http://www.natureserve.org/library/isolated_wetlands_05/isolated_wetlands.pdf (last visited Nov. 11, 2014).

[70] *Id.*

[71] Brian Davis et al., *Survival of Wood Duck Ducklings and Broods in Mississippi and Alabam*a. 71 Journal of Wildlife Management 507, 507-517 (2007).

[72] Margaret S. Gunzburger, *Differential Predation on Tadpoles Influences the Potential Effects of Hybridization between Hyla cinerea and Hyla gratiosa*, 39 Journal of Herpetology 682, 682-87 (2005).

- The semi-aquatic Eastern Mud Turtle is a bottom-dweller of shallow, slow-moving water bodies and geographically isolated wetlands, but during the late summer and fall, individuals leave their aquatic habitat for extended periods to overwinter on land. Movement between aquatic water bodies is common.[73]

- Chicken turtles, which are found primarily in shallow and seasonally fluctuating wetlands in the southeastern United States but are rare in permanent wetlands, have been documented to move distances of several hundred meters between geographically isolated wetlands.[74]

- Sirens and Amphiumas (salamanders) in the Savannah River Site in South Carolina colonize geographically isolated wetlands through temporary aquatic connections to other bodies of water.[75]

- Fish found in geographically isolated Carolina bay wetlands in the Savannah River Site confirm surface water connections between the wetlands and the Savannah River during times of wetland overflow flooding.[76]

- Red-spotted newts in a series of mountain ponds in the Shenandoah Mountains of Virginia were documented to migrate "en masse" every August and September, moving to and from ponds to breed.[77]

- Several species of aquatic and semi-aquatic worm snakes, found primarily in geographically isolated wetlands formed metapopulations in the Lower Atlantic

[73] Leigh Anne Harden et al., *Terrestrial Activity and Habitat Selection of Eastern Mud Turtles (Kinosternon subrubrum) in a Fragmented Landscape: Implications for Habitat Management of Golf Courses and Other Suburban Environments*, 1 Copeia 78, 78-84 (2009).

[74] Kurt A. Buhlmann et al., *Ecology of Chicken Turtles (Deirochelys Reticularia) in a Seasonal Wetland Ecosystem: Exploiting Resource and Refuge Environments*, 65 Herpetologica 39, 39-53 (2009).

[75] Joel W. Snograss et al., *Influence of Hydroperiod, Isolation, and Heterospecifics on the Distribution of Aquatic Salamanders (Siren and Amphiuma) among Depression Wetland*, 53 Can. J. Fish. Aquat. Sci. 443 (1999).

[76] Joel W. Snodgrass et al., *Factors Affecting the Occurrence and Structure of Fish Assemblages in Isolated Wetlands of the Upper Coastal Plain, U.S.A.*, 53 Can. J. Fish. Aquat. Sci. 443, 443-454 (1996).

[77] Douglas E. Gill, *The Metapopulation Ecology of the Red-spotted Newt, Notophtalmus viridescens (Rafinesque)*, 48 Ecological Monographs, 145, 145-166 (1978).

Coastal Plain of South Carolina during periods of inundation when wetland boundaries expanded and the wetland system became more interconnected.[78]

- Alligators in southern Georgia were shown to form a functional connectivity among the seasonal wetland, terrestrial, and creek–river systems, and that this connectivity is a consequence of the ontogenetic niche shift in habitat use and results in significant movement of energy and biomass. As alligators progress from juvenile life stages to adulthood, they shift from using wetland habitat to using riverine habitat. Females also return to wetlands to breed.[79]

In addition to providing essential habitat for a variety of species, the second way geographically isolated wetlands preserve biodiversity is by allowing the formation of metapopulations of organisms on a regional scale.[80] Individuals migrate between geographically isolated wetlands and TNWs via overland corridors that connect them, allowing local populations to form metapopulations, which are essential to maintaining the integrity of local and regional populations.[81] This is called the "rescue effect," a central component of metapopulation theory, which asserts that immigration and recolonization of separate patches of habitat increase the persistence of local populations, and the rate of local extinctions increases as the distance between local populations increases.[82]

Decreasing the amount of geographically isolated wetlands has been shown to reduce the population of species in larger wetlands.[83] This phenomenon has been documented extensively in populations of pond-breeding amphibians like newts.[84] The loss or alteration of any wetland,

[78] Kevin R. Russell, *Aspects of the Ecology of Worm Snakes (Carphophis amoenus) Associated with Small Isolated Wetlands in South Carolina,* 33 Journal of Herpetology 339, 339-344 (1999).

[79] Amanda L. Subalusky et al., *Ontogenetic Niche Shifts in the American Alligator Establish Functional Connectivity Between Aquatic Systems*, 142 Biological Conservation 1507, 1507-1514 (2008).

[80] J. Whitfield Gibbons, *Terrestrial Habitat: A Vital Component for Herpetofauna of Isolated Wetlands*, 23 Wetlands, 630, 630-635 (2003).

[81] *Id.*

[82] Per, Sjogren, *Extinction and Isolation Gradients in Metapopulations: the Case of the Pool frog (Rana lessonae)*, 42 Biological Journal of the Linnean Society 135, 135-147 (1991).

[83] Raymond D. Semlitsch, and J. Russell Bodie, *Are Small, Isolated Wetlands Expendable?* 12 Conservation Biology 1129, 1129-33 (1998).

[84] Gill, *supra* note 77.

large or small, reduces the total number of sites at which pond-breeding individuals can reproduce and successfully recruit juveniles into the breeding population.[85] Decreasing the amounts of geographically isolated wetlands reduces the number of individuals dispersing and increases the distance individuals must travel between wetlands, decreasing the species' ability to maintain larger and more viable meta-populations.[86]

For all the reasons stated immediately above, geographically isolated wetlands such as Carolina bays and pocosins need to come under the protections of the CWA. Fortunately, we now have the science to establish the connections between these waters and downstream traditional navigable waters allowing these waters to be defined as waters of the United States by rule.

Comment: When the Science Advisory Board (SAB) reviewed the EPA's Connectivity Report, it concluded that there was enough scientific literature to support a "more definitive statement about the functions of 'unidirectional' non-floodplain wetlands that sustain the physical, chemical and/or biological integrity of downstream waters."[87] The EPA currently has sufficient evidence from the scientific literature it used in its Connectivity Report to make the case for extending protections to "other waters." In addition, the SAB provided the EPA with additional peer-reviewed literature to include in its Connectivity Report.[88] When combined with the scientific literature provided with these comments, the EPA has enough support to extend categorical protections to these waters.

Agency Comment Request: *Therefore, the proposed rule requires a case-specific significant nexus evaluation to determine if such "other waters" are subject to CWA jurisdiction and the agencies are requesting comment on several alternate approaches, including approaches that would not include case-specific analysis, to inform the final rule. Finally, the agencies are for the first time proposing definitions for some of the terms used in the proposed regulation.*[89]

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[85] Semlitsch, *supra* note 83.

[86] *Id.*

[87] SAB Review of the Draft EPA Report *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence*. October 17, 2014. EPA-SAB-15-001.

[88] SAB Review at p. 52.

[89] 79 Fed. Reg. at 22198

Comment: In the Southeast we have seen jurisdictional wetlands excavated to make amenity ponds in housing developments. Because they were excavated "cleanly," the Corps has been unwilling to require permits for this activity since the Tulloch Rule purportedly allows for such work even when there is a clear connection to other jurisdictional waters. We think that the Corps should clarify that such waters remain waters of the United States after the excavation is completed. Furthermore, if a wetland is excavated in this manner to create an amenity pond and it is then connected to a jurisdictional water through a ditch, then this entire system should be considered a water of the United States. Otherwise unregulated discharges of pollutants such as storm water could be made into the amenity pond and affect downstream jurisdictional waters.

Agency Comment Request: *Consistent with Justice Kennedy's opinion in Rapanos, the agencies propose today and are soliciting comment on establishing a case-specific analysis of whether "other waters," including wetlands, that do not meet the criteria for any of the proposed jurisdictional categories in (a)(1) through (a)(6) and are not proposed to be excluded by rule under section (b), are susceptible to a case-specific analysis of whether they alone, or in combination with other similarly situated waters, have a significant nexus to a traditional navigable water, an interstate water, or the territorial seas, and therefore are "waters of the United States."*[90]

Comment: It is essential that case-specific analyses for individual waters continue. Although such analyses are resource intensive they are essential if we are to properly protect all waters of the United States. The primary goal, however, should be to move such waters into categories or classes that can be defined by rule to be waters of the United States as science continues to reveal the connections between such waters and jurisdictional waters.

Agency Comment Request: *The agencies recognize that Supreme Court decisions in SWANCC and Rapanos placed limits on the scope of "other waters" that may be determined to be jurisdictional. Therefore, the agencies' proposal today provides that waters not determined to be jurisdictional as a category are jurisdictional only if they are determined on a case-specific basis to have a significant nexus to a traditional navigable water, an interstate water, or the territorial seas. The agencies also request comment and information below on how the science could support other approaches that could provide greater regulatory certainty regarding the jurisdictional status of "other waters", including expanding the list of waters jurisdictional by rule, expanding the list of waters not jurisdictional by rule, and narrowing the "other waters" subject to a case-specific analysis, including eliminating the case-specific analysis where the*

[90] *Id.* at 22211.

science does not support it. The agencies will review the administrative record, including comments received, the scientific literature, and the final Report, in determining how to address "other waters" in the final rule.[91]

Comment: Although the agencies did not specifically request comments on the legal basis for using the "category" approach to defining "other waters" as waters of the United States by rule, it deserves some attention. It is our suggestion that the agencies expand in the preamble to the final rule on why this approach is legal and appropriate in this context. Below is a legal analysis that may assist in this task.

A. The agencies have the legal authority to make a categorical determination for subcategories of "other waters" when a majority of those waters meet the significant nexus standard.

Under the approach proposed in the proposed rule waters listed in categories (1) through (4) are automatically jurisdictional because they have historically been identified as "navigable" in the CWA, the Rivers and Harbors Act, and in federal case law.[92] In other words, no one is going to quarrel with the fact that traditional navigable waters, interstate waters, territorial seas, and impoundment of these waters are all waters of the United States.

Waters listed in categories (5) and (6) of the proposed rule are also automatically jurisdictional as well.[93] The agencies determined that these tributaries and adjacent wetlands are by rule "waters of the United States" because, in the majority of cases, those waters have a significant nexus to traditional navigable waters, interstate waters, and territorial seas.[94]

Under category (7) the agencies go even further to allow for the creation of categories of waters that do not fit within the seven categories listed above. The "other waters" contain such features as non-adjacent wetlands that are not part of an apparent tributary system. The agencies leave the door open to commenters to identify specific classes of "other waters" that science reveals have a significant nexus to traditional waters, interstate waters, or territorial seas. Under this approach, if most of the "other waters" in that class or category either alone or cumulatively

[91] *Id.* at 22212.

[92] *See id*. at 22252-22259.

[93] *Id.*at 22262.

[94] *Id.* at 22204.

with other similarly situated waters in the region, then these waters could be defined as waters of the United States by rule.

That would mean that case-by-case analyses would not have to be done each time an applicant seeks a permit to impact one of these waters. The question is, however, do the agencies have the legal authority to determine that a subcategory of "other waters" are "waters of the United States" when some, but not all the waters in the class have been documented to meet the significant nexus test. The answer is yes for the following reasons: (i) the Supreme Court has finally clarified the legal standard for determining jurisdiction under the CWA, (ii) Justice Kennedy explicitly authorized agencies to make categorical determinations in *Rapanos*, (iii) the Supreme Court's holdings in *Riverside Bayview* and *SWANCC* support Justice Kennedy's categorical approach, (iv) the Court and Congress have acquiesced to the Corps' longstanding practice of making categorical determinations regarding their jurisdiction under the CWA, (v) the agencies have made categorical significant nexus determinations in other parts of the rule, and (vi) such determinations are necessary as a matter administrative economy.

1. The Supreme Court has clarified the legal requirements for making jurisdictional determinations under the CWA.

First, the agencies have the authority to determine that a subcategory of "other waters" are "waters of the United States" when a majority of the waters in that subcategory meet the significant nexus standard because the Supreme Court has finally clarified the legal standard for determining jurisdiction under the CWA. The agencies' interpretation of the significant nexus test conforms to the Supreme Court's holding in *Rapanos*, and further limits the kind of waters that can be aggregated for a significant nexus determination. Thus, it is highly unlikely that the agencies' categorical significant nexus determination would be found to exceed the CWA's jurisdiction, or infringe on states' rights.

In *Rapanos*, Justice Kennedy explained that the "significant nexus" test is the legal standard for determining whether a wetland is a "water of the United States."[95] This test ensures that any categorical determinations made by the agencies will fulfill the purposes of the CWA, without exceeding the limits of the CWA's jurisdiction. Justice Kennedy determined that the required nexus "must be assessed in terms of the [CWA's] goals and purposes."[96] As explained by Justice Kennedy, "wetlands possess the requisite nexus, and thus come within the statutory phrase navigable waters, if the wetlands, either alone or in combination with similarly situated

[95] 547 U.S. at 780.

[96] *Id.* at 780, *see* 33 U.S.C. § 1251(a) (the purpose of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters").

lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable.'"[97]

Based on Justice Kennedy's significant nexus test, the proposed rule defines significant nexus in section (c)(7).[98] The agencies assert that the proposed rule's definition of "significant nexus" is consistent with the language in *SWANCC* and *Rapanos*, but that it "relies most significantly on Justice Kennedy's *Rapanos* opinion."[99] The proposed rule's definition "limits the 'other waters' that can be aggregated for purposes of determining jurisdiction."[100] Under the proposed Rule, agencies must "examine both the functionality and proximity" of waters to determine whether they are "similarly situated" for the purposes of a significant nexus determination.[101] Additionally, the agencies only evaluate similarly situated waters in the same "region," defined as "the watershed that drains to the nearest" traditional navigable water or interstate water.[102] Under the proposed rule, the likelihood of a significant nexus "is greater with increasing size and decreasing distance from the identified (a)(1) through (a)(3) water, as well as with increased density of the 'other waters' for 'other waters' that can be considered in combination with similarly situated waters."[103]

Under the proposed rule, these limitations apply whether the agencies are making a case-specific significant nexus determination[104], or a categorical significant nexus determination.[105] Thus, for the first time, the agencies have clear parameters from the Supreme Court for determining when they have jurisdiction over individual waters, similarly situated waters, and categories of waters under the CWA.

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[97] 547 U.S. at 780.

[98] 79 Fed. Reg. at 22263.

[99] *Id.* at 22262.

[100] *Id.* at 22213.

[101] *Id.*

[102] *Id.* at 22214.

[103] *Id.*

[104] *Id.* at 22216.

[105] *Id.* at 22259-22260.

2. Justice Kennedy explicitly authorized agencies to make categorical significant nexus determinations.

Second, agencies have the authority to determine that a subcategory of "other waters" is "waters of the United States" when a majority of the waters in that subcategory meet the significant nexus standard because Justice Kennedy stated that the agencies had such authority.

In *Rapanos*, Justice Kennedy stated "through regulation or adjudication, the Corps may choose to identify categories of [waters] that are likely, in the majority of cases, to perform important functions for an aquatic ecosystem incorporating navigable waters."[106] In the proposed rule, the agencies stated "Justice Kennedy's significant nexus standard provides a framework for establishing categories of waters which are *per se* 'waters of the United States."[107]

Thus, Justice Kennedy authorized the agencies to make categorical significant nexus determinations and the agencies have the opportunity to do so in the proposed Rule.

3. Justice Kennedy's directive is supported by and consistent with Supreme Court precedent.

Third, agencies have the authority to determine that a subcategory of "other waters" are "waters of the United States" when a majority of the waters in that subcategory meet the significant nexus standard because Justice Kennedy's directive—that "through regulation or adjudications, the Corps may choose to identify categories of tributaries that . . . in the majority of cases, … perform important functions for an aquatic system incorporating navigable waters"[108]—is supported by the Court's holdings in *Riverside Bayview* and is consistent with the Court's reasoning in *SWANCC*.

Justice Kennedy's directive is supported by the Court's holding in *Riverside Bayview*. In *Riverside Bayview Homes*, 474 U.S. 121, 126, (1985), the Supreme Court upheld the Corps' determination that wetlands adjacent to navigable waters were categorically "waters of the United States."[109] The Corps justified this categorical determination based on a "reasonable

[106] 547 U.S. at 780.

[107] *See* 79 Fed. Reg. at 22209.

[108] 547 U.S. at 781.

[109] 474 U.S. at 134.

inference of ecological interconnection" between the waters and the adjacent wetlands. *Id.* The Court deferred to the Corps' judgment, stating that the Corps "provide[d] an adequate basis for a legal judgment [contained in 33 C.F.R. § 323.2(a)] that adjacent wetlands may be defined as waters under the Act."[110]

In *Rapanos*, Justice Kennedy stated that the Court's reasoning in *Riverside Bayview* "could apply equally to wetlands adjacent to certain major tributaries."[111] Justice Kennedy therefore provided a direct example of how the agencies could make a categorical significant nexus determination, based on the Court's holding in *Riverside Bayview*. His statement in the next sentence—that agencies could make categorical significant nexus determinations—repeats and clarifies his original argument.

Justice Kennedy's directive is also consistent with the Court's reasoning in *SWANCC*. In *SWANCC*, the Court held that the Corps exceeded its authority when it determined that isolated wetlands used by migratory birds were categorically "waters of the United States."[112] First, the Court acknowledged that "it was the significant nexus between the wetlands and 'navigable waters' that informed [its] reading of the CWA in *Riverside Bayview Homes*."[113] Then, the Court determined that there was no "significant nexus" between the wetlands and traditional navigable waters, and therefore held that those wetlands were not "waters of the United States."[114] Thus, Justice Kennedy held in *Rapanos* that agencies could make categorical determinations, but only if the waters had a significant nexus to waters more readily identified as navigable waters.[115]

4. Congress and the Supreme Court have acquiesced to the agencies' longstanding practice of making categorical determinations regarding jurisdiction under the CWA.

Fourth, the agencies have the authority to determine that a subcategory of "other waters" are "waters of the United States" when a majority of the waters in that subcategory meet the

[110] *Id.*

[111] 547 U.S. at 780.

[112] *Solid Waste Agency of N. Cook Cnty.*, 531 U.S. at 171.

[113] *Id.* at 167.

[114] *Id.*

[115] 547 U.S. at 780.

significant nexus standard because the agencies have made such categorical determinations for nearly fifty years. Additionally, Congress and the Supreme Court have acquiesced to that practice.

The agencies have a longstanding practice of creating categories of waters defined as "waters of the United States." After initially construing "waters of the United States" to cover only waters navigable in fact, in 1975 the Corps issued interim final regulations redefining "the waters of the United States" to include not only actually navigable waters but also tributaries of such waters, interstate waters and their tributaries, non-navigable interstate waters whose use or misuse could affect interstate commerce, and all "freshwater wetlands" that were adjacent to other covered waters.[116] In 1977, the Corps formally adopted this regulation in 33 C.F.R. § 323.2(a). The Corp's and the EPA's current definition of "waters of the United States"— located in 33 C.F.R. § 328.3(a)—includes the categories listed in the 1977 regulation, as well as an assortment of "other waters" including wetlands and intermittent streams, the use or destruction of which could affect interstate commerce.

Additionally, Congress and the Supreme Court have acquiesced to the agencies' practice of making categorical determinations. In *United States v. Riverside Bayview Homes, Inc.* the Court upheld the Corps' categorical determination that wetlands adjacent to navigable waters were "waters of the United States" because, *inter alia*, Congress had acquiesced to the Corps' categorical determination.[117]

Thus, the agencies have the authority to make categorical determinations in the proposed rule because the Supreme Court and Congress have acquiesced to the Corps' decades-old practice of making such determinations under the CWA.

5. The agencies make categorical significant nexus determinations in other parts of the proposed rule.

Fifth, agencies have the authority to determine that a subcategory of "other waters" are "waters of the United States" when a majority of the waters in that subcategory meet the

[116] 40 Fed. Reg. 31320 (July 25, 1975).

[117] 474 U.S. 121, 136 (Congressional efforts to narrow the definition of "waters" were abandoned and, in the words of Senator Baker, the Corps "retain[ed] the comprehensive jurisdiction over the Nation's waters exercised in the 1972 Federal Water Pollution control Act")[citing 123 Cong. Rec. 39209 (1977)].

significant nexus standard because the agencies made such categorical determinations in sections (5) and (6) of the proposed rule.

In section (5) of the proposed rule, the agencies created a category of "tributaries" that are jurisdictional *per se*. As stated by the agencies in the proposed rule, "[w]hile Justice Kennedy's opinion focused on adjacent wetlands in light of the facts of the cases before him, the agencies determined it was reasonable . . . to undertake a detailed examination of the scientific literature to determine whether tributaries, as a category . . . significantly affect . . . navigable waters, interstate waters, or territorial seas."[118] The agencies studied the physical, chemical and biological impact of tributaries and concluded tributaries "significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas."[119] Thus, the agencies concluded that "[t]ributaries . . . perform the requisite functions identified by Justice Kennedy for them to be considered, as a category, to be 'waters of the United States.'"[120]

The proposed rule clarifies that "small, intermittent, and ephemeral tributaries" meet Justice Kennedy's significant nexus standard because they are "essential components of the tributary network . . . when their functional contributions to the chemical, physical, and biological conditions of downstream waters are considered at a watershed scale."[121] Therefore, the agencies concluded that all "tributaries," including intermittent and ephemeral tributaries, are categorically "waters of the United States."[122]

In section (6), the agencies concluded that "waters adjacent" to waters in sections (1) through (5) also have a "significant nexus" to traditional navigable waters and are categorically "waters of the United States." In *Rapanos*, Justice Kennedy approved the Corp's previous determination that "wetlands adjacent to traditional navigable waters are presumed to be jurisdictional waters" because the Corps previously made a "reasonable inference of ecological connection."[123] In the proposed Rule, the agencies further concluded that adjacent waters have a significant nexus with territorial seas, impoundments, and tributaries because they are "likely, in

[118] 79 Fed. Reg. at 22259.

[119] *Id.* at 22201.

[120] *Id.* at 22204.

[121] *Id.* at 22206.

[122] *Id.* at 22201.

[123] 547 U.S. at 780.

the majority of cases, to perform important functions for an aquatic system incorporating navigable waters."[124]

Therefore, the agencies have the legal authority to make categorical significant nexus determinations for "other waters," as long as they follow the framework established by Justice Kennedy, utilized in sections (5) and (6) of the proposed rule.

Category (7) of the proposed rule explains that "[o]n a case-specific basis, other waters, including wetlands [are "waters of the United States"], provided that those waters alone, or in combination with other similarly situated waters, including wetlands, located in the same region, have a significant nexus to a water identified in paragraphs (1) through (3) of this section." [125]

The agencies proposed the case-specific approach for "other waters" because they did not have enough scientific data to make a categorical determination.[126]

Justice Kennedy did not define the terms "similarly situated" or "region" when he described the significant nexus test in *Rapanos*. *See* 547 U.S. 780. Under the proposed rule, "other waters" are "similarly situated" when they "perform similar functions and are located sufficiently close together or sufficiently close to a 'water of the United States' so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a water identified in paragraphs (s)(1) through (3)."[127] The proposed rule defines "region" as "the watershed that drains to the nearest water identified in paragraphs (s)(1) through (3)." The agencies concluded that the watershed is the appropriate scale to measure the chemical, physical, or biological integrity of a particular (a)(1) through (a)(3) water" because "the movement of water from watershed drainage basins to river networks and lakes shapes the development and function of these systems in a way that is critical to their long term health."

Thus, when evaluating the significant nexus of an individual wetland, a determination that the wetland performs critical functions related to the chemical, physical, or biological

[124] 79 Fed. Reg. at 22210.

[125] *Id.* at 22263.

[126] *See id.* at 22248 ("[c]onnectivity of 'other waters' to downstream waters that do not meet the definition of adjacent will vary within a watershed and over time, which is why a case-specific nexus determination for 'other waters' is necessary under (a)(7)").

[127] *Id.* at 22262.

integrity of other waters, such as pollutant trapping, flood control, and runoff storage would likely be sufficient for the agencies to make a case-specific significant nexus determination.[128]

f. The significant nexus test coupled with the categorical approach makes the regulatory process more efficient and economical.

Finally, categorical significant nexus determinations are not only legally justifiable, they are necessary as a matter of administrative economy.

In *Rapanos*, Justice Kennedy recognized that "[w]here an adequate nexus is established for a particular wetland, it may be permissible, as a matter of administrative convenience or necessity, to presume covered statutes for other comparable wetlands in the region."[129] This statement is equally applicable to agencies making categorical significant nexus determinations.

In the proposed rule, the agencies specifically request alternatives to the method of making case-by-case significant nexus determinations for "other waters" because case-by-case determinations are "resource-intensive for the regulating agencies and the regulated community alike."[130] In contrast, the agencies recognize that "[t]here is substantial value to the regulated public and all other stakeholders involved in providing increased certainty regarding which "other waters" are jurisdictional and which are not."[131] Categorical significant nexus determinations fulfill the purpose of the proposed Rule because it allows the agencies to "better address the clarity, certainty, and predictability goals of this rule."[132] Therefore, the agencies should make categorical significant nexus determinations where possible in order to ease the administrative burden of the proposed Rule on all stakeholders involved.

[128] *Id.*; *see also Rapanos* 547 U.S. at 779.

[129] 547 U.S. 781.

[130] 79 Fed. Reg. at 22214.

[131] *Id.* at 22216.

[132] *Id.*

B. The agencies have the legal authority to define waters by rule.

For all of the reasons stated above, the agencies have the legal authority to make a determination that certain subcategories of "other waters" have a significant nexus to traditional navigable waters, interstate waters, and territorial seas.

Agency Comment Request: *To best meet their goals and responsibilities, the agencies solicit comment and information on the state of the science, and its relation to the CWA and the caselaw, to determine if there are opportunities to provide greater clarity, certainty, and predictability for establishing jurisdiction over "other waters." This includes the possibility of determining that additional waters should be jurisdictional by rule such as in paragraphs (a)(1) through (a)(6), and the possibility that additional waters should be excluded from jurisdiction by rule such as in section (b). The agencies' decision on how best to address jurisdiction over "other waters" in the final rule will be informed by the final version of the Report and other available scientific information.*[133]

Comment: See response above where we set out need for "other waters" categories and supply the scientific reports to support such categories.

Agency Comment Request: *The agencies solicit comment on how the agencies propose to find "other waters" to be similarly situated in this proposed rule, whether other methods of identifying similarly situated "other waters" would be reasonable, and whether no "other waters" should be determined to be similarly situated. In each instance, the comments should address how the actions of the agencies would be consistent with the science, including any science not currently before the agencies, the CWA, and the caselaw.*[134]

Comment: For those "other waters" that are not otherwise found to be waters of the United State by rule, they should be considered similarly situated with all other waters in their watershed that serve the same functions and provide the same values. The origin or type of the water should not matter in this inquiry, only the functions and values of the waters. Whether a depressional wetland, for example, is a limesink or a bay should not matter in the similarly situated inquiry as long as these wetlands are providing the same services to the ecosystem and are having the same effect on downstream waters.

[133] *Id.* at 22214.

[134] *Id.* at 22215.

We also suggest that agencies maintain careful records of similarly situated waters. The agencies should maintain a complete data base of all watersheds that have gone through a similarly situated analysis so that such an analysis does not have to be repeated each time an application is filed to fill an "other water" in that watershed.

Agency Comment Request: *The agencies request comment on the list of ecoregions above and whether this list is appropriate, and whether there are other ecoregions or distinct areas that should be included or excluded from this list. This list does not include regions in Alaska or Hawaii and the agencies request comment on appropriate regions to use to analyze "other waters" in those states. The agencies also request comment on whether using Level III ecoregions is appropriate or whether a finer gradation of ecoregions would be more appropriate.*[135]

Comment: We do not agree with the ecoregion approach. Although it would create some bright lines for regulators, many of these bright lines would be arbitrary and would lead to unnecessary litigation.

Agency Comment Request: *If waters are categorized as non-jurisdictional because of a lack of science available today, the agencies request comment on how to best accommodate evolving science in the future that could indicate a significant nexus for these "other waters." Specifically, the agencies request comment as to whether this should be done through subsequent rulemaking, or through some other approach, such as through a process established in this rulemaking.*[136]

Comment: It is imperative that the agencies establish in this rulemaking a mechanism whereby the agencies can establish new classes of "other waters" by rule. The agencies should explain in the preamble to the final rule how scientific studies that are performed in the future can be used to support the development of new categories of "other waters" by rule. While the connection of certain waters to jurisdictional waters may not be apparent now, further study may reveal such connections. The agencies should establish some mechanism for creating new categories of "other waters" and defining them as waters of the United States by rule.

Agency Comment Request: *The agencies also seek comment on how the science supports retaining the case-specific determination for the remaining "other waters" that are neither*

[135] *Id.* at 22215-16.

[136] *Id.* at 22217.

specifically included nor excluded from jurisdiction. Retaining the case-specific analysis for these other waters would not enhance clarity of jurisdiction for these other waters, but it would retain the ability for a jurisdictional determination consistent with the objective of the CWA to restore and maintain the chemical, physical, and biological integrity of the nation's waters. In the alternative, the agencies seek comment on whether it would be appropriate to categorize remaining "other waters" as not jurisdictional. The agencies specifically seek comment on how these "other waters" should be considered.[137]

Comment: We are opposed to declaring any waters non-jurisdictional because they did not pass the significant nexus test at any given time. As the climate changes and flood events become more common, water that cannot meet the significant nexus test today may well meet that test in the future. Wetlands delineations are only good for five years for a reason—waters and ecosystems change over time. With climate change upon us, those changes will only become more dramatic.

(b) The following are not "waters of the United States" notwithstanding whether they meet the terms of paragraphs (a)(1) through (7) of this section—

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act.

No comment.

(2) Prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act the final authority regarding Clean Water Act jurisdiction remains with EPA.

No comment.

(3) Ditches that are excavated wholly in uplands, drain only uplands, and have less than perennial flow.

Agency Comment Request: *The agencies specifically seek comment on the appropriate flow regime for a ditch excavated wholly in uplands and draining only uplands to be included in the exclusion of paragraph (b)(3). In particular, the agencies seek comment on whether the flow*

[137] *Id.*

regime in such ditches should be less than intermittent flow or whether the flow regime in such ditches should be less than perennial flow as proposed.[138]

Comment: It is our understanding that in earlier drafts of the proposed rule, the flow regime proposed was intermittent flow. We believe that that is the correct flow regime for the final rule. Any ditch that is so deep that it uncovers the water table, even if only for part of the year, should not be exempted. Such ditches, depending on their location and orientation, could have a dramatic impact on the hydrologic regime in the area surrounding the ditch even if they are dug through uplands and only drain uplands.

(4) Ditches that do not contribute flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4) of this section.

Agency Comment Request: *The agencies request comment on this formulation of the ditch exclusion. The agencies specifically seek comment on the appropriate flow regime for a ditch excavated wholly in uplands and draining only uplands to be covered by the exclusion in paragraph (b)(3). In particular, the agencies seek comment on whether the flow regime in such ditches should be less than intermittent flow or whether the flow regime in such ditches should be less than perennial flow as proposed.*[139]

Comment: See the comment immediately above.

(5) The following features:

(i) Artificially irrigated areas that would revert to upland should application of irrigation water to that area cease;

No comment.

(ii) Artificial lakes or ponds created by excavating and/or diking dry land and used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;

[138] *Id.* at 22203.

[139] *Id.* at 22217.

Comment: To avoid confusion the term "dry land" should be changed to "uplands." To the extent that this is an alternative to using the farm pond exemption set forth in the statute, we support it.

(iii) Artificial reflecting pools or swimming pools created by excavating and/or diking dry land;

Comment: Dry land should be changed to uplands.

(iv) Small ornamental waters created by excavating and/or diking dry land for primarily aesthetic reasons;

Comment: Same comment as immediately above.

(v) Water-filled depressions created incidental to construction activity;

Comment: This exemption should be removed. In major construction projects such as interstate highways, extremely large borrow pits are dug with the express purpose of turning these "water-filled depressions" into lake-front property. Under this exemption such amenity lakes would not be subject to regulation in the future. This would be a mistake. Other constructed depressions turn into wetlands over time and are often connected with jurisdictional waters. Again, cutting such waters off from any future protections would be a mistake.

(vi) Groundwater, including groundwater drained through subsurface drainage systems; and

Comment: If the agencies do include groundwater as not regulated, the agencies must be very clear in explaining that although the Clean Water Act is typically viewed as not regulating groundwater, shallow subsurface movement of water can be used to establish a connection between a water and a jurisdictional water.

(vii) Gullies and rills and non-wetland swales.

Agency Comment Request: *The agencies request comment on how they could provide greater clarity on how to distinguish between erosional features such as gullies, which are excluded from jurisdiction, and ephemeral tributaries, which are categorically jurisdictional.*[140]

[140] *Id.* at 22219.

No comment.

Agency Comment Request: *The agencies request comment on how they could provide greater clarity on how to distinguish swales, which are excluded from jurisdiction, and ephemeral tributaries, which are categorically jurisdictional.*[141]

No comment.

(c) Definitions—

(1) *Adjacent.* The term *adjacent* means bordering, contiguous or neighboring. Waters, including wetlands, separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes and the like are "adjacent waters."

Agency Comment Request: *While the agencies' best professional judgment has always been a factor in determining whether a particular wetland is "adjacent" under the existing definition, the agencies recognize that this may result in some uncertainty as to whether a particular water connected through confined surface or shallow subsurface hydrology is an "adjacent" water. The agencies therefore request comment on whether there are other reasonable options for providing clarity for jurisdiction over waters with these types of connections.*[142]

Comment: Adjacency should be determined using and chemical, physical, and biological factors. Certainly flooding is one measure that should be used to determine if a water is adjacent to another water. But, if for instance, certain amphibians regularly migrate to and from a wetland to a jurisdictional river, this should be taken into account to counter when determining any bright-line adjacency determinations. If the agencies only use a flood plain analysis to determine adjacency, the flood plain should be no smaller than the 100 year flood plain. We have discovered that the Federal Emergency Management Agency's maps are often incorrect by significant amounts so anything less than the 100 year metric would not offer sufficient protection.

(2) *Neighboring.* The term *neighboring,* for purposes of the term "adjacent" in this section, includes waters located within the riparian area or floodplain of a water identified in

[141] *Id.*

[142] *Id.* at 22208.

paragraphs (a)(1) through (5) of this section, or waters with a shallow subsurface hydrologic connection or confined surface hydrologic connection to such a jurisdictional water.

Agency Comment Request: *The agencies seek comment on specific options for establishing additional precision in the definition of "neighboring" through: explicit language in the definition that waters connected by shallow subsurface hydrologic or confined surface hydrologic connections to an (a)(1) through (a)(5) water must be geographically proximate to the adjacent water; circumstances under which waters outside the floodplain or riparian zone are jurisdictional if they are reasonably proximate; support for or against placing geographic limits on what waters outside the floodplain or riparian zone are jurisdictional; determining that only waters within the floodplain, only waters within the riparian area, or only waters within the floodplain and riparian area (but not waters outside these areas with a shallow subsurface or confined surface hydrologic connection) are adjacent; identification of particular floodplain intervals within which waters would be considered adjacent; and any other scientifically valid criteria, guidelines or parameters that would increase clarity with respect to neighboring waters.*[143]

Comment: If a water is outside the floodplain and riparian areas, the Corps should be able to use best professional judgment to claim the water as jurisdictional as long as there is a chemical, physical, or biological connection.

(3) *Riparian area.* The term *riparian area* means an area bordering a water where surface or subsurface hydrology directly influence the ecological processes and plant and animal community structure in that area. Riparian areas are transitional areas between aquatic and terrestrial ecosystems that influence the exchange of energy and materials between those ecosystems.

Comment: Because the agencies decided to expand the protection of adjacent waters to include more than just wetlands, they provided additional definitions for "adjacent" and "neighboring."[144] The proposed definition for "neighboring" includes "waters located within the riparian area or floodplain of a water."[145]

[143] *Id.* at 22209.

[144] *Id.* at 22263.

[145] *Id.*

The definitions of riparian area and floodplain lack guidance on how the extent of such an area will be determined. This is a problem because waters adjacent to jurisdictional waters are covered as a category in the proposed rule; therefore, waters within areas deemed to be riparian areas or floodplains that are adjacent to jurisdictional waters will be jurisdictional as a class. In order to respond to the claim that the agencies are expanding their jurisdiction by including non-wetlands as adjacent the agencies must do a better job of explaining that such waters would be considered jurisdictional on a case-by-case basis regardless of whether they are considered adjacent or not.

(4) *Floodplain.* The term *floodplain* means an area bordering inland or coastal waters that was formed by sediment deposition from such water under present climatic conditions and is inundated during periods of moderate to high water flows.

Agency Comment Request: *When determining whether a water is located in a floodplain, the agencies will use best professional judgment to determine which flood interval to use (for example, 10 to 20 year flood interval zone). The agencies request comment on whether the rule text should provide greater specificity with regard to how the agencies will determine if a water is located in the floodplain of a jurisdictional water.*[146]

Comment: For the reasons stated above, the flood interval should be no smaller than 100 years.

(5) *Tributary.* The term *tributary* means a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4) of this section. In addition, wetlands, lakes, and ponds are tributaries (even if they lack a bed and banks or ordinary high water mark) if they contribute flow, either directly or through another water to a water identified in paragraphs (a)(1) through (3) of this section. A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head of or along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break. A tributary, including wetlands, can be a natural, man-altered, or man-made water and includes waters such as

[146] *Id.* at 22209.

rivers, streams, lakes, ponds, impoundments, canals, and ditches not excluded in paragraph (b)(3) or (4) of this section.

Comment: Overall, we support the proposed rule's approach to protecting tributary streams. The proposed rule provides more clarity and better corresponds to the robust science linking tributary streams with their downstream rivers.[147] As stated above, small streams make up a majority of stream miles in the United States and making their impact on the chemical, physical and biological integrity of our waters indisputable. Of those streams, intermittent and ephemeral streams comprise a significant portion of the river network, underscoring the need for their protection. For example, in arid and semi-arid states including Arizona, New Mexico, Nevada, Utah, Colorado and California, over 81% of stream miles have been classified as ephemeral or intermittent.[148] Even in some non-arid states, intermittent streams are predominant as in Alabama where 80% of stream miles in the National Forest are classified as intermittent.[149] The value of these small streams for the nation's clean and safe drinking water is well recognized, providing drinking water for 117 million Americans,[150] and yet is currently under threat. [151]

Headwater streams, whether perennial, ephemeral or intermittent impact downstream flooding, base flows, water quality and the entire aquatic, and in many cases, terrestrial food chain.[152] Headwater streams prevent devastating floods by absorbing significant amounts of

[147] See e.g., J.L. Meyer and J.B. Wallace, *Lost linkages and lotic ecology: rediscovering small streams in* Ecology: Achievement and Challenge 295-317 (M.C. Press et al. eds. 2001); M.J. Patz et al., *Trace Elements in Coalbed Methane Produced Water Interacting with Semi- and Ephemeral Stream Channels*, 170 Water Air and Soil Pollution 55, 55-67 (2006); Judy E. Meyer et al., *Where Rivers are Born: The Scientific Imperative for Defending Small Streams and Wetlands* (2003), *available at* www.americanrivers.org/newsroom/resources/where-rivers-are-born-the-scientific-imperative-for-defending-small-streams-and-wetlands/ (last visited Nov. 10, 2014).

[148] Lainie R. Levick et al., *The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest*, U.S. Environmental Protection Agency and USDA/ARS Southwest Watershed Research Center, EPA/600/R-08/134, ARS/233046 (2008).

[149] J.L. Meyer, et. al., Comments of Professional Aquatic Scientists on Advanced Notice of Proposed Rulemaking for on the Clean Water Act Regulatory Definition of "Waters of the United States" (Docket ID No. OW-2002-0050) (2003).

[150] U.S. Environmental Protection Agency, Geographic Information Systems Analysis of the Surface Drinking Water Provided by Intermittent, Ephemeral, and Headwater Streams in the U.S. [hereinafter EPA, GIA Analysis], http://water.epa.gov/lawsregs/guidance/wetlands/surface_drinking_water_index.cfm (last visited Nov. 10, 2014).

[151] Charles Duhigg and Janet Roberts, *Rulings Restrict Clean Water Act, Foiling EPA*, New York Times, Feb. 28, 2010 (quoting New York State Assistant Commissioner for Water Resources on the gaps left in clean water protections: "There are whole watersheds that feed into New York's drinking water supply that are, as of now, unprotected."), http://www.nytimes.com/2010/03/01/us/01water.html?pagewanted=all&_r=0.

[152] *Id*. *see also*, *supra* note 148.

rainwater, runoff, and snowmelt. While headwaters comprise the smallest upstream component of a river network, they have the largest surface area of soil in contact with available water, thereby providing the greatest opportunity for groundwater recharge. [153] Physical, chemical, and biological processes of headwaters retain and transform excess nutrients preventing them from entering downstream community water supplies, lakes and eventually estuaries. These headwaters not only provide numerous ecosystem services to humans but also provide vital habitat for numerous species. Most species spend at least some portion of their life cycle in these small perennial, ephemeral and intermittent streams. Preserving headwater streams under the Clean Water Act means cleaner water for larger downstream rivers, estuaries and oceans. It is well known that processes occurring upstream within these small streams affect the entire river network's structure and function.

Given the critical nature of tributary streams, we are pleased to see the agencies' reading of current law and science to continue its protection of tributary stream systems. Specifically, we support the presumptive coverage of non-navigable tributaries connected to navigable waters and the recognition of the cumulative impact of stream systems on downstream waters through application of Justice Kennedy's direction to evaluate wetlands "alone or in combination with similarly situated wetlands in the region" to streams. We offer the following recommendations to strengthen the final rule to better protect tributaries and clean water.

The ordinary high water mark (OHWM) has long been a measure to define a stream, indicating volume and flow. OHWM demonstrates a continuous channel providing a clear linkage between a tributary and downstream waters in many places. However, the traditional approach to measuring OHWM has relied on physical characteristics alone, neglecting hydrologic measures.[154] In the arid Southwest, for instance, typical OHWM indicators have not been found to be a reliable determination of a stream given the vast difference in "ordinary" flood patterns, and as a result it is suggested that the floodplain itself be used as the OHWM.[155] EPA already recommends a suite of factors to determine headwater streams, which may be described as "dynamic zones within stream networks." [156] While a traditional OHWM is

[153] Meyer, *supra* note 145.

[154] U.S. Army Corps of Engineers, *Review of Ordinary High Water Mark Indications for Delineating Arid Streams in the Southwestern United States* (Robert L. Lichvar and James S. Wakeley eds. 2004).

[155] U.S. Army Corps of Engineers, *Distribution of Ordinary High Water Mark Indicators and Their Reliability for Delineating the Limits of "Waters of the U.S." in Southwestern Arid Channels* (Lichvar et al., 2006).

[156] U.S. Environmental Protection Agency, *Field Operations Manual for Assessing the Hydrologic Permanence and Ecological Condition of Headwater* (2006).

certainly a positive indicator of a tributary, it is not a prerequisite. Moreover, because small headwater streams are the most susceptible to changes in size,[157] the OHWM is more variable and more difficult to ascertain. Thus, we recommend that the proposed rule make clear that tributaries can be defined by the presence of an OHWM or more broadly by hydrologic, geomorphic, ecological and physical factors to ensure that tributaries across a range of regional and climatic variations are protected.

We support EPA's proposed analysis for cumulative analysis of similarly situated waters. Watershed networks are inherently connected, and failure to protect small upstream tributaries could result in "alterations [to] downstream hydrology, water quality, biota and geomorphic processes."[158] Once EPA or the Corps makes a determination that a tributary stream has a significant nexus to any traditional navigable waters or interstate water, all downstream stream segments by necessity must also be jurisdictional. EPA should make clear that field staff should document the tributary that was found to have a significant nexus with downstream traditional navigable waters or interstate waters as well as all waters in between the two to ensure those waters are clearly recognized as jurisdictional. This data should be widely available and be used to create an ongoing database of waters that are jurisdictional for continual development of the category of "similarly situated" waters.

Comment: Under the proposed rule most ditches are considered tributaries. We offer the following comments concerning ditches. In contrast to other tributaries, ditches are required to meet additional characteristics before even being potentially considered jurisdictional. Ditches must have an OHWM, connect directly or indirectly to a traditional navigable water or interstate water and meet one of five other factors, and the proposed Guidance presumes that ditches are not tributaries.[159] Historically, ditches commonly have been protected under the CWA. Some so-called ditches have been regulated under the Clean Water Act because they are actually altered streams (i.e., streams that have been dredged out), and because ditches can transport pollutants downstream they are functionally no different than other tributaries. Ditches can also be regulated under the Clean Water Act if they flow into other bodies of water that are protected by the Clean Water Act even if the ditches themselves are artificial.[160] There is no compelling legal

[157] Emily H. Stanley et al., *Ecosystem Expansion and Contraction in Streams.* 47 BioScience 427, 427-435 (1997).

[158] Mary C. Freeman et al., *Hydrologic Connectivity and the Contribution of Stream Headwaters to Ecological Integrity at Regional Scales*, 43 Journal of the American Water Resources Association 5, 6-14 (2007).

[159] Proposed Guidance, p.12.

[160] *Headwaters, Inc. v. Talent Irrigation Dist*., 243 F.3d 526 (9th Cir. 2001); *United States v. Holland*, 373 F. Supp. 665 (M.D. Fla. 1974).

or scientific reason to treat ditches differently from other tributaries and find them jurisdictional under the significant nexus test and we urge EPA to remove the unnecessary and burdensome additional factors.

Agency Comment Request: *The agencies seek comment on whether the flow regime in [upland] ditches should be less than intermittent flow or whether the flow regime in such ditches should be less than perennial flow.*

Comment: Although we agree that certain ditches should be excluded from jurisdiction, we feel the only ones that should be excluded are ephemeral ditches. Ditches with intermittent or perennial are designed not only to convey surface runoff, but also to lower the water table. Such ditches should not be excluded from CWA jurisdiction.

(6) *Wetlands.* The term *wetlands* means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

No comment.

(7) *Significant nexus.* The term *significant nexus* means that a water, including wetlands, either alone or in combination with other similarly situated waters in the region (i.e., the watershed that drains to the nearest water identified in paragraphs (a)(1) through (3) of this section), significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section. For an effect to be significant, it must be more than speculative or insubstantial. Other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a "water of the United States" so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section.

Agency Comment Request: *However, the agencies also seek additional information that would enhance the predictability and accuracy of its jurisdictional determinations. The agencies request the type of information on the evolving scientific literature on connectivity of waters that could allow the agencies to rely less on case-specific significant nexus evaluations.*[161]

[161] 79 Fed. Reg. at 22192.

Comment: Before examining other ways to increase the consistency of the significant nexus test, the agencies must be completely consistent in how they express the test itself. Some commenters have interpreted the significant nexus test to require chemical, physical, *and* biological connections between any "other water" and a jurisdictional water. There are places in the proposed rule where it could be interpreted that the agencies are saying the same thing. Such an interpretation of the test would make it impossible to establish connectivity in many cases. In drafting the proposed rule, the agencies do not go far enough to explain why Justice Kennedy uses the phrase "chemical, physical, *and* biological" instead of chemical, physical *or* biological in setting forth the test. To avoid a legal challenge on this point, the agencies will have to develop a strong counter argument and set it forth in the preamble to the final rule.

> So far the agencies have said the following on this issue:
>
> To protect the integrity of the waters subject to the CWA, the significant nexus standard must be implemented in a manner that restores and maintains any of these three attributes of traditional navigable waters, interstate waters, or the territorial seas. Waters adjacent to tributaries also provide ecological functions that, in conjunction with the functions provided by the tributaries they are adjacent to, have a significant influence on the chemical, physical, and biological integrity of downstream traditional navigable waters, interstate waters, and the territorial seas.[162]

In the "Summary of Significant Nexus Conclusions" section following that quote, the Rule, it states:

> As the agencies developed this proposed definition of "waters of the United States," the agencies carefully considered available scientific literature and propose a rule consistent with their conclusions that a particular category of waters either alone or in combination with similarly situated waters in the region, significantly affects the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas.[163]

Finally, closer to the end of the Rule in the "Other Waters" section, the text states:

[162] *Id*. at 22194.

[163] *Id*. at 22197.

> The proposed rule includes a definition of significant nexus that is consistent with Justice Kennedy's significant nexus standard. In characterizing the significant nexus standard, Justice Kennedy stated: "The required nexus must be assessed in terms of the statute's goals and purposes. Congress enacted the [CWA] to 'restore and maintain the chemical, physical, and biological integrity of the Nation's waters' . . . ."[164] It clear that Congress intended the CWA to "restore and maintain" all three forms of "integrity," 33 U.S.C. 1251(a), so if any one form is compromised then that is contrary to the statute's stated objective. It would subvert the intent if the CWA only protected waters upon a showing that they had effects on every attribute of a traditional navigable water, interstate water, or territorial sea. Therefore, a showing of a significant chemical, physical, or biological affect should satisfy the significant nexus standard. [165]

Although these statements are helpful on this *and*-versus-*or* question, the agencies will have to go further to explain why only one connection is sufficient to establish a significant nexus. And the agencies will have to be very careful to use "and" where they mean "and" and "or" where they mean "or" whenever they state the significant nexus test in the final rule.[166]

Agency Comment Request: *EPA and the Corps are very interested in identifying other emerging technologies or approaches that would save time and money and improve efficiency for regulators and the regulated community in determining which waters are subject to CWA jurisdiction. The agencies specifically invite comment on this topic*.[167]

Comment: The Savannah District of the Army Corps of Engineers has been using LIDAR with great success to identify wetlands and the surface connections that they may have to jurisdictional waters.

It is critical that the Corps and EPA extend CWA jurisdiction as far as they can under current law. During the Bush administration, the Agencies fell far short of the mark. And

[164] *Rapanos*, 547 U.S. at 779.

[165] 79 Fed. Reg. at 22261.

[166] *Rapanos*, 547 U.S. at 780. Justice Kennedy would agree because in his opinion he stated that the nexus "must be assessed in terms of the [CWA's] goals and purposes.

[167] 79 Fed. Reg. at 22195.

although the draft Guidance is a vast improvement, we encourage the Agencies to go still further. The scientific literature is now clear that most non-proximate wetlands are connected either biologically, chemically, or hydrologically to jurisdictional waters. The proposed rule should reflect this reality.

Finally, we want to point out that what we are suggesting in these comments would not restrict in any way the long-standing exemptions for agriculture, ranching, and forestry that are set forth in the CWA. Nor would what we are seeking broaden CWA jurisdiction beyond what is permissible under current federal law.

If you have any questions concerning this comment letter, please contact me at (404) 521-9900.

Sincerely,

/S/

William W. Sapp
Senior Attorney

cc:

Alabama Rivers Alliance
One Hundred Miles
Cahaba River Society
Choctawhatchee Riverkeeper
Hurricane Creekkeeper
Friends of Hurricane Creek
Upstate Forever
Georgia River Network
Environment Virginia
Catawba Riverkeeper Foundation
Atlanta Audubon Society
Harpeth River Watershed Association
Congaree Riverkeeper
Wetlands Watch
Friends of the Rivers of Virginia
Roanoke River Basin Association
Virginia League of Conservation Voters
Chattahoochee Riverkeeper
Center for a Sustainable Coast
Satilla Riverkeeper
Savannah Riverkeeper
Waccamaw River Keeper
South Carolina Wildlife Federation
Environment Georgia
SC Coastal Conservation League
St. Marys EarthKeeper
Alabama Rivers Alliance
Glynn Environmental Coalition
Tennessee Citizens for Wilderness Planning
Ogeechee Riverkeeper
Tennessee Environmental Council
Tennessee Chapter Sierra Club
Charleston Waterkeeper
Conservation Voters of South Carolina
North Carolina Coastal Federation
Friends of Reedy Creek

Save Our Saluda
Black Warrior Riverkeeper
Cahaba Riverkeeper
SOURCE
Greenlaw
Altamaha Riverkeeper
Tennessee Clean Water Network
Tennessee Riverkeeper
Friends of Little Cahaba
Coosa Riverkeeper
Flint Riverkeeper
Wild South
Mobile Baykeeper

EXHIBIT A

Exhibit A

Summary of Clean Water Act History

(The Legislative History of the Clean Water Act, the Implementation of the Act, and Judicial Review of the Act all Show that the Act was to be Interpreted Broadly.)[1]

A. The "Clean Water Act of 1972"

To appreciate the jurisdictional reach of the Clean Water Act, it is important to review the legislative history of the Act. It is apparent from what was said and written about Clean Water Act jurisdiction during the passage of this Act that it was meant to cover the nation's waters in a comprehensive manner.[2]

To characterize the Clean Water Act of 1972 as simply another set of amendments to the long series of federal water pollution control statutes that Congress enacted during the 1940s, 1950s, and 1960s, (which we refer to collectively as the FWPCAs), would be misleading. The

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[1] In this section the author draws heavily from the article William W. Sapp et al., *From the Fields of Runnymede to the Waters of the United States: A Historical Review of the Clean Water Act and the Term "Navigable Waters,"* 36 Envtl. L. Rep. News & Analysis 10190 (2006).

[2] As is explained below, Congress intended the Clean Water Act to have a broad application. Whether Congress fully comprehended the role wetlands would play in the interpretation of the Clean Water Act of 1972 is unclear. What is clear, though, is that by 1972 the scientific community was rapidly increasing its understanding of the vital role that wetlands play in aquatic ecosystems. As early as 1956, the FWS published a report that coined the phrase "wetlands" and articulated a taxonomy of wetland types. It also explained the value of wetlands as habitat for fish and wildlife and called for the setting aside of land to protect these areas. Samuel P. Shaw & C. Gordon Fredine, *Wetlands of the United States: Their Extent and Their Value to Waterfowl and Other Wildlife,* FWS Circular No. 39 (1956). Others stressed the importance of wetlands too, including authors such as John and Mildred Teal whose book *Life and Death of a Salt Marsh* was published in 1969. By 1970, at least one committee in the U.S. House of Representatives had recognized the importance of wetlands and published a report explaining how the Corps could help protect the important resource. *Our Waters and Wetlands: How the Corps of Engineers Can Help Prevent Their Destruction and Pollution,* H.R. Rep. No. 91-917 (1970). In this report the Committee on Government Operations stated the following:

> The natural environments of our Nation's bays, estuaries, and other water bodies are being destroyed or threatened with destruction by water pollution, alteration of river courses, landfilling of the shallow and marshland areas, sedimentation, dredging, construction of piers and bulkheads, and other man-made changes. Many of these water areas, including some located near densely populated urban areas, serve public needs for recreational opportunities and provide feeding, habitat, and nesting or spawning grounds for migratory waterfowl, fish, shellfish, and other wildlife. Many Federal agencies participate in, or authorize work and activities which contribute to, the destruction of these water areas, and some agencies have specific responsibilities for preventing such pollution and destruction.

Id. at 1. In the remainder of the report, the committee strongly suggests ways that the Corps can use its existing authorities to protect wetlands and other waters.

FWPCAs had relied on the concept of water quality standards. They had also placed the federal government in a support role to the states. These approaches had not been very successful in reducing water pollution. As a result, Congress revised the structure of the FWPCAs when it passed the Clean Water Act of 1972 and crafted a state-federal partnership to improve water quality.

The most important addition that Congress made to the FWPCAs, for the purposes of our present inquiry, is that in the Clean Water Act of 1972 it defined the term "navigable waters" as the "waters of the United States, including the territorial seas." As demonstrated in the discussion below, it took some time and some debate for Congress to arrive at that definition. Between the two houses of Congress, the Senate was the first to arrive at a definition for the term "navigable waters."

1. *Senate Bill 2770*

The Senate Environment and Public Works Committee introduced S. 2770 on October 28, 1971.[3] In S. 2770, the Committee defined "navigable waters" as meaning "the navigable waters of the United States, portions thereof, and *the tributaries thereof,* including the territorial seas and the Great Lakes."[4] From this definition it is clear that the committee was proposing a geographic jurisdiction for the Clean Water Act comparable to that of Section 13 of the Rivers & Harbors Act of 1899 (Refuse Act).

The Committee Report that accompanied the bill offers support for this position. It provided as follows:

> The control strategy of the Act extends to navigable waters. The definition of this term means the *navigable waters of the United States, portions thereof, tributaries thereof, and includes the territorial seas and the Great Lakes*. . . . Water moves in hydrologic cycles and it is essential that discharge of pollutants be controlled at the source. Therefore, reference to the control requirements must be made the navigable waters, portions thereof, and their tributaries.[5]

Had the committee meant to restrict the jurisdiction of the proposed legislation to the traditional navigable waters, it could have defined "navigable waters" as the "navigable waters of the United

[3] S. 2770, 92d Cong. (1971).

[4] S. 2770, 92d Cong., § 502(h) (1971) (emphasis added).

[5] S. Rep. No. 92-414, at 77 (1971) (emphasis added).

States."[6] It did not. Instead, it specifically included tributaries in the definition because of the committee's goal of controlling water pollution at its source.

In the extensive debates over S. 2770 on the Senate floor, the jurisdictional reach of S. 2770 was only commented on once. In summarizing the bill, Sen. John Williams (R-Del.) stated that proposed legislation would lead to an increase in federal jurisdiction by extending the reach of that jurisdiction "to all navigable waters rather than just interstate and boundary waters."[7] With no further discussion about "navigable waters," the Senate passed S. 2770 on November 2, 1971, leaving the definition for "navigable waters" unchanged.

2. *House Bill 11896*

On November 19, 1971, the U.S. House of Representatives' Public Works Committee introduced H.R. 11896. It defined "navigable waters" as the "navigable waters of the United States, including the territorial seas."[8] The House Report that accompanied H.R. 11896 commented on this definition in the following:

> One term the Committee was reluctant to define was the term "navigable waters." The reluctance was based on the fear that any interpretation would be read narrowly. However, this is not the Committee's intent. The Committee fully intends that the term "navigable waters" be given the *broadest possible constitutional interpretation* unencumbered by agency determinations which have been made or may be made for administrative purposes.[9]

This language shows that, like the Senate, the House intended for the Clean Water Act to have a broad jurisdictional reach.

Furthermore, S. 2770 had been available to the members and staffers of the House for more than three weeks before the Public Works Committee introduced H.R. 11896. Thus, it is more than likely that the committee was well aware of the definition that the Senate was using for "navigable waters." If the committee had intended for H.R. 11896 to have a significantly smaller jurisdictional reach than S. 2770, it is likely that it would have noted this in its report.

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[6] As explained in Section II A below, "traditionally navigable waters" are those waters that are within the jurisdiction of older statutes such as the Rivers & Harbors Act of 1899. The jurisdiction of the Rivers & Harbors Act is limited to "navigable rivers of the United States" which are those waters that were used in the past to transport commerce, are presently used for this purpose, or could be improved to allow for the transport of commerce.

[7] 117 Cong. Rec. 38863 (daily ed. Nov. 2, 1971).

[8] H.R. 11896, 92d Cong. § 502(8) (1971).

[9] H.R. Rep. No. 92-911, at 131 (1972) (emphasis added).

Instead, the House Public Works Committee Report indicates that the definition for "navigable waters" in H.R. 11896 was intended to be the same as its counterpart in S. 2770.

The debates on the House floor on H.R. 11896 yield only two comments on its jurisdictional reach. Both provide some support for the position that the House and Senate were substantially aligned on the issue of "navigable waters." First, Rep. William Sikes (D-Fla.), in comparing H.R. 11896 to S. 2770, said: "Both the House and the Senate bill declare their objective is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[10] If the House bill were designed to protect a much smaller subset of the waters intended to be protected by the S. 2770, it would seem that Representative Sikes would have mentioned such a difference between the two bills.

Second, Rep. Ray Madden (D-Ind.), after describing the deplorable condition of the nation's waters,[11] stated that H.R. 11896 "calls for an all-out drive by the Federal Government to eliminate the discharge of pollutants into our *lakes, rivers, and navigable waters* by 1985. In the meantime the legislation strives to purify our *lakes and streams* so that they would all be suitable for swimming by 1981."[12] He then went on to comment that: "We have 225 miles of Lake Michigan shoreline, hundreds of miles of *trout streams* and hundreds of *inland lakes* and exploding recreational facilities demands that stimulate my constituents to want action to provide clean water."[13] Based on these comments, it is likely that Representative Madden believed that the federal government's "all-out" drive was going to extend to the trout streams and inland lakes he referred to, as well as to traditional navigable waters such as Lake Michigan.

With neither House willing to adopt the other's bill, H.R. 11896 and S. 2770 were sent to a joint House and Senate conference committee.

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[10] 118 Cong. Rec. 10799 (daily ed. Mar. 29, 1972) at 739.

[11] Representative Madden described those deplorable conditions in the following statement:

> We admit that one must consider today that almost 75 percent of our population live in urban areas where drinking water during the last 12 years has become stagnated and infested with germs and pollutants caused by municipalities, industries, and all segments of our economy dumping refuse, waste, and pollutants into our lakes and streams. Beaches are being closed, rivers, both large and small, are becoming stench-holes, and over 30 percent of the Nation's drinking water contains hazardous amounts of chemicals and pollutants.

118 Cong. Rec. 10202 (daily ed. Mar. 27, 1972); 118 Cong. Rec. 33691-92 (daily ed. Oct. 4, 1972).

[12] 118 Cong. Rec. 10202-03 (daily ed. Mar. 27, 1972) (emphasis added).

[13] 118 Cong. Rec. 10202-03 (daily ed. Mar. 27, 1972) (emphasis added).

3. *Conference*

On September 28, 1972, S. 2770 emerged from the Conference Committee with certain modifications. One of these modifications was a new definition for "navigable waters." The Conference Committee decided to define "navigable waters" as the "waters of the United States, including the territorial seas."[14] The committee included the following statement in the Conference Report to provide guidance on how the term should be interpreted: "The conferees fully intend that the term 'navigable waters' be given the *broadest possible constitutional interpretation* unencumbered by agency determinations which have been made or may be made for administrative purposes."[15] The conferees did not want the jurisdiction of the Clean Water Act to be limited by legislative or executive fiat. Instead, it appears that the conferees were leaving that determination up to the U.S. Supreme Court. Since the Court had already held that federal jurisdiction could extend to non-navigable tributaries in cases such as *Rio Grande Dam & Irrigation Co.*[16] and *Grand River Dam Authority,*[17] it is logical to conclude that the conferees intended for "navigable waters" to include traditional navigable waters and non-navigable waters.

During Senate debate on the Conference Report, Senator Muskie asked that the legislative history for the Clean Water Act include a written summary of the major points of the Conference Report. In that summary, he began by stating that: "One matter of importance throughout the legislation is the meaning of the term 'navigable waters of the United States.'"[18] He then goes on to include the Conference Report statement quoted above that calls for a broad interpretation of the term "navigable waters."[19] In the next passage he continues this theme by stating:

> Based on the history of consideration of this legislation, it is *obvious that its provisions and the extent of application should be construed broadly.* It is intended that the term "navigable waters" *include* all water bodies, such as lakes, streams and rivers, regarded as public navigable waters in law which are navigable in fact. It is further intended that such waters shall be considered to be navigable in fact

[14] S. Conf. Rep. No. 92-1236, at 144 (1972).

[15] S. Conf. Rep. No. 92-1236, at 144 (1972).

[16] *United States v. Rio Grande Dam & Irrigation Co.*, 174 U.S. 690 (1899).

[17] *United States v. Grand River Dam Auth.*, 363 U.S. 229 (1960).

[18] 118 Cong. Rec. 33699 (daily ed. Oct. 4, 1972).

[19] 118 Cong. Rec. 33699 (daily ed. Oct. 4, 1972).

> when they form, in their ordinary condition by themselves or by uniting with other waters or other systems of transportation, such as highways or railroads, a continuing highway over which commerce is or may be carried on with other States or with foreign countries in the customary means of trade and travel in which commerce is conducted today. In such cases the commerce on such waters would have a substantial economic effect on interstate commerce.[20]

In this passage, Senator Muskie reiterates that the term "navigable waters" should be construed broadly. He then goes on to focus on navigable-in-fact waters in such a way to suggest that only they could be considered "navigable waters." Considering that Senator Muskie was one of the key architects of the Clean Water Act and that he had consistently argued for a broad interpretation of the term "navigable waters," this passage should not be taken as evidence that Senator Muskie had in the "eleventh hour" abruptly changed his views on Clean Water Act jurisdiction.

After hearing the remarks of Senator Muskie and others, the Senate voted 74 to 0 to approve the Conference Report. Had there been any dispute over an issue as fundamental as the jurisdiction of the Clean Water Act, this vote would not have been unanimous.

During the House debate on the Conference Report, Rep. John Dingell (D-Mich.), floor manager for the bill and one of the cosponsors of H.R. 11896, discussed the definition of "navigable waters" as it appeared in § 502 of the conference version of S. 2770. Representative Dingell discussed how the concept of "navigable waters" had expanded over time since *The Daniel Ball* case in 1870.[21] Representative Dingell explained that although "navigable waters" may have once had a strict meaning that was tied to whether a ship could navigate a water body, that strict meaning had been changed by two centuries of U.S. Supreme Court precedent.[22] As an

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[20] 118 Cong. Rec. 33699 (daily ed. Oct. 4, 1972).

[21] *The Daniel* Ball, 77 U.S. 557, 563 (1870).

[22] As Representative Dingell stated in his remarks on the House floor:

> The new and broader definition is in line with more recent judicial opinions which have substantially expanded that limited view of navigability--derived from the Daniel Ball case (77 U.S. 557, 563)--to include waterways which would be "susceptible of being used . . . with reasonable improvement," as well as those waterways which include sections presently obstructed by falls, rapids, sand bars, currents, floating debris, et cetera. *United States v. Utah,* 283 U.S. 64 (1931); *United States v. Applachian* [sic] *Electric Power Co.,* 331 U.S. 377, 407-410, 416 (1940); *Wisconsin Public Service Corp. v. Federal Power Commission,* 147 F.2d 743 (CA 7, 1945); *cert. den.* 325 U.S. 880; *Wisconsin v. Federal Power Commission,* 214 F.2d 334 (CA 7, 1954) *cert. den.* 348 U.S. 883 (1954); *Namekagon Hydro Co. v. Federal Power Commission,* 216 F.2d 509 (CA 7, 1954); *Puente de Reynosa, S.A. v. City of McAllen,* 357 F.2d 43, 50-51 (CA 5, 1966); *Rochester Gas and Electric Corp. v. Federal Power Commission,* 344 F. 2d 594 (CA 2, 1965); [*United States v. Steamer Montello*], 87 U.S. (20 Wall.) 430, 441-42 (1874); *Economy Light & Power Co. v. United States,* 256 U.S. 113 (1921).

example, he pointed out that to be considered a "navigable water" in the past, a water body had to be a link in an interstate chain of waterborne commerce; by 1972, a water body could be a "navigable water" even if the chain of commerce included links that were over land.[23] In short, Representative Dingell did not want any of his colleagues to apply an outmoded definition to the term "navigable waters" as it appeared in § 502 of H.R. 11896.

In an attempt to end all possible misunderstanding about the term "navigable waters," Representative Dingell summarized the breadth of the term by making one of the clearest statements on the subject contained in the legislative history of the Clean Water Act: "Thus, this new definition clearly encompasses all water bodies, including main streams and their *tributaries,* for water quality purposes."[24] By including the word "tributaries" in this statement, it demonstrates that Representative Dingell intended for the term "navigable waters" to include non-navigable tributaries, as well as traditional navigable waters.

In discussing the Conference Report, several representatives and senators described at great length the differences between H.R. 11896 and S. 2770. What is significant about these discussions is that not one of these individuals mentioned that the definition of "navigable waters" in H.R. 11896 differed from that in S. 2770. Instead, the members pointed out other differences. For example, S. 2770 provided EPA with veto power over state-issued permits, whereas H.R. 11896 did not. S. 2770 included a no-discharge goal by 1985, whereas H.R. 11896 did not. And, S. 2770 provided for national pollution standards, whereas H.R. 11896 did not.[25]

If the H.R. 11896 definition of "navigable waters" genuinely was understood by any Representative to cover only traditional navigable waters, and the S. 2770 definition of "navigable waters" was understood to mean traditional navigable waters and any adjacent

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118 Cong. Rec. 33756-57 (daily ed. Oct. 4, 1972).

[23] As Representative Dingell stated in the following, the water bodies only have to be one link in the chain of interstate commerce:

> Although most interstate commerce 150 years ago was accomplished on waterways, there is no requirement in the Constitution that the waterway must cross a State boundary in order to be within the interstate commerce power of the Federal government. Rather, it is enough that the waterway serves as a link in the chain of commerce among the States as it flows in the various channels of transportation--highways, railroads, air traffic, radio and postal communication, waterways, et cetera. The "gist of the Federal test" is the waterway's use "as a highway," not whether it is "part of a navigable interstate or international commercial highway." *Utah v. United States,* 403 U.S. 9, 11, 1 ELR 20250 (1971); *United States v. Underwood,* 4 ERC 1305, 1309, 2 ELR 20567. (M.D. Fla. June 8, 1972).

118 Cong. Rec. 33756-57 (daily ed. Oct. 4, 1972).

[24] 118 Cong. Rec. 33756-57 (daily ed. Oct. 4, 1972) (emphasis added).

[25] *See, e.g.*, H.R. Deb. on H.R. 11896, 92d Cong. (1972).

wetlands, as well as non-navigable tributaries, then this single difference would have dwarfed all of the other differences between the two bills described above. As Rep. William Harsha (D-Ohio) and Sen. Philip Hart (D-Mich.) estimated in the 1977 debates on the Clean Water Act, only about 2% of the nation's waters would be covered by the legislation if federal jurisdiction under the Clean Water Act were limited to the traditional navigable waters and any adjacent wetlands.[26]

In other words, at least 98% of the nation's waters would have been unprotected by the proposed 1972 legislation if it had covered only traditional navigable waters. Although it is not clear whether the 92d Congress had these precise statistics, it is likely that the senators and congressmen who voted on the Clean Water Act of 1972 realized that the traditional navigable waters included but a small fraction of the *nation's waters.* If the definitions for "navigable waters" in the two bills were indeed being interpreted differently--with S. 2770 being interpreted to include close to 100% of the nation's waters and H.R. 11896 being interpreted to include at most 2% of the *nation's waters*--it would seem that this would have been a difference in the two bills that at least 1 of the 531 elected members of the 92d Congress would have felt worthy of recording in the legislative history of the Act.

Based on the legislative history, there does not appear to have been any disagreement in the House over having a broad interpretation of the term "navigable waters." The Conference Committee's version of S. 2770 passed the House 366 to 11.[27]

4. *Presidential Veto*

At the close of their respective considerations of the Conference Report, the two houses adopted S. 2770 and sent it on to President Nixon for signature. Instead of signing the bill, he vetoed it. Senator Muskie had anticipated that the president would veto the bill because of the "stringent regulations it would impose on industrial polluters."[28] Instead, President Nixon stated that he vetoed the bill because the country could not afford to build all the municipal sewage treatment plants that the bill required. President Nixon explained that S. 2770 was a "bill whose laudable intent is out-weighed by its unconscionable $24 billion price tag."[29] The day after the

[26] 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Hart), 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)), 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)); Lance D. Wood, *Don't Be Misled: Clean Water Act Jurisdiction Extends to All Non-Navigable Tributaries of the Traditional Navigable Waters and to Their Adjacent Wetlands,* 34 ELR 10187, 10193 (Feb. 2004), at 939-40; 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. Harsha), 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)), 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[27] 118 Cong. Rec. 33767-68 (daily ed. Oct. 4, 1972).

[28] 118 Cong. Rec. 33694 (daily ed. Oct. 4, 1972).

[29] Veto Message for S. 2770, 92d Cong., at 1 (1972); 118 Cong. Rec. 33691-92 (daily ed. Oct. 4, 1972).

president concluded the nation could not afford the Clean Water Act, Congress debated S. 2770 a final time. Much was said about the price tag of the bill, but nothing was said about the definition of "navigable waters."[30]

Congress easily overrode President Nixon's veto by votes of 52 to 12 in the Senate and 247 to 23 in the House. The Clean Water Act became law on October 18, 1972, and it included the following definition: "'navigable waters' means the 'waters of the United States, including the territorial seas.'"[31] Taking into consideration the history of the term "navigable waters" and all that was said and written on the subject during the debates of the Clean Water Act of 1972, it is clear that Congress intended Clean Water Act jurisdiction to encompass all the *nation's waters.* And, as explained above, this includes the traditional navigable waters, as well as the non-navigable waters, such as the non-navigable tributaries. This conclusion is reinforced by the remaining sections of these comments.

B. Executive and Judicial Response to the Clean Water Act of 1972

Examining how the executive branch and judicial branch interpreted the term "navigable waters" after 1972 helps establish the context for the legislative history of the Clean Water Act of 1977. EPA, the Corps, and the courts had a lot to say about the geographic jurisdiction of the Clean Water Act of 1972. What these entities said and did during the implementation of the Act helped to shape the discussion in Congress over the term "navigable waters" in 1977.

1. *EPA's Response*

EPA immediately interpreted the scope of the Clean Water Act to cover "all the waters of the United States" and began drafting regulations to implement § 402, which provides the authority for EPA's national pollution discharge elimination system (NPDES).[32] The NPDES program regulates all discharges of pollutants into the "navigable waters" except for discharges of "dredged or fill material."[33] These latter pollutants are regulated by the Corps, in conjunction with EPA, under § 404 of the Clean Water Act.[34]

The regulations that EPA promulgated in 1973 to implement the Act included the following broad definition of the term "navigable waters":

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[30] 118 Cong. Rec. 36871-79 (daily ed. Oct. 18, 1972), at 95-113; S. Deb. on Veto of S. 2770, 92d Cong. (1972), at 115-36.

[31] Pub. L. No. 92-500, § 502(7), 86 Stat. 886 (1972).

[32] 33 U.S.C. § 1342.

[33] 33 U.S.C. § 1342.

[34] 33 U.S.C. § 1344.

(1) All navigable waters of the United States;

(2) Tributaries of the navigable waters of the United States;

(3) All interstate waters;

(4) Intrastate lakes, rivers and streams which are utilized by interstate travelers for recreation and other purposes;

(5) Intrastate lakes, rivers and streams from which fish or shellfish are taken and sold in interstate commerce;

(6) Intrastate lakes, rivers and streams which are utilized for industrial purposes by industries in interstate commerce.[35]

Consistent with congressional direction, EPA developed an administrative definition of "navigable waters" that would allow the new Act to control water pollution "at its source," as the statutory provisions and legislative history of the new law required. Although EPA's original definition quoted above did not specifically list "wetlands" as "navigable waters," EPA contemporaneously issued a policy statement noting that wetlands "represent an ecosystem of unique and major importance to citizens of this Nation" that require "extraordinary protection."[36] Accordingly, EPA announced its policy to "preserve the wetland ecosystems and to protect them from destruction through waste water or nonpoint source discharges" and to "minimize alterations in the quantity or quality of the natural flow of water that nourishes wetlands and to protect wetlands from adverse dredging or filling practices."[37]

[35] 38 Fed. Reg. 13527, 13529 (May 22, 1973).

[36] 38 Fed. Reg. 10834 (May 2, 1973).

[37] 38 Fed. Reg. 10834 (May 2, 1973).

2. *The Corps' Response*

The Corps' response to the Clean Water Act was more complicated. Two months after the passage of the Act, the Acting General Counsel for the Corps, William R. Orlandi, signed a memorandum addressed to the Corps' Director of Civil Works outlining the issues raised by the new legislation. The first issue involved the transfer of the Refuse Act regulatory program from the Corps to EPA. The Refuse Act program was to serve as the foundation of the new EPA NPDES program. This posed a potential problem for the Corps, because under the Refuse Act, the Corps had been able to control any discharges of refuse into non-navigable tributaries. If not properly regulated, these discharges could flow downstream and cause sandbars to develop in navigation channels.

Acting General Counsel Orlandi explained the problem as follows:

> Since [Refuse Act] permits for discharges into *nonnavigable tributaries* have been transferred to EPA, what course of action should the Corps take to control and remedy shoaling conditions in *navigable waters* which may occur as a result of discharges into *nonnavigable tributaries?* This will require coordination with EPA with resultant agreements being reduced to a memorandum of understanding between both agencies.[38]

This passage demonstrates that the head attorney at the Corps at that time had concluded that the jurisdiction of the Clean Water Act extended to non-navigable tributaries just like the jurisdiction of the Refuse Act had extended into such waters.

Next, Orlandi raised the question of whether the Corps should consider observing two different jurisdictional reaches for the established § 10 regulatory program (which regulated the construction of structures in the "navigable waters of the United States") and the new § 404 program.

> Should the Corps continue to use the definition of "navigable waters" as prescribed in [its regulations implementing § 10] to define the scope of its regulatory jurisdiction, or expand its jurisdiction to include "*all* waters of the United States" which is the definition of "navigable waters" used in the [Clean Water Act]? It is possible that we would be confined to our current definition of "navigable water" in the administration of our [§] 10 permit program, but would have to expand our

[38] Memorandum from William R. Orlandi, Acting General Counsel, U.S. Army Corps of Engineers, to Director of Civil Works, U.S. Army Corps of Engineers, Problem Areas to Be Resolved in Corps Regulatory Programs Following Passage of Recent Legislation, P2(a)(2) (Dec. 13, 1972) (on file with author).

> normal jurisdiction to include additional waters in the administration of the new [§] 404 permit program.[39]

Here the Acting General Counsel poses a remarkable question considering the ultimate path that the Corps chose to take in implementing the § 404 program; Mr. Orlandi asks whether, considering that Clean Water Act jurisdiction extends into non-navigable tributaries, the Corps should extend the jurisdiction of its § 10 program into non-navigable tributaries. He concludes that the Corps probably would not be able to expand the jurisdiction of the § 10 program, and thus, the § 404 program would have to have a broader jurisdictional reach than the § 10 program.

In making these observations, the Acting General Counsel acknowledged that implementing a § 404 permit program covering discharges of dredged and fill material in all the nation's waters would have political repercussions.[40] His concerns are clear in his concluding remarks in the memorandum:

> In view of the fact that many of the problem areas raised by [the Clean Water Act of 1972] involve an *intermixture of legal and policy decisions,* it is suggested that representatives from your Directorate meet with members of my staff to resolve these matters.[41]

The Corps decided to interpret the terms "navigable waters" and "waters of the United States" narrowly and apply the § 404 program to the same waters as the § 10 program, that is, only the traditional navigable waters. In the following passage from his article on "navigable waters," long-time Corps Assistant Chief Counsel Lance D. Wood describes why the Corps decided to interpret Clean Water Act jurisdiction so narrowly:

> From 1972 through 1974, the Corps' leadership came to realize that the new § 404 permit responsibility over "all the waters of the United States" could overwhelm the Corps with regulatory duties that the Corps had neither the staff nor the legal

[39] Memorandum from William R. Orlandi, Acting General Counsel, U.S. Army Corps of Engineers, to Director of Civil Works, U.S. Army Corps of Engineers, Problem Areas to Be Resolved in Corps Regulatory Programs Following Passage of Recent Legislation, P2(c)(5) (Dec. 13, 1972) (on file with author).

[40] 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)), 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)), *reprinted in* Lance D. Wood, *Don't Be Misled: Clean Water Act Jurisdiction Extends to All Non-Navigable Tributaries of the Traditional Navigable Waters and to Their Adjacent Wetlands,* 34 ELR 10187, 10193 (Feb. 2004), at 10206.

[41] Memorandum from William R. Orlandi, Acting General Counsel, U.S. Army Corps of Engineers, to Director of Civil Works, U.S. Army Corps of Engineers, Problem Areas to Be Resolved in Corps Regulatory Programs Following Passage of Recent Legislation, P2(a)(2) & P4 (Dec. 13, 1972) (emphasis added) (on file with author).

> means to perform effectively, but which could get the Corps into serious political, practical, and legal difficulties.[42]

According to Mr. Wood, the Corps did not have the regulatory resources to implement a drastically increased regulatory program, as required by § 404. In 1972, the Corps did not have sufficient personnel to administer even its existing regulatory programs under § 9 and § 10 of the Rivers and Harbors Act.[43] And the Corps did not want to hire and train the large new regulatory staff that would be needed to administer the § 404 program. As Mr. Wood provides, "the Corps' senior leadership wanted the Corps to remain to the maximum extent possible an engineering agency, staffed with engineers who solved important U.S. military and civil engineering problems, not a regulatory agency staffed with lawyers and regulators."[44]

Consequently, the Corps chose to view its new § 404 jurisdiction as equivalent to its established § 10 jurisdiction. Since § 404 jurisdiction extends to the "navigable waters," which was defined in the Clean Water Act to mean the "waters of the United States, including the territorial seas," and since § 10 jurisdiction extends to the "navigable waters of the United States," to make its jurisdictional plan work, the Corps had to conclude that the three terms above are all synonymous. This feat was explained in the Corps' first set of regulations that implemented the Clean Water Act of 1972.

The final rule of April 3, 1974, stated:

> Section 404 of the [Clean Water Act] uses the term "navigable waters" which is later defined in the Act as "the waters of the United States." The Conference Report, in discussing this term, advises that this term is to be given the "broadest possible Constitutional interpretation unencumbered by agency determinations which have been made or may be made for administrative purposes." We feel that the guidance in interpreting the meaning of this term which has been offered by this Conference Report--to give it the broadest Constitutional interpretation--is the same as the basic premise from which the aforementioned judicial precedents have evolved. The extent of Federal regulatory jurisdiction must be limited to that which is Constitutionally permissible, and in this regard, we feel that we must adopt an administrative definition of this term which is soundly based on this premise and the judicial precedents which have reinforced it. *Accordingly, we feel that both*

[42] Lance D. Wood, *Don't Be Misled: Clean Water Act Jurisdiction Extends to All Non-Navigable Tributaries of the Traditional Navigable Waters and to Their Adjacent Wetlands,* 34 ELR 10187, 10206 (Feb. 2004).

[43] Lance D. Wood, *Don't Be Misled: Clean Water Act Jurisdiction Extends to All Non-Navigable Tributaries of the Traditional Navigable Waters and to Their Adjacent Wetlands,* 34 ELR 10187, 10207 (Feb. 2004).

[44] Lance D. Wood, *Don't Be Misled: Clean Water Act Jurisdiction Extends to All Non-Navigable Tributaries of the Traditional Navigable Waters and to Their Adjacent Wetlands,* 34 ELR 10187, 10206 (Feb. 2004).

> *["navigable waters of the United States" and "waters of the United States"] should be treated synonymously.*[45]

In order for the Corps to reach the conclusion that "navigable waters of the United States" and "waters of the United States" should be used synonymously, the Corps had to conclude that by 1974 the limits of federal jurisdiction over the nation's waters extended only to the traditional navigable waters. If that had been the case, the Corps could not have legally implemented the § 404 program in any non-navigable waters. This conclusion, of course, belies the fact the Court had already sanctioned federal regulation of non-navigable tributaries[46] and that the Corps already had jurisdiction over non-navigable tributaries under the Refuse Act.[47]

Not surprisingly, EPA, the U.S. Department of Justice (DOJ), and four federal courts did not approve of the Corps' narrow interpretation of "navigable waters." Near the time the Corps issued its regulations implementing the Clean Water Act, the DOJ wrote a letter to the Corps arguing in favor of a broader interpretation of "navigable waters."[48] In *United States v. Holland*[49] and *United States v. Smith,*[50] the courts held that the phrase "waters of the United States" signaled a broad interpretation of "navigable waters." And, in *United States v. Ashland Oil & Transportation Co.,*[51] the U.S. Court of Appeals for the Sixth Circuit explained that the Corps' narrow interpretation of "navigable waters" to exclude tributaries was nonsensical.

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[45] 39 Fed. Reg. 12115, 12115 (Apr. 3, 1974) (emphasis added).

[46] *United States v. Rio Grande Dam & Irrigation Co.*, 174 U.S. 690 (1899); *United States v. Grand River Dam Auth.*, 363 U.S. 229 (1960).

[47] 33 U.S.C. § 407. Under § 13, the Corps had authority to regulate discharges of refuse into the "navigable waters of the United States," as well as "any *tributaries* of any navigable water." *Id.* (emphasis added).

[48] William L. Want, Law of Wetlands Regulation § 2:9, 2-10, n.3 (2005).

[49] 373 F. Supp. 665, 671 (M.D. Fla. 1974):

> Clearly Congress has the power to eliminate the "navigability" limitation from the reach of federal control under the Commerce Clause. The "geographic" and "transportation" conception of the Commerce Clause which may have placed the navigation restriction in the Rivers and Harbors Act of 1899 has long since been abandoned in defining federal power. Now when courts are forced with a challenge to congressional power under the Commerce Clause a statute's validity is upheld by determining first if the general activity sought to be regulated is reasonably related to, or has an effect on, interstate commerce and, second, whether the specific activities in the case before the court are those intended to be reached by Congress through statute. Perez v. United States, 402 U.S. 146, 91 S. Ct. 1357, 28 L. Ed. 2d 686 (1970); Katzenbach v. McClung, 379 U.S. 294, 85 S. Ct. 377, 13 L. Ed. 2d 290 (1964); Heart of Atlanta Motel, Inc. v. United States, 379 U.S. 241, 85 S. Ct. 348, 13 L. Ed. 2d 258 (1964); United States v. Darby, 312 U.S. 100, 61 S. Ct. 451, 85 L. Ed. 609 (1941).

[50] 7 E.R.C. 1937, 1938-39 (E.D. Va. 1975).

[51] 504 F.2d 1317, 1325 (6th Cir. 1974):

> It would, of course, make a mockery of [Congress' Commerce Clause] powers if its authority to control pollution was limited to the bed of the navigable stream itself. The tributaries which join to form the river could then be used as open sewers as far as federal regulation was concerned. The navigable part of the river could become a mere conduit for upstream waste.[52]

As the court explained, unless discharges into tributaries are regulated, it is impossible to address water pollution in any effective way.

It was not until the Natural Resources Defense Council challenged the Corps' regulations in the federal district court for the District of Columbia, however, that the issue was resolved. In an eight-paragraph decision, the district court in *Natural Resource Defense Council, Inc. v. Callaway,*[53] ordered the Corps to "revoke and rescind those portions of the Corps regulations that pertained to the jurisdiction of the Corps under § 404 of the [Clean Water Act]." The key paragraph in the decision states as follows:

> [The Corps is] without authority to amend or change the statutory definition of navigable waters and [it is] hereby declared to have acted unlawfully and in derogation of [its] responsibilities under Section 404 of the Water Act by the adoption of the definition of navigability described at . . . 39 Federal Register 12119 . . . and it is ordered that the [Corps issue new regulations consistent with the Clean Water Act].[54]

When the Corps proposed a new set of regulations with an expanded interpretation of "navigable waters," it also issued a press release that explained that the expanded jurisdiction of the § 404 permit program could force farmers, foresters, and ranchers to obtain Corps permits for many of their common activities.[55] The press release was successful in getting the attention of a regulated community that saw an onerous federal permit program on the horizon.[56]

> We believe that Congress knew exactly what it was doing and that it intended the Federal Water Pollution Control Act to apply, as Congressman Dingell put it, "to all water bodies, including main streams and their tributaries." Certainly the Congressional language must be read to apply to our instant case involving pollution of one of the tributaries of a navigable river. Any other reading would violate the specific language of the [navigable waters definition] and turn a great legislative enactment into a meaningless jumble of words.

[52] 504 F.2d 1317, 1326 (6th Cir. 1974).

[53] 392 F. Supp. 685 (D.D.C. 1975).

[54] 392 F. Supp. 685, 686 (D.D.C. 1975).

[55] William L. Want, Law of Wetlands Regulation § 2:9, 2-10, n.3 (2005) (citing Press Release, U.S. Dep't of Army, Office of the Chief of Engineers (May 6, 1975)); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen.

In its post-Callaway regulations, the Corps adopted a three-phase approach to implementing the expanded Corps regulatory jurisdiction. Wetland scholar William Want summarized the waters included in each phase in the following:

> [1] [Traditional Navigable Waters and Any Adjacent Wetlands]
>
> Phase I began immediately upon publication of the regulation on July 25, 1975, and included all the waters subject to the ebb and flow of the tide and/or waters that were or are susceptible to use for commercial navigation purposes (waters already being regulated by the Corps), plus all adjacent wetlands to these waters.
>
> [2] [Larger Non-navigable Waters and Any Adjacent Wetlands]
>
> Phase II became effective on September 1, 1976 (originally scheduled for July 1, 1976, but postponed for sixty days by Presidential action), and included primary tributaries to the Phase I waters and lakes greater than five acres in surface area, plus wetlands adjacent to these waters.
>
> [3] [Remainder of Non-navigable Waters and Any Adjacent Wetlands]
>
> Phase [III] became effective on July 1, 1977, and included all waters of the United States.[57]

Thus, within the span of two years, the Corps went from regulating only the traditional navigable waters under its 1974 regulations to regulating all the nation's waters under its 1975 regulations.

In its proposed § 404(b)(1) Guidelines, which were published three months before the Corps' 1975 regulations, EPA explained that the dredge and fill program would protect "wetlands which are especially valuable for propagation and support of fish and wildlife, as well as other beneficial uses [from] capricious development [that is] having a major impact on the aquatic life and wildlife of the United States, and other water uses."[58] Recognizing the importance of the program and that the Corps' resources were limited, EPA supported the phase-in of the Corps' regulatory program as evidenced by this passage from the preamble to the final § 404(b)(1) Guidelines:

Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[56] William L. Want, Law of Wetlands Regulation § 2:9, 2-10, n.3 (2005).

[57] William L. Want, Law of Wetlands Regulation § 2:9, 2-10, n.3 (2005); *see also* 40 Fed. Reg. 31319, 31320 (July 25, 1975); 33 C.F.R. § 209.120(d)(2) and (e)(2) (1976).

[58] 40 Fed. Reg. 19794 (May 6, 1975).

> [EPA and the Corps] have worked together in an effort to develop a program that is manageable, responsive to the concerns of protecting vital national water resources from destruction through irresponsible and irreversible decisions, and sensitive to the often conflicting needs and desires of people who utilize these resources. We have attempted to create a program that recognizes the need to interweave all concerns of the public in the decision making process: *that recognizes that present limitations on manpower preclude its immediate implementation throughout the country;* and that we believe to be responsive to the overall objectives and needs of the [FWPCA].[59]

While EPA and the Corps worked together to implement the phase-in, the regulated community began banding together to oppose it. Many of the groups that formed to oppose the new regulatory program had the political clout to make their voices heard in Washington, D.C.[60] So arose the political storm that would end in the Clean Water Act of 1977.

C. The 1977 Amendments

Beginning in about 1975, the regulated community, led by the silviculture, agriculture, and ranching interests,[61] lobbied against the broad scope of § 404 of the Clean Water Act. Congress, considering the intensity of this lobbying effort, was faced with two options: (1) roll back the jurisdictional reach of the § 404 program to the "traditional navigable waters;" or (2) develop some statutory fixes to the program to make the broad reach of the Act workable and palatable. Congress ultimately chose the latter option.[62] It is important to note that had Congress chosen to roll back the jurisdictional reach of the § 404 program in 1977, the statutory fixes ultimately embodied in the 1977 Amendments would not have been necessary.

1. *H.R. 3199*

In the 94th Congress, both chambers passed bills to amend the 1972 legislation, but both bills died in conference. In the 95th Congress, both the Senate Environment and Public Works

[59] 40 Fed. Reg. 41292, 41292 (Sept. 5, 1975) (emphasis added).

[60] 40 Fed. Reg. 41292, 41292 (Sept. 5, 1975).

[61] For example, Reps. Robert Edgar (D-Pa.) and Gary Myers (R-Pa.) stated the following in their Additional Views that accompany H.R. Rep. No. 95-139 (1977): "Thousands of farmers, and ranchers have written to their Congressmen calling for a roll back in the corps' jurisdiction with respect to the section 404 program. This grass-roots lobbying effort has been very effective to date." H.R. Rep. No. 95-139 (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[62] 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

Committee and the House Public Works and Transportation Committee held hearings on water pollution bills. On February 17, 1977, Rep. Herbert Roberts (D-Tex.) and 21 cosponsors introduced H.R. 3199 to the House with the intention of establishing the bounds of the Corps' § 404 regulatory authority once and for all.[63]

Section 16 of H.R. 3199 was intended to overhaul § 404 of the Clean Water Act by redefining "navigable waters" and "adjacent wetlands" for the purpose of the § 404 program only.[64] Thus, under this approach, § 402 of the Clean Water Act would have continued to have a broad definition for "navigable waters," whereas § 404 would have had a more narrow one. Section 16 states that "the term 'navigable waters' as used in this section shall mean all waters which are presently used, or are susceptible to use in their natural condition or by reasonable improvement as a means to transport interstate or foreign commerce . . . ."[65] Thus, under § 16 of H.R. 3199, § 404 jurisdiction would have covered navigable-in-fact waters and waters susceptible to being made navigable-in-fact, but not waters that had been used to transport commerce historically.

By omitting "*historic use waters"* from the definition of "navigable waters," the cosponsors of H.R. 3199 were apparently attempting to roll back federal jurisdiction to the pre-1921 era. It was in 1921 that the U.S. Supreme Court, in the *Economy Light & Power* case,[66] first decided that *historic use waters* fall under federal jurisdiction. It is also noteworthy that this § 16 definition for "navigable waters" is narrower than the definition adopted by the Corps for "navigable waters" in its short-lived 1974 regulations. In these regulations, the Corps, consistent with the holding in *Economy Light & Power,* had included the *historic use waters* in its definition of "navigable waters of the United States."[67]

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[63] H.R. 3199, 95th Cong. (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)) at 939-40; 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[64] H.R. Rep. No. 95-139, at 24 (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)), at 939-40; 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[65] H.R. 3199, 95th Cong. § 16 (1977).

[66] *Economy Light & Power Co. v. United States*, 256 U.S. 113, 123 (1921).

[67] Relevant text from the committee's explanation is as follows:

> The definition of "navigable waters" contained in section 16 is the same as the definition of navigable waters of the United States as it has evolved over the years through court decisions with one exception. The definition in section 16 omits the historical test of navigability. Under the historical test many bodies of water--particularly small lakes--have been classified as navigable by the Corps of Engineers solely on the basis of their use some time in the past as part of a highway of commerce. For example, some have been classified as navigable because they were used in the fur trade in the 1700's where traders would transport their furs by trail to the lake, across the lake by boat, and then again by trail into another State. Others have been classified as navigable because they were used in the same manner for the supply of army bases in the 1700s and 1800s. Likewise,

In addition to defining the term "navigable waters," § 16 of H.R. 3199 also defined the term "adjacent wetlands" as any wetlands that are "contiguous or adjacent to navigable waters."[68] Section 16 then stated that those waters that are not "navigable waters" or "adjacent waters" are not subject to direct regulation by the Corps under the Clean Water Act, or "section 9, section 10, or section 13" of the Rivers and Harbors Act of 1899.[69] Under § 16 then, the only way that the Corps could regulate discharges of dredged or fill material into waters that were not "navigable waters" or "adjacent waters" would have been by entering into a joint agreement with the governor of the state in which these "other waters" were located.[70] Because the cosponsors of § 16 did not attempt to limit the bounds of these "other waters" in any way, § 16 provided a form of "conditional federal jurisdiction" that would have extended to all of the nation's waters had this provision ever been enacted.

In recommending § 16, the House Public Works and Transportation Committee offered three basic reasons for its adoption. First, the committee said that the Corps would not be able to efficiently and effectively process all of the permits that would be required if § 404 jurisdiction were maintained for all the nation's waters because the committee did not believe that Congress would approve any increases to the Corps' regulatory resources.[71] Second, the committee believed that the federal government could not and should not assume the entire responsibility

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> small lakes located entirely within one State, which were part of a highway of commerce in the 1800s by virtue of their proximity to a railway track which led into another State, have been classified as navigable.

H.R. Rep. No. 95-139 (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[68] The full text is as follows:

> The term "adjacent wetlands" as used in this section shall mean (A) those wetlands, mudflats, swamps, marshes, shallows, and those areas periodically inundated by saline or brackish waters that are normally characterized by the prevalence of salt or brackish water vegetation capable of growth and reproduction, which are contiguous or adjacent to navigable waters, and (B) those freshwater wetlands including marshes, shallows, swamps, and similar areas that are contiguous or adjacent to navigable waters, that support freshwater vegetation and that are periodically inundated and are normally characterized by the prevalence of vegetation that requires saturated soil conditions for growth and reproduction.

H.R. 3199, 95th Cong. § 16 (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[69] Considering that § 13 explicitly states that it covers "tributaries" of traditional navigable waters, it is not clear what import the § 16 limitation would have had on § 13, especially considering that § 13 had already been superseded, in large measure, by § 402 of the Clean Water Act.

[70] H.R. 3199, 95th Cong. § 16 (1977).

[71] H.R. Rep. No. 95-139 (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

for cleaning up the nation's waters.[72] Third, the committee contended, incorrectly, that historically the federal government had only regulated traditional navigable waters and any adjacent wetlands.[73]

In the debates on the House floor over H.R. 3199, the representatives divided into two groups. Those who supported § 16 reiterated the arguments made by the House Public Works and Transportation Committee when its members had reported the bill. Those who opposed § 16 pointed out that many states had weak environmental protection programs.[74] In explaining this point, Rep. Stewart B. McKinney (R-Conn.) stated, "delegating the Corps' program to State agencies would leave too much of the nation's wetlands subject to uncoordinated, unplanned, and destructive development."[75] He also explained that § 16 would leave "98 percent of the Nation's stream miles and 80 percent of its swamps and marshlands" unregulated by the Corps or EPA.[76]

Representative McKinney then argued that the traditional navigable waters-non-navigable tributaries distinction "does not reflect the environmental truism that water is water, wherever it is."[77] Commenting on § 404 jurisdiction, Reps. Robert Edgar (D-Pa.) and Gary Myers (R-Pa.) in a written statement on H.R. 3199 stated, "[the framers of the Clean Water Act of 1972] knew that a broad interpretation was necessary to provide for restoring and maintaining

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[72] H.R. Rep. No. 95-139 (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[73] H.R. Rep. No. 95-139 (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[74] *See* Additional Views of Representatives Harsha and Cleveland, H.R. Rep. No. 95-139 (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)):

> We are similarly unable to accept at this time the argument that state regulation can be relied upon to protect our most important wetlands in areas beyond Federal authority as curtailed by section 16 of this bill. If the States were doing an adequate job, the version of 404 currently in H.R. 3199 would not have the support it has among those interests not wishing to be regulated at all.

[75] 123 Cong. Rec. 10404 (daily ed. Apr. 5, 1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[76] 123 Cong. Rec. 10404 (daily ed. Apr. 5, 1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[77] 123 Cong. Rec. 10404 (daily ed. Apr. 5, 1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

the quality of our waters."[78] Representatives Edgar and Myers then went on to remind the House Public Works and Transportation Committee of the statement about "navigable waters" the committee included in its Committee Report only five years earlier (and it bears repeating here):

> One term that the committee was reluctant to define was the term "navigable waters." The reluctance was based on the *fear that the interpretation would be read narrowly.* However, this is not the committee's intent. The committee fully intends that the term "navigable waters" be given the *broadest possible constitutional interpretation* unencumbered by agency determinations which have been made or may be made for administrative purposes.[79]

Edgar and Myers continued by stating that "in defining 'navigable waters' broadly, the committee knew that there was a limit to dumping raw sewage into our streams, to injecting life-destroying toxins into our lakes, or dumping sludge off our coasts without eventually paying the penalty."[80] In short, they argued that the committee, like the rest of Congress, intended the jurisdiction of § 404 to reach all of the nation's waters. Finally, they made the point that § 16 would not even allow the Corps to assert jurisdiction over *historic use waters*--waters that had been subject to federal jurisdiction, as discussed above, since 1921.[81]

In an attempt to broker a compromise, Representative Edgar and Rep. James Cleveland (R-N.H.) both offered amendments to H.R. 3199 that would have preserved a broad interpretation of "navigable waters," but would have exempted certain agricultural and silvicultural activities such as plowing and ditching.[82] These amendments were rejected and the

[78] Additional Views of Representative Edgar and Representative Myers, H.R. Rep. No. 95-139, at 54 (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[79] Additional Views of Representative Edgar and Representative Myers, H.R. Rep. No. 95-139, at 54 (1977) (quoting H.R. Rep. No. 92-911, at 131 (1972)); 118 Cong. Rec. 33691-92 (daily ed. Oct. 4, 1972), at 818 (emphasis added).

[80] *See* Additional Views of Representative Edgar and Representative Myers, H.R. Rep. No. 95-139, at 54 (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[81] Additional Views of Representative Edgar and Representative Myers, H.R. Rep. No. 95-139, at 1250; *see Economy Light & Power Co. v. United States*, 256 U.S. 113 (1921) and accompanying text.

[82] 123 Cong. Rec. 10426-29 (daily ed. Apr. 5, 1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

House passed H.R. 3199 on April 5, 1977, by a large majority. Section 16 survived unchanged.[83] It was, however, not to survive Senate scrutiny.

2. *B. S. 1952*

While the House was negotiating H.R. 3199, the Senate was working on its own bill, S. 1952. The Senate Committee for the Environment and Public Works reported the bill to the Senate floor on July 19, 1977. The Senate bill left the 1972 definition of "navigable waters" unchanged.[84] While the committee sought to preserve the broad jurisdiction of § 404, its members realized that the heady days of 1972, with its unanimous Senate votes to protect the environment, were over. Influential senators, including Sens. Lloyd Bentsen (D-Tex.), Robert Dole (R-Kan.), Pete Domenici (R-N.M.), and John Tower (R-Tex.), had teamed up to restrict the jurisdictional reach of the § 404 program.[85]

Despite the new legislative landscape, the committee members were determined to ensure "continued protection of *all the Nation's waters."*[86] The Committee Report argues that without broad jurisdiction, the Clean Water Act would fail in its mission of cleaning up the nation's waters:

> The 1972 [Clean Water Act] exercised *comprehensive jurisdiction over the Nation's waters* to control pollution to the fullest constitutional extent . . . . The objective of the 1972 act is to protect the physical, chemical, and biological integrity of the Nation's waters. Restriction of jurisdiction to those relatively few waterways that are used or are susceptible to use for navigation would render this purpose impossible to achieve. Discharges of dredged or fill material into lakes and tributaries of these waters can physically disrupt the chemical and biological integrity of the Nation's waters and adversely affect their quality.[87]

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[83] H.R. 3199, 95th Cong. § 16 (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[84] S. 1952, 95th Cong. (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[85] *See* 123 Cong. Rec. 26711, 26725 (daily ed. Aug. 4, 1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[86] S. Rep. No. 95-370, at 75 (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)) (emphasis added).

[87] S. Rep. No. 95-370, at 75 (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)) (emphasis added).

> The Committee Report also stresses that pollution must be addressed at its source:
>
> > The presence of toxic pollutants in these materials compounds this pollution problem and further dictates that *the adverse effects of such materials must be addressed where the material is first discharged into the Nation's waters.* To limit the jurisdiction of the [Clean Water Act] with reference to discharges of the pollutants of dredged or fill material would cripple efforts to achieve the act's objectives.[88]

Senator Hart made this same point about the need to treat pollution at its source during an exchange with Senator Bentsen on the Senate floor:

> > So now what the Senator from Texas is suggesting is that we are only going to treat the cancer if it occurs in the trunk of the body, but not allow any treatments for the arms or the legs, so that if you have cancer in the hand, the arm, the foot, or the knee, we cannot treat that even though it may spread to the rest of the body or cause the loss of that limb.[89]

Just as Senator Hart tried to explain to Senator Bentsen in the above quote, the Committee argued that if the Corps did not have the freedom under the § 404 program to regulate discharges of dredged or fill material in all the nation's waters, the traditional navigable waters could be severely impacted by unregulated discharges into the non-navigable waters and their adjacent wetlands. To ensure that the Corps would be able to continue its mission of protecting the nation's waters from unauthorized discharges of dredged and fill material, the committee fought to preserve the current broad definition of "navigable waters."

The committee, however, was mindful of the administrative burden that such a large regulatory program would place on the Corps. Thus, the committee decided to tap the resources of willing states to help run the § 404 program. As the Senate Committee Report provides:

> > [S. 1952] *does not redefine navigable waters.* Instead [S. 1952] intends to assure *continued protection of all the Nation's waters,* but allows *States to assume the primary responsibility for protecting those lakes, rivers, streams, swamps, marshes, and other portions of the navigable waters outside the Corps program in the so-called Phase 1 waters.* Under [S. 1952], the Corps will continue to

[88] S. Rep. No. 95-370, at 75 (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)) (emphasis added).

[89] 123 Cong. Rec. 26713 (daily ed. Aug. 4, 1977); S. Deb. on S. 1952, 95th Cong. (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

> administer the § 404 permit program in all navigable waters for a discharge of dredge or fill material until the approval of a State program for Phase 2 and 3 waters.[90]

Thus, the committee determined that states willing to develop § 404 programs for non-navigable tributaries and their adjacent wetlands should be encouraged to do so. Under the "state assumption" process in S. 1952, if a state could demonstrate to EPA that its § 404 program was as vigorous as the federal program, then it could take over the § 404 program from the federal government for non-navigable tributaries and their adjacent wetlands.[91] The Corps would then confine its regulatory program within the state to just the traditional navigable waters (including the *historic use waters)* and their adjacent wetlands.[92]

3. *The Bentsen Amendment*

During the debates on S. 1952, it became quite apparent that Senator Bentsen was not happy with the bill. S. 1952 left unchanged the definition of "navigable waters" that was in the Clean Water Act of 1972--"navigable waters means the waters of the United States, including the territorial seas."[93] Convinced that the § 404 program should be confined to a more limited jurisdiction, Senator Bentsen offered § 16 from H.R. 3199 as an amendment to S. 1952. The House had approved H.R. 3199 four months earlier.[94] As discussed in the previous section on H.R. 3199, § 16 was designed to limit jurisdiction of the § 404 program to navigable-in-fact waters and waters that were susceptible to becoming navigable-in-fact. Thus, under § 16, § 404 jurisdiction would not have extended to any non-navigable waters, any *historic use waters,* or any adjacent wetlands thereof.[95]

Many senators supported the Bentsen Amendment. Like the supporters of § 16 in the House, these senators were attempting to turn back the clock on § 404 jurisdiction over the

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[90] S. Rep. No. 95-370, at 75 (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[91] S. Rep. No. 95-370, at 75 (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[92] S. 1952, 95th Cong. § 49(a)(5) (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)),

[93] Pub. L. No. 92-500, § 502(7), 86 Stat. 886 (1972).

[94] 123 Cong. Rec. 26711 (daily ed. Aug. 4, 1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[95] Considering that § 13 explicitly states that it covers "tributaries" of traditional navigable waters, it is not clear what import the § 16 limitation would have had on § 13, especially considering that § 13 had already been superseded, in large measure, by § 402 of the Clean Water Act and accompanying text.

nation's waters.[96] Non-navigable tributaries have been subject to federal jurisdiction since 1899,[97] and *historic use waters* have been subject to federal jurisdiction since 1921.[98]

These senators voiced three basic arguments in support of the Bentsen Amendment. First, Senator Domenici argued that when Congress passed the Clean Water Act of 1972, it only intended for the Act to reach navigable-in-fact waters and waters that were susceptible to becoming navigable-in-fact.[99] He contended that *Callaway* had been wrongly decided and that the Corps, as a result of this decision, was forced to improperly expand its regulatory program. The *Callaway* court, as explained above, held that the Corps acted illegally when, in its 1974 regulations, it limited the § 404 program to the traditional navigable waters and their adjacent wetlands.[100] It is not clear from his testimony whether Senator Domenici believed that EPA, in contrast to the Corps, had improperly included non-navigable waters and *historic use waters* when it implemented the § 402 NPDES program.[101]

Second, Senator Tower argued that if the federal government maintained control over all the nation's waters until a state assumed the program, the federal government would be usurping the police powers of the states, albeit temporarily.[102] States, he contended, not the federal government, had primary responsibility over their intrastate waters and had the right to preserve and protect the quality of non-navigable tributaries, traditional navigable waters, and their adjacent wetlands as they saw fit.[103] Consequently, in accordance with the Bentsen Amendment,

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[96] 123 Cong. Rec. 26711 (daily ed. Aug. 4, 1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[97] *See United States v. Rio Grande Dam & Irrigation Co.*, 174 U.S. 690 (1899) and accompanying text.

[98] *See Economy Light & Power Co. v. United States*, 256 U.S. 113 (1921) and accompanying text.

[99] 123 Cong. Rec. 26716 (daily ed. Aug. 4, 1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)).

[100] *See Natural Res. Defense Council v. Callaway*, 392 F. Supp. 685 (D.D.C. 1975) and accompanying text.

[101] The geographic jurisdiction of §§ 402 and 404 are the same because they both cover discharges of pollutants into "navigable waters." Therefore, to be consistent, if one were to argue that the jurisdiction of § 404 had been interpreted too broadly, one would also have to argue that the jurisdiction of § 402 also had been interpreted too broadly.

[102] 123 Cong. Rec. 26721 (daily ed. Aug. 4, 1977); *see also* 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[103]123 Cong. Rec. 26721 (daily ed. Aug. 4, 1977); *see also* 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

the Corps should regulate non-navigable tributaries and their adjacent wetlands only if asked to do so by a state.[104]

Third, Senators Bentsen, Dole, Domenici, and Tower, among others, argued that citizens wanted and needed less federal government involvement in their lives.[105]

As Senator Tower stated:

> If we do not act affirmatively and clean up the language in Public Law 92-500, it will result in unwarranted and despotic intrusion by the Federal Government over every brook, creek, cattle tank, mud puddle, slough, or damp spot in every landowner's backyard across this Nation. It seems unreasonable that we should choose more Federal Government on our citizens in an era when they want less.[106]

Many other senators, however, did not agree with these arguments made in support of the Bentsen Amendment. Sen. John Chafee (R-R.I.) argued that a § 404 program that only covered navigable-in-fact waters and waters that were susceptible to becoming navigable-in-fact would leave too many of the "Nation's ecologically important wetlands with no protection and many with uncertain protection from discharges of dredged or fill material."[107] Sen. Robert Stafford (R-Vt.) argued that this lack of protection "would cripple efforts to achieve the act's objectives."[108] He continued by quoting the Senate Committee Report for S. 1952, which states "waters move[] in hydrologic cycles and it is essential that discharges of pollutants be controlled at the source."[109]

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[104] Senator Bentsen and his colleagues on the Committee on Environment and Public Works differed markedly in how they approached the issue of state assumption. Senator Bentsen, through his proposed amendment to S. 1952 (the product of that committee), would have given all authority to regulate non-traditionally navigable waters (including historically navigable waters) to the states and then allowed the states to request the Corps to regulate certain ecologically and environmentally important "state waters" if the state was so inclined. The committee, in drafting S. 1952, gave the Corps authority to regulate discharges into all waters of the United States, and then allowed the states to assume all but the traditional navigable waters (minus the historically navigable waters).

[105] 123 Cong. Rec. 26719 (daily ed. Aug. 4, 1977); *see also* 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)). (Senator Domenici, arguing for the Bentsen Amendment, stated as follows: "[I] think we have an opportunity here in the Senate to undo something that has grown up that we really never intended under section 404 that the Corps of Engineers be involved in the daily lives of our farmers, realtors, people involved in forestry, anyone that is moving a little bit of earth anywhere in this country that might have an impact on navigable streams. We just did not intend that [in 1972].").

[106] 123 Cong. Rec. 26721, at 931 (daily ed. Aug. 4, 1977) at 931.

[107] 123 Cong. Rec. 26716 (daily ed. Aug. 4, 1977).

[108] 123 Cong. Rec. 26716 (daily ed. Aug. 4, 1977).

[109] 123 Cong. Rec. 26714 (daily ed. Aug. 4, 1977).

Like Senators Chafee and Stafford, other senators who opposed the Bentsen Amendment recognized that unregulated discharges of dredged or fill material into small streams, marshes, lakes, and wetlands would physically disrupt the biological integrity of those waters, as well as downstream waters.[110] For example, Sen. Howard Baker (R-Tenn.), a cosponsor of the 1977 Amendments, pointed out that contaminated sediments could be found in rivers and harbors nationwide, and that the disposal of dredged material, laden with such toxins, in wetlands could destroy those wetlands, as well as the sports fisheries dependent on those wetlands.[111]

Senator Baker went on to remind his colleagues of the importance of a comprehensive § 404 program in the following:

> Continuation of the comprehensive coverage of this program is essential for the protection of the aquatic environment. The once seemingly separable types of aquatic systems are, we now know, interrelated and interdependent. We cannot expect to preserve the remaining qualities of our water resources without providing appropriate protection for the entire resource.[112]

He also indicated that he thought that EPA and the Corps were heading in the right direction by establishing a "management program that focused the decision-making process on significant threats to aquatic areas while avoiding unnecessary regulation of minor activities."[113] And, he pointed out that earlier that year, much like Congress was attempting to do through the 1977 Amendments, the Corps had "revised its [§ 404] regulations to further streamline the program and correct several misunderstandings."[114]

Senator Hart also argued for protecting the "entire resource"--all of the Nation's waters. He pointed out, as he had done in earlier debates, that the traditional navigable waters comprised no more than 2% of the "entire resource" and that leaving the other 98% unregulated would be manifestly inadequate.[115]

In short, these senators argued that, to protect the *nation's waters,* it is critical to have a comprehensive nationwide regulatory program.

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[110] 123 Cong. Rec. 26714 (daily ed. Aug. 4, 1977); *see also* 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[111] 123 Cong. Rec. 26718 (daily ed. Aug. 4, 1977).

[112] 123 Cong. Rec. 26718 (daily ed. Aug. 4, 1977).

[113] 123 Cong. Rec. 26718 (daily ed. Aug. 4, 1977).

[114] 123 Cong. Rec. 26718 (daily ed. Aug. 4, 1977).

[115] 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)).

It was not clear how the vote would turn out. The makeup of the Senate had changed in the five years since the Clean Water Act of 1972 had been enacted. Twenty-eight of the senators who had voted unanimously to pass the Clean Water Act of 1972 had retired or been replaced.[116] Furthermore, the agriculture, silviculture, and ranching lobbies had made their presence known on Capitol Hill during that time. When the votes were counted, however, the Bentsen Amendment to S. 1952 was defeated by a margin of 45 to 51.[117]

By defeating the Bentsen Amendment, the Senate had voted in favor of maintaining a § 404 regulatory program that encompasses all of the *nation's waters.* The House, in contrast, as explained in the previous section, had four months earlier approved § 16 to H.R. 3199 (the House's "Bentsen Amendment"), which would have limited § 404 jurisdiction to present use and susceptible use waters and their adjacent wetlands. Thus, as of August 4, 1977, the two chambers of Congress were very much at odds on the issue of § 404 jurisdiction.

4. *Amendment of H.R. 3199*

In an attempt to move toward a consensus with the House, the Senate adopted those sections of H.R. 3199 that it agreed with and then amended the remainder of the sections. One of the changes that the Senate made to H.R. 3199 was that the Senate excised § 16 from H.R. 3199. By doing so, the Senate let the House know that it would not agree to limit the jurisdiction of the § 404 program. The Senate's amended version of H.R. 3199 sought to continue § 404 jurisdiction over "all waters of the United States."

The Senate version of H.R. 3199 also changed the provision in the House's version of H.R. 3199 that covered state involvement in the § 404 program. S. 1952 and H.R. 3199 varied greatly regarding when and how states would regulate waters. As stated above, the House wanted to confine all federal regulation under § 404 to navigable-in-fact waters and waters that were susceptible to becoming navigable-in-fact. States would regulate all other waters, but could ask for federal assistance on certain high value waters. Alternatively, the Senate preferred to allow a state to assume control over non-navigable waters after that state had applied for the

[116] *Compare* 123 Cong. Rec. 26728 (daily ed. Aug. 4, 1977), 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)), 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)), *with* 118 Cong. Rec. 33718 (daily ed. Oct. 4, 1972), 118 Cong. Rec. 33691-92 (daily ed. Oct. 4, 1972) at 222-23.

[117] *See* 123 Cong. Rec. 26728 (daily ed. Aug. 4, 1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)), (yeas 45, nays 51).

responsibility, submitted a comprehensive plan for regulating discharges of dredged or fill material, and had received approval from the EPA Administrator.[118]

These and other differences led the House to reject the Senate's amendments to H.R. 3199 and to request another Senate-House Conference to attempt a compromise.

5. *Conference Number Two*

The House and Senate conferees made many concessions during the second conference. The major ones involved jurisdiction, state assumption, exemptions, and general permits.

The Senate-House Conference Committee recommended that both legislative branches agree to the broad jurisdictional reach of Clean Water Act § 404 as adopted by the Senate amendment to H.R. 3199.[119] As Senator Muskie pointed out during the Senate Conference debates: "The conference bill follows the Senate bill by maintaining the full scope of Federal regulatory authority over all discharges of dredged or fill material into any or [sic] the Nation's waters."[120]

During the conference, the House conferees accepted the Senate's approach to state assumption, namely that the states would have to seek approval from EPA before they could administer a § 404 permit program. The Senate conferees accepted that the *historic use waters* could be delegated to the states.[121] Section 404(g)(1), as it appears in the conference bill, outlines the parameters of the state program and the federal program as follows:

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[118] As passed by the Senate: H.R. 3199, § 53(a)(5):

> State programs for discharges of dredged or fill material that are subject to approval under this subsection shall include all navigable waters within the State except any coastal waters of the United States subject to the ebb and flow of the tide, including any adjacent marshes, shallows, swamps, and mudflats, and any inland waters of the United States that are used, have been used or are susceptible to use for transport of interstate or foreign commerce, including any adjacent marshes, shallows, swamps, and mudflats. H.R. 3199, § 53(b) Section 404 of the Clean Water Act is amended by adding the following new subsections: Section 404(d) at any time after the enactment of the Clean Water Act of 1977 a State may assume the authority of the Secretary of the Army under this section . . . .

123 Cong. Rec. 26783 (daily ed. Aug. 4, 1977).

[119] H.R. Conf. Rep. No. 95-830, at 97-99 (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[120] 123 Cong. Rec. 39187 (daily ed. Dec. 15, 1977).

[121] 123 Cong. Rec. 26783 (daily ed. Aug. 4, 1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

> The Governor of any State desiring to administer its own individual and general permit program for the discharge of dredged or fill material into the navigable waters (other than those waters which are *presently used,* or are *susceptible to use* in their natural condition or by reasonable improvement as a means to transport interstate or foreign commerce shoreward to their ordinary high water mark, including all waters which are subject to the ebb and flow of the tide shoreward to their mean high water mark, or mean higher high water mark on the west coast, *including wetlands adjacent thereto*), within its jurisdiction may submit to the Administrator a full and complete description of the program it proposes to establish and administer under State law or under an interstate compact.[122]

Under this provision, the states can assume the § 404 program for all the "navigable waters" except for those that are included in the provision's parenthetical phrase. The parenthetical phrase includes navigable-in-fact waters and waters that were susceptible to becoming navigable-in-fact, and any adjacent wetlands, which are reserved for federal regulation.[123] Thus, a state program can assume § 404 regulatory responsibility for non-navigable waters and *historic use waters.*[124] As this provision indicates, the conferees viewed the traditional navigable waters as a subset of the terms "navigable waters" and "waters of the United States" as they appear in the Clean Water Act of 1972.[125]

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[122] 33 U.S.C. § 1344(g)(1) (emphasis added).

[123] 123 Cong. Rec. 26783 (daily ed. Aug. 4, 1977) at 1087; 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[124] Rep. Norman D'Amours (D-N.H.) explained why the states were given authority over the historic only waters in the following:

> The waters in which a State may not regulate the discharge of dredged or fill material under a State program approved under section 404 are those waters defined as the phase I waters in the Corps of Engineers 1975 regulations, with the exception of waters considered navigable solely because of historical use. These latter waters are considered more appropriate for State regulation rather than Federal since they do not support interstate commerce either in their present state or with reasonable improvement. (A State can, however, regulate the discharge of dredge or fill materials into these so-called Phase I waters where it takes over the administration of a general permit issued by the Corps or under an EPA approved section 208 program regulating a class or category of activities).

123 Cong. Rec. 38970-72 (daily ed. Dec. 15, 1977).

[125] In theory, one might argue that § 404(g)(1) simply allows states to assume the "historic use waters" and no more. This argument is a non-starter considering that one of the primary goals of the Clean Water Act of 1977 was to encourage the states to assume a portion of the § 404 program and become partners with the federal government in running the program. To this day, there are very few identified *historic use waters.* Therefore, if in fact, Congress had intended for the states to assume authority covering only *historic use waters,* then the states would have undertaken only a token role in administering the § 404 program. It is also unlikely that Congress would have

Drawing upon provisions in S. 1952 and H.R. 3199, the conferees included several proposed amendments to the Clean Water Act of 1972, in addition to the one on state assumption. These other amendments were designed to reengineer the § 404 regulatory scheme in two significant respects. First, the amendments exempted a large number of activities (most notably routine agricultural, silvicultural, and ranching activities) from § 404's permit requirements.[126] Under these amendments, for example, farmers would not have to obtain § 404 permits for "normal" farming activities. Second, the amendments authorized the issuance of general permits for any category of similar-in-nature activities that would cause only minimal separate and cumulative adverse environmental effects.[127] Under these amendments, activities such as minor road crossings could receive expedited approval as long as the permittee complied with established general permit conditions.

During the final debates on the conference bill, little was said on the issue of § 404 jurisdiction. In the end, the conference bill passed both houses with substantial support, and was enacted as Public Law No. 95-217 on December 27, 1977.[128] The definition for "navigable waters" remained "waters of the United States, including the territorial seas." While incorporating significant changes in the operation of the § 404 program, Congress in the 1977 Amendments preserved the broad assertion of Clean Water Act jurisdiction it had intended in the 1972 Act and endorsed the jurisdictional reach of the Corps' 1975 regulations.

D. 1977 to the Present

1. *Riverside Bayview Homes*

Many thought that the expansive view of Clean Water Act jurisdiction was cemented in the 1985 Supreme Court decision *United States v. Riverside Bayview Homes, Inc.*[129] In *Riverside Bayview,* the Court held that the Corps was properly within its administrative discretion when it determined that wetlands adjacent to a "navigable waterway" are jurisdictional even if they are not regularly flooded by overflow from the traditional navigable waters. The Court concluded that "it was a permissible interpretation of the Act" to conclude that the term

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included in the amendments the extensive provisions for state assumption that it did, if the waters at issue were so minimal.

[126] *See* 33 U.S.C. § 1344(f); H.R. Conf. Rep. No. 95-830, at 100-01 (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)); 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[127] *See* 33 U.S.C. § 1344(e).

[128] Pub. L. No. 95-217 (1977); 123 Cong. Rec. 26725 (daily ed. Aug. 4, 1977) (statement of Sen. Philip Hart (D-Mich.)) at 939-40; 123 Cong. Rec. 10401 (daily ed. Apr. 5, 1977) (statement of Rep. William Harsha (D-Ohio)).

[129] *United States v. Riverside Bayview Homes, Inc.*, 474 U.S. 121 (1985).

"waters of the United States" encompasses "all wetlands adjacent to other bodies of water over which the Corps has jurisdiction."[130]

In examining the legislative history of the Clean Water Act, the Court said the following: "Protection of aquatic ecosystems, Congress recognized, demanded broad federal authority to control pollution, for 'water moves in hydrologic cycles and it is essential that discharge of pollutants be controlled at the source.'"[131] Finally, the Court found it somewhat instructive that the Bentsen Amendment, which would have narrowed the jurisdiction of § 404 markedly, was defeated, thus preserving the broad definition of navigable waters.[132] The Court unanimously concluded its decision by stating that it "was persuaded that the language, policies, and *history* of the Clean Water Act compel a finding that the Corps has acted reasonably in interpreting the Act to require permits for the discharge of fill material into wetlands adjacent to the 'waters of the United States.'"[133]

2. *SWANCC*

After *Riverside Bayview,* the primary question was what are the outermost limits of Clean Water Act jurisdiction. One year after the Court decided *Riverside Bayview,* the Corps published guidance in the preamble to its 1986 regulations that would ultimately test those outermost limits. The provision stated, in part, that if migratory birds use or would use an intrastate isolated water as habitat, then that water body would be considered a jurisdictional "water of the United States."[134]

This so-called migratory bird rule was challenged when the Solid Waste Agency of Northern Cook County (SWANCC) decided that it wanted to construct a solid waste landfill in an abandoned gravel mine outside of Chicago. The Corps initially declined to assert jurisdiction over the SWANCC site, but when the Corps discovered that migratory birds frequented the numerous ponds at the site, the Corps decided to assert jurisdiction, and ultimately denied the permit because it posed a potential threat to drinking water supplies and destroyed unmitigatable habitat for migratory birds.[135] When *SWANCC* reached the Supreme Court, a divided 5-4 Court held that the "migratory bird rule" was not an allowable basis for asserting jurisdiction and that

[130] *Riverside Bayview Homes, Inc.*, 474 U.S. at 135.

[131] *Riverside Bayview Homes, Inc.*, 474 U.S. at 132-33 (citing S. Rep. No. 92-414, at 77 (1972), *reprinted in* 1972 U.S.C.C.A.N. 3668, 3742).

[132] *Riverside Bayview Homes, Inc.*, 474 U.S. at 135.

[133] *Riverside Bayview Homes, Inc.*, 474 U.S. at 139 (emphasis added).

[134] 51 Fed. Reg. 41206, 41217 (Nov. 13, 1986).

[135] *Solid Waste Agency of N. Cook Cnty. v. U.S. Army Corps of Eng'rs*, 531 U.S. 159, 165 (2001).

the ponds were "a far cry, indeed, from the 'navigable waters' and 'waters of the United States' to which the statute by its term extends."[136]

This holding was narrow and was largely limited to the facts of the case or very similarly situated waters. At issue in that case were waters that had been abandoned gravel pits that, over the years, had filled with water and were used as habitat by migrating waterfowl. In asserting jurisdiction over the waters, the Corps cited the presence of migratory birds as the jurisdictional trigger for the Clean Water Act; they did not cite any of the other bases in their regulations that also allowed them to assert Clean Water Act protections over intrastate waters, whether they appear to be "isolated" or not.[137] Accordingly, the Supreme Court did not invalidate any of the regulatory bases for asserting jurisdiction over such water bodies (such as links to interstate commerce). The Court held that the Corps' regulations "as clarified and applied to petitioner's balefill site pursuant to the 'Migratory Bird Rule'. . . exceeds the authority granted to respondents under § 404(a) of the Clean Water Act."[138]

The five-Justice majority decision did contain gratuitous language – dicta – that was read by industry lawyers and others as inviting additional legal attacks on federal protection for waters that are not traditionally navigable. Fortunately, when those arguments were made, the courts generally did not interpret *SWANCC* broadly, though it still did lead to a cut back on legal protections.[139]

Following *SWANCC*, on January 15, 2003, the EPA and Army Corps of Engineers published an Advance Notice of Proposed Rulemaking (ANPRM) raising a broad array of questions about the jurisdiction of the Clean Water Act and asking the public to comment on whether the agencies should rewrite their longstanding definitions of "waters of the United States." Simultaneously, they released a guidance memo to their field staff regarding Clean Water Act jurisdiction over certain so-called "isolated," non-navigable, intrastate waters.

The agencies claimed these actions were responsive to the *SWANCC* case, but both the guidance memo and the ANPRM went far beyond the Court's holding.

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[136] *Solid Waste Agency of N. Cook Cnty.*, 531 U.S. at 173.

[137] The term "isolated" does not appear in the Act itself or in EPA or Corps jurisdictional regulations.

[138] *Solid Waste Agency of N. Cook Cnty.*, 531 U.S. at 174 (internal citations omitted). The Migratory Bird Rule was contained in the 1986 preamble to the Corps' regulations, and is not a rule. 51 Fed. Reg. 41206, 41217 (Nov. 13, 1986).

[139] *See, e.g.*, *United States v. Rapanos*, 376 F.3d 629, 638 (6th Cir. 2004) (stating "the majority of courts have interpreted *SWANCC* narrowly to hold that while the Clean Water Act does not reach isolated waters having no connection with navigable waters, it does reach inland waters that share a hydrological connection with navigable waters"), *vacated*, 126 S.Ct. 2208 (2006).

The 2003 guidance took effect right away and had an immediate impact on many of the Nation's wetlands, creeks, ponds, and streams. The policy directed Corps and EPA staff *not to assert jurisdiction over "isolated" waters* without first obtaining permission from headquarters.[140] No similar instructions were issued to get permission before *allowing* unregulated pollution or destruction of these waters by determining that they were not subject to Clean Water Act jurisdiction. More importantly, in practice, the 2003 guidance led to the loss of resources. Whenever the agencies themselves determined that waters were "isolated," intrastate, and not traditionally navigable–even where the waters had uses other than as habitat by migratory birds–the waters were found to be non-jurisdictional.

The EPA itself estimated that as many as 20 million acres of wetlands–20 percent of the remaining wetlands in the continental U.S.–were "isolated," meaning they were placed at risk of losing federal Clean Water Act protections under the 2003 policy.[141]

The ANPRM announced the administration's intention to consider even broader changes to Clean Water Act coverage through rulemaking. Fortunately, overwhelming opposition to the proposed rulemaking from Congress (including 218 members of the House and more than 40 Senators); state water pollution control, fish and wildlife, and natural resources agencies; hunting and angling groups; environmental organizations;[142] and the public (over 130,000 individual citizens submitted comments, overwhelmingly opposing the rollback) caused EPA's then-Administrator Michael Leavitt to announce that the administration was dropping the rulemaking idea.[143]

However, the EPA left the 2003 guidance in place, along with its biased one-way policy requiring staff to get headquarters permission to protect waters but not to authorize their destruction or degradation. As a result, the 2003 guidance was causing widespread destruction of waters that should have remained legally protected even after *SWANCC*.[144]

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[140] 68 Fed. Reg. 1991, 1997-98 (Jan. 15, 2003) ("field staff should seek formal project-specific HQ approval prior to asserting jurisdiction over waters based on other factors listed in 33 CFR 328.3(a)(3)(i)–(iii)").

[141] *See* Eric Pianin, *Administration Establishes New Wetlands Guidelines; 20 Million Acres Could Lose Protected Status, Groups Say*, Washington Post, Jan. 11, 2003, at A5.

[142] We hereby incorporate by reference the comments submitted by national environmental organizations on the 2003 ANPRM and guidance.

[143] EPA Press Release, *EPA and Army Corps Issue Wetlands Decision*, Dec. 12, 2003 ("After soliciting public comment to determine if further regulatory clarification was needed, the EPA and the Corps have decided to preserve the federal government's authority to protect our wetlands."). Also see *Rapanos*, 126 S.Ct. at 2256 n.4 (Stevens, J., dissenting) (describing agencies' effort to revise regulations and noting that "almost all of the 43 States to submit comments opposed any significant narrowing of the Corps' jurisdiction – as did roughly 99% of the 133,000 other comment submitters").

[144] We recognize and appreciate that the 2007 Guidance and agency coordination memo, discussed below in section IX, replaced the one-way "phone home" policy.

The reaction of the federal courts of appeals and federal district courts has largely been to construe the *SWANCC* decision narrowly. The U.S. Court of Appeals for the Fourth Circuit, the U.S. Court of Appeals for the Sixth Circuit, the U.S. Court of Appeals for the Seventh Circuit, the U.S. Court of Appeals for the Ninth Circuit, and the U.S. Court of Appeals for the Eleventh Circuit have held in varying contexts that EPA and the Corps may continue to assert jurisdiction over non-navigable waters even if those waters are quite small and distant from traditional navigable waters.[145] Although no circuit has held that Clean Water Act jurisdiction does not encompass non-navigable waters, the U.S. Court of Appeals for the Fifth Circuit has stated in dicta something to the effect that the Clean Water Act covers traditional navigable waters and non-navigable waters adjacent to traditional navigable waters.[146]

3. *Rapanos and Carabell*

The Supreme Court granted certiorari in *Rapanos*[147] and *Carabell*[148] to respond to what it considered a split between the Fifth Circuit and the Fourth, Sixth, Seventh, Ninth, and Eleventh Circuits. In the *Rapanos* and *Carabell* cases, the Bush administration argued that the Clean Water Act and its implementing regulations properly encompass and protect the non-navigable tributaries of "traditionally navigable" waters and the wetlands adjacent to these tributary streams and rivers. This position was supported by briefs filed by more than 30 state Attorneys General and nine members of Congress who helped pass the Clean Water Act in 1972, its amendments in 1977, or both. Also filing briefs in favor of the government's position were: four former EPA administrators who served under Republican and Democratic administrations; a coalition of hunting and angling groups and businesses; state water pollution control officials, wetland managers, fish and wildlife agencies, and floodplain managers; New York City; numerous western resources councils; Macomb County (MI); and many environmental, public health and conservation groups.

The *Rapanos* petitioners and some supporting organizations argued that the Clean Water Act does not protect non-navigable tributaries and only covers those wetlands directly adjacent to traditional navigable waters.[149]

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[145] *See, e.g.*, *United States v. Gerke*, 412 F.3d 804 (7th Cir. 2005); *United States v. Rapanos*, 376 F.3d 629 (6th Cir. 2004); *Parker v. Scrap Metal Processors, Inc.*, 386 F.3d 993 (11th Cir. 2004); *United States v. Deaton*, 332 F.3d 698 (4th Cir. 2003); *United States v. Newdunn Assocs., L.L.P.*, 344 F.3d 407 (4th Cir. 2003); *Headwaters, Inc. v. Talent Irrigation Dist.*, 243 F.3d 526 (9th Cir. 2001).

[146] *In re Needham*, 354 F.3d 340 (5th Cir. 2003); *Rice v. Harken Exploration Co.*, 250 F.3d 264 (5th Cir. 2001).

[147] 376 F.3d at 629, *cert. granted*, 126 S.Ct. 414.

[148] 391 F.3d at 704, *cert. granted*, 126 S.Ct. 415.

[149] The petitioners in the *Carabell* advanced a more limited argument, claiming that it was impermissible for the Corps to regulate a wetland as "adjacent" to a protected water body – and therefore subject to the Clean Water Act –

In its decision (which addressed the two consolidated cases) the Supreme Court had no majority opinion but split 4-1-4 in its analysis of the Clean Water Act and the extent to which the law covers tributaries and wetlands.[150] The Court did not invalidate the agencies' existing rules defining the "waters of the U.S." but the various opinions suggested three different tests for determining whether streams and other tributaries and wetlands adjacent to those waters remain under the scope of the Act.

The four-justice plurality, in an opinion written by Justice Scalia, would significantly limit the law's scope. Justice Scalia, joined by Chief Justice Roberts and Justices Thomas and Alito, concluded that:

> [T]he phrase "the waters of the United States" includes only those relatively permanent, standing or continuously flowing bodies of water 'forming geographic features' that are described in ordinary parlance as "streams[,] . . . oceans, rivers, [and] lakes." The phrase does not include channels through which water flows intermittently or ephemerally, or channels that periodically provide drainage for rainfall.[151]

The opinion also would require wetlands to have a "continuous surface connection" to jurisdictional waters to be protected.[152]

Justice Kennedy would require the agencies to establish that a water has a physical, biological, or chemical effect on – a "significant nexus" –a traditional navigable water in order to be protected.[153] For tributaries, Justice Kennedy says that, applied consistently, existing rules "may well provide a reasonable measure of whether specific minor tributaries bear a significant nexus with other regulated waters to constitute 'navigable waters' under the Act."[154] For wetlands adjacent to such non-navigable tributaries, Justice Kennedy suggested that a

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if it lacked a hydrological connection with the water body. Brief of Petitioners at 12-13 (Dec. 2, 2005), *Carabell v. U.S. Army Corps of Eng'rs*, No. 04-1384.

[150] *Rapanos*, 126 S.Ct. 2208 (2006).

[151] *Rapanos*, 126 S.Ct. at 2225 (plurality opinion) (citation omitted).

[152] *Rapanos*, 126 S.Ct. at 2226.

[153] *Rapanos*, 126 S.Ct. at 2248 (Kennedy, J., concurring).

[154] *Rapanos*, 126 S.Ct. at 2249.

"significant nexus" could be shown in different ways, depending on the kind of water to which the wetland is adjacent.[155]

While he concurred that the cases should be remanded, Justice Kennedy completely rejected Justice Scalia's reasoning. Indeed, he stated that Justice Scalia's plurality opinion "is inconsistent with the Act's text, structure, and purpose."[156]

In dissent, Justice Stevens, joined by Justices Souter, Ginsburg and Breyer, said that the existing agency regulations reflect a reasonable interpretation of the statutory phrase "waters of the United States," especially in light of the Court's unanimous 1985 decision in *U.S. v. Riverside Bayview Homes*, *which upheld the application of these very same rules.*[157] While rejecting the rationale of both of the other opinions, these four justices stated that, since they would protect all of the waters that Justice Scalia's test would protect and all of the ones Justice Kennedy's test would protect, the agencies should continue to protect streams and wetlands if they qualify under either test.[158]

Since *Rapanos*, numerous courts have wrestled with the question of which opinion (or opinions) contains the controlling rule of law. For instance, in the First and Eighth Circuits, a water is protected under the Clean Water Act if it meets either the plurality standard or the "significant nexus" standard.[159] In the Eleventh Circuit, a water may only be covered consistent with the "significant nexus" standard.[160] The Seventh and Ninth Circuits both have ruled that the "significant nexus" standard is a sufficient basis to uphold jurisdiction, but have not ruled out the use of the plurality standard in appropriate circumstances.[161] The Second, Fifth, and Sixth

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[155] *Rapanos*, 126 S.Ct. at 2249 ("When the Corps seeks to regulate wetlands adjacent to navigable-in-fact waters, it may rely on adjacency to establish its jurisdiction. Absent more specific regulations, however, the Corps must establish a significant nexus on a case-by-case basis when it seeks to regulate wetlands based on adjacency to nonnavigable tributaries.").

[156] *Rapanos*, 126 S.Ct. at 2246.

[157] *Rapanos*, 126 S.Ct. at 2255.

[158] *Rapanos*, 126 S.Ct. at 2265 & n.14.

[159] *United States v. Bailey*, 571 F.3d 791, 799 (8th Cir. 2009); *United States v. Johnson*, 467 F.3d 56 (1st Cir. 2006).

[160] *United States v. Robison*, 505 F.3d 1208 (11th Cir. 2007), *reh'g denied*, 521 F.3d 1319 (11th Cir. 2008); *see also United States v. Freedman Farms, Inc.*, 2011 WL 1884000, *7 (E.D.N.C. 2011) (denying reconsideration of jury instruction based exclusively on Justice Kennedy's "significant nexus" standard).

[161] *United States v. Gerke Excavating, Inc.*, 464 F.3d 723, 724-25 (7th Cir. 2006) (discussing both standards and concluding that Justice Kennedy's is narrower view except in "rare cases[s]" and concluding that Justice Kennedy's test "must govern the further stages of this litigation"); *N. Cal. Riverwatch v. City of Healdsburg*, 496 F.3d 993, 999-1000 (9th Cir. 2007) (replacing prior opinion characterizing Justice Kennedy's test as "the controlling rule of law" with one that says it is "the controlling rule of law for our case"); *but cf. United States v. Moses*, 496 F.3d 984, 990

Circuits have reached decisions in which they left to a later case the resolution of whether one of the standards or both are valid jurisdictional triggers.[162]

(9th Cir. 2007) (decision issued three days prior to revision of *Healdsburg* opinion cites the initial *Healdsburg* opinion and characterizes Justice Kennedy's test as "the controlling rule of law").

[162] *Cordiano v. Metacon Gun Club, Inc.*, 575 F.3d 199, 215-16 (2d Cir. 2009); *United States v. Lucas*, 516 F.3d 316, 327 (5th Cir. 2008) (concluding that evidence is sufficient for jury to convict under plurality, "significant nexus," or dissent tests, but not indicating which standard, if any, controls); *United States v. Cundiff*, 555 F.3d 200, 210 (6th Cir. 2009).

EXHIBIT B

Exhibit B

Traditional Navigable Waters

Generally, there are three different lines of traditional navigable waters cases: (1) those involving the Commerce Clause; (2) those involving admiralty jurisdiction; and (3) those involving determinations over the ownership of the beds of navigable waters. A discussion of each type follows.

a. Commerce Clause Cases

Under the Commerce Clause of the U.S. Constitution, Congress has the power "to regulate Commerce with foreign Nations, and among the several states, and with the Indian Tribes."[1] All of the cases in this section are tied to the commerce power and fall within one of four categories: (1) regulation of commerce; (2) Federal Power Act (FPA); (3) RHA; and (4) navigational servitude.

1) Regulation of Commerce

The first line of cases involves federal regulation of commerce on navigable waters of the United States. In the 1824 watershed case *Gibbons v. Ogden*,[2] the Supreme Court held that navigation, which had been long recognized as an important part of commerce, was within the power of the federal government to regulate under the Commerce Clause of the Constitution. Thus, the federal government could, among other things, regulate the new steamship trade that was developing on the nation's navigable waters.

One of the regulations that grew out of this power was the requirement that all steamship operators engaging in interstate commerce obtain a federal license. It was this requirement that was at issue in the seminal decision, *The Daniel Ball*.[3] In this case the operator of a steamship operating between Grand Haven and Grand Rapids on the Grand River in Michigan argued that he did not have to secure a federal license or subject his steamship to federal inspection because he was operating his steamship solely within the state of Michigan. In deciding the case the Supreme Court devised a two-part test. The Court set forth the first part of the test as follows:

> Those rivers must be regarded as public navigable rivers in law, which are navigable in fact. And they are navigable in fact when they are used, or *are susceptible of being used*, in their ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water.[4]

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[1] U.S. CONST. art. 1, § 8, cl. 3.

[2] *Gibbons v. Ogden*, 22 U.S. (9 Wheat.) 1, 190 (1824).

[3] *The Daniel Ball*, 77 U.S. 557 (1870).

[4] *The Daniel Ball*, 77 U.S. at 563 (emphasis added).

In other words, a water body is subject to regulation under the Commerce Clause if it is currently being used for commerce, or if it could be used for commerce in the future. The Court then set forth the second part of the test as follows:

> And they constitute navigable waters of the United States within the meaning of the acts of Congress, in contradistinction from the navigable waters of the States, when they form in their ordinary condition by themselves, or by uniting with other waters, a continued highway over which commerce is or may be carried on with other States or foreign countries in the customary modes in which such commerce is conducted by water.[5]

This part of the test requires that the goods or passengers that are being transported make it all the way to a state or international border via water.

Four years after it decided *The Daniel Ball*, the Supreme Court expanded its navigability test in *United States v. Steamer Montello (The Montello)*.[6] In this case involving the Fox River in Wisconsin, the Court decided that water could be found navigable, and thus subject to federal regulation, even if commerce was hindered by rapids and small waterfalls. The Court held:

> The capability of use by the public for purposes of transportation and commerce affords the true criterion of the navigability of a river, rather than the extent and manner of that use. If it be *capable in its natural state* of being used for purposes of commerce, no matter in what mode the commerce may be conducted, it is navigable in fact, and becomes in law a public river or highway.[7]

The Court found that early fur trading canoes had made it down the Fox River on a regular basis and that this trading use was sufficient to qualify the river as a navigable water of the United States that was "generally and commonly useful to some purpose of trade or agriculture."[8]

2) Rivers and Harbors Act Cases

As commerce grew in, on, and around the navigable waters during the 19th century, it became clear that the federal government would need to take action to keep these waterways clear of obstructions. Wharfs, bridges, dams, and weirs had begun to clog some of the busier waters. To complicate matters, whenever the federal government attempted to stop such obstructions, the Supreme Court held that it could not do so until it passed legislation regulating

[5] *Id.*

[6] *United States v. Steamer Montello (The Montello)*, 87 U.S. (20 Wall.) 430 (1874).

[7] *The Montello*, 87 U.S. at 441-42 (emphasis added).

[8] *Id.* at 442.

such activities.[9] In response, Congress passed §§9 and 10 of the RHA.[10] From that point on, anyone wishing to build any type of structure in the navigable waters of the United States would have to first secure a permit from the Secretary of War (later the Secretary of the Army).

One of the most important RHA cases is *Economy Light & Power Co. v. United States*.[11] In this case, a power company attempted to build a hydropower dam across the Des Plaines River in Illinois without first securing a §9 permit under the RHA. The company argued that since two previously built canals diverted water out of the river, the river was no longer navigable. The Court held that because the river had been used in the past for fur trading, it was still a navigable water of the United States. In doing so, the Court established the concept of "indelible navigability," that is, if a water was ever navigable-in-fact, it will always be at least navigable-in-law and subject to federal regulatory power.[12]

The Corps has summarized the holdings of the cases that it feels define its jurisdiction under the RHA by regulation as follows:

> Navigable waters of the United States are those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce: A determination of navigability, once made, applies laterally over the entire surface of the water body and is not extinguished by later actions or events which impede or destroy navigable capacity.
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> * * *
>
> The several factors which must be examined when making a determination whether a water body is a navigable water of the United States are discussed in detail below. Generally, the following conditions must be satisfied:
>
> > (a) Past, present, or potential presence of interstate or foreign commerce;
> > (b) Physical capabilities for use by commerce as in paragraph (a) of this section; and
> > (c) Defined geographic limits of the water body.[13]

[9] *Wilson v. Black-Bird Creek Marsh Co.*, 27 U.S. (2 Pet.) 245 (1829); *Willamette Iron Bridge Co. v. Hatch*, 125 U.S. 1 (1888).

[10] 33 U.S.C. §§402 & 403.

[11] *Economy Light & Power Co. v. United States*, 256 U.S. 113 (1921).

[12] *Economy Light & Power Co.*, 256 U.S. at 123.

[13] 33 C.F.R. §§329.4, 329.5 (2008) (Note that in 1976 Congress exempted from the wharf and pier provisions of RHA §10 any body of water located entirely within one state if its classification as a navigable water of the United States rested solely on its historical use. Water Resources Development Act of 1976, §154 (codified at 33 U.S.C. §59L).

This regulatory definition is based on such cases as *The Daniel Ball, The Montello*, and *Economy Light & Power*, as well as such cases as *United States v. Utah* [14] and *United States v. Appalachian Electric Power Co.*, [15] which is discussed in the sections below. It is important to note that under this definition, the Corps has not adopted the second part of *The Daniel Ball* test that requires that the commerce be transported all the way to a state or foreign border via water. Instead the Corps relies on the Supreme Court's holding in the Equal Footing Doctrine case, *Utah*,[16] also discussed below, which held that a water can be a navigable water if it can be used to transport commerce even if the water is wholly within a state and the goods being transported must be transported over land to reach a state or foreign border.

While the Corps maintains this position that the second part of *The Daniel Ball* test does not apply to RHA cases, three appellate court decisions have held to the contrary. For example, in *National Wildlife Federation v. Alexander*, [17] the North Dakota State Water Commission commenced work on a channel that would allow floodwaters to flow into the 34,000-acre Devils Lake. The lake is not connected to any other water body that could serve as an interstate or international link for waterborne commerce. The commission did not apply for any RHA permit before starting work. The National Wildlife Federation challenged the commission's decision.

The U.S. Court of Appeals for the District of Columbia (D.C.) Circuit decided the case by concluding that the second prong of *The Daniel Ball* does apply in RHA cases. "[W]e conclude that [navigable waters of the United States] requires a body of water to have an interstate connection by water, which Devils Lake lacks."[18] In similar cases involving lakes in Minnesota and Virginia, the U.S. Courts of Appeals for the Fourth and Eighth Circuits also concluded that both prongs of *The Daniel Ball* test had to be met for a water to be a navigable water of the United States under the RHA.[19]

3) FPA Cases

In the FPA, Congress, acting under its authority under the Commerce Clause, gave the Federal Power Commission, now the Federal Energy Regulatory Commission,[20] the authority to regulate hydropower facilities located in navigable waters. The Act actually defines navigable waters as:

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[14] *United States v. Utah*, 283 U.S. 64 (1931).

[15] *United States v. Appalachian Electric Power Co.*, 311 U.S. 377 (1940).

[16] *Utah*, 283 U.S. at 64.

[17] *National Wildlife Federation v. Alexander*, 613 F.2d 1054, 10 ELR 20060 (D.C. Cir. 1979).

[18] *National Wildlife Federation*, 613 F.2d at 1055.

[19] *State Water Control Bd. v. Hoffman*, 574 F.2d 191, 8 ELR 20358 (4th Cir. 1978); *Minnehaha Creek Watershed Dist. v. Hoffman*, 597 F.2d 617, 9 ELR 20334 (1979).

[20] 42 U.S.C. §§7171(a), 7172(a).

> [T]hose parts of streams or-other bodies of waters . . . which either in their natural or *improved condition* not-withstanding interruptions between the navigable parts of such streams or waters by falls, shallows, or rapids compelling land carriage, are used or suitable for use for the transportation of persons or property in interstate or foreign commerce, including therein all such interrupting falls, shallows, or rapids . . . .[21]

What is important to note about this definition is that it includes those waters that although they are not presently navigable, are susceptible to being made navigable through reasonable improvements.[22]

Perhaps the most important and oft-cited FPA case is *Appalachian Electric Power*. [23] The case involved regulations promulgated by the Federal Power Commission requiring the licensing of hydroelectric dams located on navigable waters. The Federal Power Commission initially declared the New River, which runs through Virginia and West Virginia, non-navigable. Two years later the commission reversed itself and adopted a resolution declaring the New River navigable. The Supreme Court recognized, as had courts from *The Montello* forward, that different types of commerce could exist to determine navigability.[24]

The use of commerce, the Court stated, need not be "continuous," explaining that "[e]ven absence of use over long periods of years, because of changed conditions, the coming of the railroad or the improved highways does not affect the navigability of rivers in the constitutional sense."[25] The Court proceeded to couple significant historical evidence with contemporary studies suggesting the New River could be made navigable with "reasonable" improvements.[26] The Court accepted surveys and reports published by government agencies as evidence that the river had been improved for navigability in the past.[27] Additionally, the Court discussed prior appropriations by the Virginia General Assembly made for the improvement of the river.[28] These official accounts were bolstered by the testimony of elderly residents that private boats and commercial ferries had sailed on the New River "in the days before railways and good roads."[29]

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[21] 16 U.S.C. §796(8) (2005).

[22] *Appalachian Elec. Power Co.*, 311 U.S. at 407-08.

[23] *Id.* at 377.

[24] *Id.* at 408-09.

[25] *Id.* at 409.

[26] *Id.* at 416-17.

[27] *Id.* at 413-14.

[28] *Id.* at 414.

[29] *Id.* at 416.

Appalachian Electric Power also explicitly recognized the concept of indelible navigability as it had been expressed in *Economy Light & Power*. In *Appalachian Electric Power*, the Court stated: "[W]hen once found to be navigable, a waterway remains so."[30] This is true, even if the waterway in its natural state required "reasonable" improvements to be navigable. As the Court explained: "The power of Congress over commerce is not to be hampered because of the necessity for reasonable improvements to make an interstate waterway available for traffic."[31] The decision thus clarified *Economy Light & Power's* relation on historical use with the latter's low threshold for commercial activity.

4) Navigational Servitude Cases

As described below under the Equal Footing Doctrine, states have title to the beds of navigable waters. Nonetheless, the federal government has an easement over those submerged lands. Under that easement or servitude, the federal government has the authority to condemn these submerged lands to make improvements to the waterways for commerce. When the federal government exercises this power, it does not have to pay compensation to riparian property owners under the Takings Clause of the Fifth Amendment to the Constitution.[32] The navigational servitude extends from the "ordinary high water mark"[33] on one bank of a navigable water of the United States to the ordinary high watermark on the other bank.[34]

The right of public access applies to all lands covered by the navigational servitude. Thus, many of the cases that deal with the navigational servitude involve public access to desirable waters. Typically, the definition for establishing the extent of the navigational servitude is the same as the one used for determining federal jurisdiction under the RHA.[35]

Kaiser Aetna was the first and is the only case which has held that navigability for the purpose of federal regulation under the *Commerce Clause* is not coterminous with navigability for the purpose of defining the scope of the federal navigational servitude.[36] *Kaiser Aetna*, which

[30] *Id.* at 408.

[31] *Id.*

[32] *Atlanta Sch. of Kayaking, Inc. v. Douglasville-Douglas County Water & Sewer Auth.*, 981 F. Supp. 1469, 1472 (N.D. Ga. 1997).

[33] A water body's ordinary high watermark is the "line of the shore established by the fluctuations of water . . . ." 33 C.F.R. §329.11(a)(1). It is determined by "physical characteristics such as a clear, natural line impressed on the bank, . . . changes in the character of the soil; destruction of terrestrial vegetation; . . . or other appropriate means that consider the characteristics of the surrounding areas." *Id. See Normal Parm Jr. et al. v. Mark Shumate*, 513 F.3d 135, 143 (5th Cir. 2007).

[34] 33 C.F.R. §329.11(a); *see also United States v. Rands*, 389 U.S. 121, 123 (1967).

[35] *Goodman v. City of Crystal River*, 669 F. Supp. 394, 400 (M.D. Fla. 1987).

[36] *Kaiser Aetna v. United States*, 444 U.S. 164 (1979).

should be read along with its companion case, *Vaughn v. Vermillion Corp.*,[37] stands for the proposition that navigable waterways built on private property with private funds, in such a manner that they ultimately join with other navigable waterways, do not create a general right of use in the public.[38]

B. Admiralty Cases

The second line of cases involves the Constitution's admiralty provision. Under Article III of the Constitution, federal courts have "original jurisdiction . . . of [a]ny civil case of admiralty or maritime jurisdiction.[39] The purpose of federal admiralty jurisdiction is to "protect [] commercial shipping" with "uniform rules of conduct."[40] Admiralty jurisdiction is based on a two-part test. First, did the alleged tort happen on or over navigable waters?[41] Second, did the cause of the injury have a "substantial relationship to traditional maritime activity such that the incident had a potentially disruptive influence on maritime commerce?"[42]

For our purposes, we are most interested in the first prong of this test. The test for whether a water is navigable in admiralty law is as follows: "[Whether the] waters are navigable if they are currently being used as a highway of commerce or if they are susceptible of being so used."[43] This is the test that was set forth by the Supreme Court in *The Daniel Ball* in 1870. It serves as the foundation for many of the navigability definitions discussed in these comments.

Whereas other tests have broadened in scope over time, the admiralty definition for navigable waters has not. For instance, admiralty jurisdiction does not extend to certain waters that were historically used to transport commerce but are no longer capable of doing so because of obstructions.[44] The rationale for this limitation is that admiralty jurisdiction is supposed to extend only to those waters that enjoy or could enjoy maritime commerce. If a new dam were to prevent maritime commerce from reaching waters upstream of the dam, it would also make sense

[37] *Vaughn v. Vermilion Corp.*, 444 U.S. 206 (1979).

[38] *Vaughn*, 444 U.S. at 208-209.

[39] 28 U.S.C. 1333(1).

[40] *Leblanc v. Cleveland*, 198 F.3d 353, 356 (2d Cir. 1999) (citing *Sisson v. Ruby*, 497 358, 362 (1990)).

[41] *Leblanc*, 198 F.3d at 356 (citing *Jerome B. Grubart, Inc. v. Great Lakes Dredge & Dock Co.*, 513 U.S. 527, 534 (1995)).

[42] *Id.*

[43] *Price v. Price*, 929 F.2d 131, 134 (1991).

[44] *Price*, 929 F.2d at 134.

that admiralty jurisdiction would not reach above the dam, regardless of the historic commerce that may have occurred on the river.[45]

C. Equal Footing Doctrine Cases

The third line of navigable waters cases arise as a result of the Equal Footing Doctrine, which is also grounded in the Constitution. When the first 13 states became the United States, they retained ownership of the submerged lands beneath their navigable waters.[46] Under the Equal Footing Doctrine, as new states joined the Union, they received the same ownership interests over the submerged lands under their navigable waters as the original states had.[47]

Many equal footing cases involve disputes over whether a state or the federal government owns the beds of certain waters. The most important issue in many of these cases is the boundaries of the navigable waters.[48] The definition of whether a water is "navigable" under this line of cases is as follows:

> [S]treams or lakes which are navigable in fact must be regarded as navigable in law; they are navigable in law when they are used, or are susceptible of being used, in their natural and ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water; and further that navigability does not depend on the particular mode in which such use is or may be had--whether by steamboats, sailing vessels or flatboats--nor on an absence of occasional difficulties in navigation, but on the fact, if it be a fact, that the stream in its natural and ordinary condition affords a channel for useful commerce.[49]

Although this definition sounds very similar to the one for admiralty jurisdiction, it differs in two important respects. First, the latter definition includes waters that were historically used for commerce but that can no longer serve that function. Second, it does not require commerce to be waterborne all the way to a state border as does the admiralty definition. Under the equal footing definition, for example, it is enough that commerce takes place on the Great Salt Lake; the lake does not have to be "part of a [waterborne] navigable interstate or international commercial highway."[50]

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[45] *Leblanc*, 198 F.3d at 359.

[46] *Martin v. Lessee of Waddell*, 41 U.S. (16 Pet.) 367, 410 (1842); *Montana v. United States*, 450 U.S. 544, 555 (1981).

[47] *Lessee of Pollard v. Hagan*, 44 U.S. (3 How.) 212, 228-229 (1845).

[48] *Idaho et al. v. Coeur D'Alene Tribe of Idaho et al.*, 521 U.S. 261 (1996).

[49] *Utah*, 283 U.S. at 76 (citing *United States v. Holt State Bank*, 270 U.S. 49, 56 (1926)).

[50] *Utah v. United States*, 403 U.S. 9, 10, 1 ELR 20250 (1971).

EXHIBIT C

The University of Georgia

College of Agricultural and Environmental Sciences
Department of Entomology

September 14, 2014

Bill Sapp
Southern Environmental Law Center
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Atlanta, GA 30303-1840

Dear Mr. Sapp,

I have read the report *Evidence of Significant Impacts of Coastal Plain Depressional Wetlands on Navigable Waters* and fully concur with its conclusions. The authors did an excellent job in collating the relevant, available scientific literature, and provide a holistic appraisal of linkages (physical and biological) between southeastern depressional wetlands and rivers, lakes, and other jurisdictional wetlands. Especially compelling to me were the copious data on how many animals in depressional wetlands such as invertebrates, amphibians, reptiles and fishes rely on nearby rivers, lakes and wetlands for survival, and how those habitats are in turn ecologically reliant on those wetland organisms. The report makes clear that in order to maintain the ecological integrity of *Waters of the US* the many influences of depressional wetlands need to be recognized.

I feel qualified to render an endorsement to the *Evidence of Significant Impacts of Coastal Plain Depressional Wetlands on Navigable Waters* report because of my past experience with wetland habitats. I have published five edited textbooks on various aspects of wetland science, including *Ecology of Freshwater and Estuarine Wetlands* (2014, 2nd edition, University of California Press), which is a textbook widely used in college-level wetland courses across the country, including my own graduate course at the University of Georgia. I have published over 80 journal articles and book chapters on wetland and aquatic ecology, and served as Editor-in-chief for the journal *Wetlands*, the scholarly publication of the society of Wetland Scientists.

Sincerely,

Darold Batzer
Professor

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An Equal Opportunity/Affirmative Action Institution

Comments on "Physical, Chemical, and Biological Impacts of Geographically Isolated Wetlands on Waters of the United States " and "Evidence of Significant Impacts of Coastal Plain Depressional Wetlands on Navigable Waters

Paul H. Zedler
7 Oct. 2014

Overall evaluation

I found both reports to be well written and thoroughly referenced. I am not an expert on the literature of all these kinds of wetlands, but the papers cited are drawn primarily from high quality peer reviewed journals. From a scientific point of view the reports are highly credible, and a suitable basis for evaluating the function and value of these wetlands. I concur with the authors' assertion that the set of ephemeral wetlands is remarkably diverse and is best thought of as a continuum with respect to hydrology and function.

Legalistic Disclaimer

As an ecologist, I have only a layman's understanding of the intricacies of legal terminology. I am not intimately familiar with the reasoning that is involved in the definition of "waters of the United States", or the exact point at which the law and regulations place the limits of "nexus", or the size of the vessel that must pass to permit a water body to be considered navigable. Indeed, although ecology as a science requires putting concepts, phenomena, and ecosystems into categories, this is done reluctantly (by thoughtful ecologists) and with the understanding that these categories are largely or wholly artificial and not indicative of some immutable imperative of nature. I accept that it is necessary to organize the reports around "types" of wetlands, but concur with the authors that there is considerable heterogeneity within each type. The types do on average differ but they do not fall into unambiguously distinct categories.

An appeal for recognition of larger systems, longer time scales, and the inherent interconnectedness of everything.

From an ecological point of view, the human use of landscapes imposes burdens on the environment. It is understood that this is necessary if the human race is to meet its needs. Soils must be plowed and exposed to wind and water erosion if crops are to be grown. Unlike any other animal, however, humans have the capacity to understand how their activities can have cumulatively negative affects on the ability of the earth to provide the needed resources. There is abundant evidence that thinking only about the immediate future (can I increase my profit if I discharge into this pond?) and only about one small part of the earth (should we fill in this ephemeral wetland?) can have bad effects at the regional and global scales.

From this view, the "waters of the United States" include every part of the system where liquid water collects -- from a rill that flows only for a few hours to the Mississippi River and the Great Lakes. Therefore there is a nexus in both the biological and physical sense, and it is cumulatively significant. By ecological reasoning all parts of this continuum deserve protection.

The case for the hydrological "nexus"?

Storage Function. With the exception of certain types of seepage wetlands, there cannot be a wetland without a basin. Because of this, wetlands perform a water storage function, reducing peak flows and except where basins are on impermeable substrates, recharging groundwater. Whether this reduction has significant effects downstream depends on precipitation amounts and patterns and the likelihood that water moving through the wetlands will reach larger bodies. In regions with higher and more consistent precipitation, overflow and contributions to groundwater will be frequent. In regions with less precipitation these connections will be less frequent and of shorter duration, but because of the greater aridity the contributions of the storage function may be relatively much more significant. Given that more intense episodes of precipitation are predicted for the future, this function will only become more important for wetlands across the precipitation gradient, and natural capacity for flood attenuation proportionately more demanding of protection.

Water quality improvement function. The reports indicate several ways in which ephemeral wetlands can improve water quality. Most notable is related to the storage function. Water collected in basins will cause suspended solids to settle, a fact that justifies the creation of artificial basins when engineering solutions are employed to offset the negative affects of the expansion of impermeable substrates. For certain wetlands and conditions nitrogen can be removed through denitrification. Phosphorus can be sequestered in plant material and if a wetland is of a type to accumulate organic matter can remove it from regional cycling.

The reports note that the value of natural ephemeral wetlands has been demonstrated by situations in which the drainage patterns have been disrupted by channelization, and other human disturbances resulting in increased siltation and decreased water quality for downstream sources.

The case for a biological "nexus"

A biological "nexus" can be said to exist if organisms or their propagules (seeds, eggs) are regularly exchanged between ephemeral wetlands and the more permanent wetlands and bodies of flowing and standing water. It is clear from the many examples cited that there is in this sense a strong and biologically significant nexus. Further, ephemeral wetlands have unique ecological functions within this nexus that either cannot be provided by larger more permanent bodies of water as well as others that are provided at higher levels. Most notable among these biological attributes is the common absence or delayed arrival of larger predators which makes the ephemeral wetlands important habitat for predation-susceptible animals both vertebrate and invertebrate

A significant proportion of the biota of ephemeral wetlands consists of species that are locally and even regionally migratory, opportunistically exploiting wetlands across seasonal and longer term fluctuations in wetland filling and drying. Commonly species move between ephemeral and more permanent bodies of water. Truncating a portion of the possible habitats cannot help such species, and may result in significant population losses.

Many ephemeral wetlands play a crucial role for migratory waterfowl, serving as breeding habitat and stopover sites during migration. The loss of these wetlands would significantly diminish the capacity of landscapes to support waterfowl.

Can the ecological services provided by ephemeral wetlands be sustained against the pressure of economic expediency?

The continual erosion of natural habitats is fostered by economic and political systems that fail to properly weight cumulative effects. Resources that consist of multiple small sites over a large area are especially vulnerable. Collections of ephemeral wetlands often occur in multiple ownerships and jurisdictions, making it difficult to do an accounting of collective loss of function. The well know process in which at each stage the loss of "just one small puddle" can be shown as economically and even biologically insignificant relative to the value to be gained by its destruction works strongly to the disadvantage of these small bodies of water.

These reports make a strong case for why a more enlightened approach to preservation of ephemeral wetlands requires a regional and national view.

EVIDENCE OF SIGNIFICANT IMPACTS OF COASTAL PLAIN DEPRESSIONAL WETLANDS ON NAVIGABLE WATERS

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River Basin Center
Odum School of Ecology
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For the Southern Environmental Law Center

July 2014

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INTRODUCTION

In this paper, we provide evidence for the influence of Carolina and Delmarva Bays and other Coastal Plain Depressional Wetlands (CPDWs) in the southeastern United States on the biological, chemical, and physical integrity of navigable waters. In an effort to contribute more information to the determination of a 2014 proposed rule for the "Definition of 'Waters of the United States' Under the Clean Water Act" (79 FR 22188), we reviewed additional literature specifically related to the significant ways in which CPDWs, including Carolina and Delmarva Bays, affect downstream waters. For the purposes of declaring any class or type of wetland a jurisdictional Water of the United States, as per section 404 of the Clean Water Act and Supreme court decisions handed down in Rapanos (2006) and SWANCC (2001), primary consideration must be given to the capability of those wetlands to "significantly affect the chemical, physical, and biological integrity of other covered [jurisdictional] waters more readily understood as 'navigable'" (Rapanos 2006). With regards to this consideration, we posit that geographically isolated depressional wetlands on the southeastern coastal plain, including those called Carolina and Delmarva Bays, clearly impact the physical, chemical, and biological processes and functions in river networks, lakes, and coastal waters. Thus, they should be considered a class of Waters of the United States.

This paper is intended to serve as a supplement to information presented in the Environmental Protection Agency (EPA) Office of Research and Development's report detailing the "Connectivity of Streams and Wetlands to Downstream Waters" (hereinafter referred to as the Connectivity Report). In the Report, the authors reviewed the available literature and reported connections between unidirectional wetlands such as Carolina/Delmarva Bays and navigable waters. While many connections were cited, a high degree of variability among biological, chemical, and physical characteristics of these wetlands has frequently been observed.

This variability is in part responsible for the preliminary conclusion that was voiced in the proposed rule that unidirectional wetlands in the United States must be evaluated on a case-by-case basis to determine the existence of a "significant nexus" with traditional navigable waters. While we agree that a large amount of variability among Coastal Plain Depressional Wetlands is common, we disagree that this leads to uncertainty in determining a significant nexus. We provide evidence to supplement the Connectivity Report in order to show that along every important gradient driving variability among

CPDWs, this class of wetlands significantly impacts the integrity of "waters more readily understood as navigable." Rather than repeat evidence already known to regulators, we avoid where possible citing literature used as reference material in the Connectivity Report, and make an effort to note where and why we've duplicated any citations. Some literature cited in the Connectivity Report is used here only to cite background material, such as Sharitz (2003) and Whigham and Jordan (2003).

COASTAL PLAIN DEPRESSIONAL WETLANDS

The authors of the Connectivity Report did not find sufficient evidence in the literature to prove the connectivity of unidirectional wetlands to downstream waters, either as a whole or by region and/or type of wetland. In the Report, the authors consider several case studies of unidirectional wetlands and their relationship to downstream jurisdictional waters; one such case study is for Carolina Bays and Delmarva Bays, which are defined as "elliptical, ponded, depressional wetlands that range along the Atlantic coastal plain from northern Florida to New Jersey." We attempt to add to the body of evidence reported in that document showing the significant impacts of Carolina and Delmarva Bays on navigable waters.

Additionally, we believe that Carolina and Delmarva Bays should be grouped with other depressional wetlands of the Coastal Plain to form a broader class of wetlands called Coastal Plain Depressional Wetlands (CPDWs). The name Carolina Bay refers to the common presumed geomorphic origin and elliptical shape of many geographically isolated wetlands on the Atlantic coastal plain (Lide 1997). While this can be a useful distinction, with regards to evaluation of connectivity of unidirectional wetlands to jurisdictional waters, it is unnecessarily specific. Limiting the evaluation of these depressional wetlands to merely Carolina and Delmarva Bays excludes many depressional wetlands on the southeastern coastal plain that are similar ecologically, and perhaps more importantly, share similar connections to downstream waters. Wetlands that have regional names such as limesinks, citronelle ponds, cypress domes, oak domes, grady ponds, and flat-bottom ponds have been considered by many researchers as some variant of "Southeastern Depressional Wetlands" due to their ecological similarity (Kirkman et al. 1999, Edwards and Weakley 2001, Kirkman et al. 2012). Even in research limited to wetlands of a specific region or geomorphic origin, authors often note the similarities among depressional wetlands on the coastal plain (Folkerts 1997, Taylor et al. 1999).

Carolina and Delmarva Bays are often considered the result of prevailing wind on water in surface depressions due to their typical northwest-southeast orientation and elliptical shape; depressional wetlands in karstic regions of Georgia and northern Florida, as well as many farther north on the Atlantic

coastal plain and on the gulf coastal plain of Alabama and Mississippi, have their origins in dissolution of the underlying limestone and/or soil minerals (Folkerts 1997, Kirkman et al. 2012). Even where many typical Carolina bays occur, these are often interspersed with other depressional wetlands that lack a characteristic elliptical shape and sand rim on the southeastern edge (Lide 1997). An inventory of Carolina Bays by the Georgia Department of Natural Resources found 528 wetlands with an oval shape and the typical orientation interspersed among an additional 969 similar geographically isolated wetlands that did not meet the strict definition of a Carolina Bay (GaDNR n.d.). Further blurring these classifications, the report found that more than half of the Carolina Bays did not have a southeastern sand rim, which is often considered characteristic of this wetland type.

We propose to expand the definition provided in the Connectivity Report for Carolina and Delmarva Bays ("Elliptical, ponded, depressional wetlands that range along the Atlantic coastal plain from northern Florida to New Jersey") by elimination of the word 'elliptical,' and to include similarly situated depressional wetlands in the same landscape and on the gulf coastal plain. These wetlands do not usually share surface water connections with permanent inland waters, are hydrologically dominated by precipitation and evapotranspiration, and usually can be characterized by seasonally fluctuating water levels perched on a clay or sand lens that retards water infiltration. This category includes wetlands that typically dry completely in the summer months, as well as those that remain ponded except in periods of extended drought. In this class we do not include headwater or flatwoods wetlands that do not occur in isolated topographic depressions (such as pocosins), nor do we include wetlands outside of the coastal plain (such as vernal pools or prairie potholes).

EVIDENCE OF CONNECTIVITY TO NAVIGABLE WATERS

CPDWs exist on gradients of hydroperiod (inundation), hydrology, isolation from other wetlands and navigable waters, and landscape disturbance. Variation is typical of these systems, and makes generalization of any one "significant nexus" between navigable waters and all (or even most) CPDWs nearly impossible. This generalization is not our aim. Rather, we provide evidence of multiple types of biological, chemical, and physical connectivity between jurisdictional waters CPDWs across each of these gradients.

We focus each section initially on supplemental evidence of connectivity between Carolina/Delmarva Bays and traditionally navigable waters, and later provide evidence for connectivity to other CPDWs that we believe should be included as a jurisdictional class of waters of the United States. While no specific type of significant nexus can be assumed to exist between every CPDW and navigable

waters, enough evidence exists to presuppose that each CPDW, individually and/or as part of a wetland complex, significantly affects the biological, chemical, and/or physical integrity of federally jurisdictional waters. The specific type of nexus is determined by where the wetland exists on the relevant environmental gradients.

PHYSICAL CONNECTIVITY

Carolina and Delmarva Bays

Throughout most of the year Carolina and Delmarva Bays exhibit limited physical connections to downstream navigable waterways, but several studies cited in the Connectivity Report have shown groundwater and potential surface water connections during extreme weather events (see Carolina and Delmarva Bays case study, 5-53—5-55). As noted in the Connectivity Report, unidirectional wetlands including Carolina and Delmarva Bays will have a significant impact on downstream waters if they are connected by surface water flows, permanent or ephemeral. Many CPDWs with longer hydroperiods clearly form these connections, as fish colonization is a common occurrence (Kirkman et al. 2012). Groundwater discharge to streams by those Bays connected to groundwater is also likely. When neither of these connections exist, Carolina and Delmarva Bays influence the physical integrity of downstream waters by acting as water and sediment storage on the landscape, and often as 'water pumps' by allowing water entering the wetlands to leave through evapotranspiration.

Bays that have been ditched, drained, or that have surface water connections to navigable waters, along with their flood plains, may be sources of sediment and organic material. Ditching of Carolina and Delmarva Bays is common in agricultural landscapes, and often creates clear hydrologic connections to river networks. This can facilitate sediment, nutrient, and biota movement between wetlands and navigable waters. The Georgia DNR (n.d.) noted that some 60% of Carolina Bays in Georgia appeared to have undergone some ditching (although some of these ditches were not operational when inspected on the ground). Un-ditched Bays in clear-cut or disturbed landscapes likely influence the physical integrity of downstream waters by slowing water movement across the landscape, and retaining some water that would otherwise enter river networks as an unimpeded run-off pulse.

High flow events caused by extreme precipitation may link geographically isolated wetlands and wetland complexes with downstream waterways. Carolina Bays retain water due to their topographically low position on the landscape, and eventually cause evapotranspiration of some water that otherwise

would enter river networks during these flooding events. Whether serving as water and sediment sources or sinks, Carolina and Delmarva Bays have a significant effect on the integrity of downstream navigable waters.

Other Coastal Plain Depressional Wetlands

Large storm events can form uncommon connections between hydrologically isolated CPDWs and river networks as the capacity of the depressions is reached, facilitating water, nutrient, sediment, and biota flow to navigable waters (Michener et al. 1998, Battle and Golladay 2002). Additionally, CPDWs likely retard water movement across the landscape and into navigable waters. Michener et al. (1998) reported that CPDWs in southwest Georgia were flooded long after a river flood pulse peak following heavy run-off (50-60% mean annual run off) due to Tropical Storm Alberto. Hundreds of new sinkholes were formed during this large storm event that had the potential to become depressional wetlands and act as additional water storage in future years.

A study north of Lake Okeechobee, FL found that roughly 38% of annual rainfall within the catchments of four geographically isolated wetlands contributed to groundwater recharge (Min et al 2010). Interestingly, the authors also found under certain wetting and drying conditions water may also move horizontally out of the wetland to drier areas. A study of six isolated cypress swamps showed that when the water table was within 10 cm of the water's surface, 70% of the potential measurements saw groundwater moving through the swamp. However, when the water table was 40-50 cm below the surface more than 60% of the measurements showed water flowing out of the swamp and into the surrounding area (Crownover et al 1995). Another study in Tennessee (outside the coastal plain) was conducted to determine the potential water loss by evaporation in an isolated wetland. Researchers found that evaporation did contribute to some water loss, but over 50% of the water escaped from the system was contributing to deep recharge of an underlying aquifer (Hill and Neary 2010).

Wetlands in developed landscapes can have significant impacts on groundwater interaction as well. Eleven cypress domes across North Florida with varying amounts of human or agricultural disturbance were selected as part of groundwater recharge study to calculate how habitat condition affects recharge rates. Researchers found that regardless of initial condition isolated cypress dome wetlands alternate between periods of net recharge and discharge. Although undisturbed wetlands are likely of greater importance for wildlife habitat, degraded wetlands in urban and agricultural regions were found to be effective groundwater recharge zones. Their higher exfiltration than infiltration rates indicate that

geographically isolated wetlands in developed areas may not be suitable habitat for all aquatic life, but they are able to contribute to subsurface flows and groundwater recharge (McLaughlin and Cohen 2013).

CHEMICAL CONNECTIVITY

Carolina and Delmarva Bays

The influence and interactions of Carolina Bays with the abiotic world are highly significant to downstream navigable waterways. As discussed above, this report is intended as a supplement to the evidence for connectivity between Carolina Bays and navigable waters detailed in the Connectivity Report. Much of the chemical and physical connectivity has been reviewed in that document. We reference some additional information and literature, and refer to the Connectivity Report where relevant.

Most Carolina Bays are characterized by having a single input, precipitation, and a single output, evaporation; while this is generally true, it is an oversimplification of a complex hydrologic process. Despite lacking obvious surface water connections, most Carolina Bays are linked through groundwater interactions or periodic, high surface water flows (Winter 2001). These connections allow depressional wetlands to function as a high quality water source, important water storage, and/or significant nutrient sink to navigable waters downstream (Sharitz and Gresham 1998, Whigham and Jordan 2003). Differences in surface and subsurface connection among individual Carolina Bays are due to basin materials, basin morphometry, meteorological variation, topographic position, and human actions such as ditching.

The water quality of individual Carolina Bays is widely variable and is primarily determined by the quality of the water entering the wetland. The position of the wetland within the watershed, the amount of organic matter within the soils, and interaction with surface, shallow subsurface, or groundwater will also influence the ecology of a depressional wetland (Whigham and Jordan 2003). As stated in the Connectivity Report, CPDWs with a surface water connection, no matter how ephemeral, will have a significant impact on downstream waters due to nutrient and chemical (such as methylmercury) transport. CPDWs that exhibit groundwater recharge may also do so through shallow subsurface input to jurisdictional waters. We emphasize that this variability does not usually create uncertainty as to whether a wetland or wetland complex influences navigable waters, but rather what type of influence is exerted.

Typical unprotected landscapes of the southeastern coastal plain are dominated by agricultural activities and human development. The surrounding upland can have tremendous effects on water quality and quantity, as well as habitability, in unidirectional wetlands and navigable waters (Whigham and Jordan 2003). Carolina Bays isolated from other waters can serve as nutrient sinks for large portions of a landscape, and limit nutrient loading to navigable waters through transformation and adsorption of nitrogen and phosphorus, respectively (Forbes et al 2012). These wetlands also support communities of detritivores that decompose terrestrial organic material that may otherwise enter river networks, and recycle these nutrients to upland ecosystems (Golladay et al. 1999, Nakano and Murakami 2001).

Development along major bodies of water and increased use of pesticides and fertilizers has impaired waters in rural and urban areas throughout the United States. Poorly designed wastewater systems from suburban homes to cattle farms are major contributors to recent water quality problems. While conventional water treatment methods can eliminate most of these contaminants, it is an expensive process that often involves the application of more potentially harmful chemicals. Interestingly, some pollutants that are unable to be removed by conventional treatment processes are trapped and stored within wetland sediments, along with common limiting nutrients and organic materials (Song et al 2001). This property of wetlands enables them to treat potential runoff from sewer systems, agricultural fields, and cattle pastures before it enters a navigable water body.

Carolina Bays that dry during portions of the year have additional chemical benefits for downstream waters, as outlined in the Connectivity Report. These low areas on the landscape act as sinks for sediments and nutrients that enter through runoff or groundwater discharge. Ephemeral wetland hydrology supports both anoxic and oxic bacteria necessary for the complete transformation of ammonia nitrogen to nitrogen gas (denitrification) (Euliss et al 2004). Thus, ephemeral Carolina Bays likely reduce ammonia and nitrate levels in navigable waters and maintain ecosystem health. Studies by Ewing et al. (2012) showed that Carolina Bay soils retain excess nutrients and heavy metals from long-term additions of agricultural water. Carolina Bays converted to row-crop agriculture for various lengths of time were compared to an unimpacted, reference Carolina Bay. Bays converted to agriculture had significantly higher amounts of P, Ca, Mg, Mn, Zn, Cu, and higher pH levels than the reference bay. Soils of farms active for 30 years were found to contain significant nutrient levels up to 1 meter below the surface; while farms active for only 15 years had significant nutrient levels only in the topsoil (Ewing et al. 2012). This shows that nutrient runoff from agriculture can be minimized by contact with a functional Carolina Bay and stored within the sediment for more than 30 years.

A similar study in Cumberland County, North Carolina investigated the differences in water quality between four Carolina Bays with varying levels of disturbance. Comparisons between reference, restored, and impacted Carolina Bays found water quality levels decreased with landscape disturbance. Outflow from the disturbed, agricultural Carolina Bay had the highest levels of soluble reactive phosphorus, total phosphorus, and nitrite. Outflow from the restored bay had lower nutrient levels than the agricultural bay but was still higher than the reference bay (Bruland 2003). This study shows that previously drained and filled Carolina Bays may still function to remove excess nutrients when restored properly. Properly restored or pristine Carolina Bays will significantly limit nutrient loads to downstream waters or coastal zones.

The Connectivity Report also noted the possibility for Carolina Bays to act as a source of materials to downstream waters in the case of natural hydrologic connections, or human alteration through ditching. Ephemeral wetlands may support sulfate-reducing bacteria at the oxic-anoxic boundary that produce methylated mercury (Marvin-DiPasquale et al 2013). Hydrologic connections may increase the export of this toxin to downstream waters, and thus influence their chemical and biological integrity. These connections are enhanced during unusually large precipitation events, as more waters become connected by surface water (Wilcox et al 2011). This may be especially important during infrequent storms, as accumulated organic matter could be exported to navigable waters through temporary surface connections, and serve as an energy resource in downstream waters.

Other Coastal Plain Depressional Wetlands

Other studies in the southeast have found that these nutrient retention capabilities are not unique to Carolina Bays but apply to most other CPDWs. A three-year study in Florida's Lake Okeechobee basin attempted to quantify the nutrient storage potential of four separate geographically isolated wetlands fed by runoff from a cattle ranch. Researchers found that P storage in above-ground plant biomass was greatest in deep marsh zones of the wetland, lower in shallow marsh zones, and lowest in pastured uplands. Additionally, P storage was significantly higher in the wetland soils than the upland pasture soils. The authors concluded that as distance from the influent source increased so did the quality of water within the wetland. The authors also note that the majority of plants studied were N limited, meaning that a temporary increase in N could facilitate further P uptake by aquatic plants (Dunne et al 2007).

A similar study conducted on four cypress dome wetlands in Florida found that geographically isolated wetlands were equally effective at removing fecal coliform bacteria from secondarily treated wastewater. While natural cypress domes typically have some level of fecal coliform, it is not transferred

to groundwater, even under manipulated experimental conditions (Fox et al. 1984). These studies show that the properties of constructed wetlands that allow them to successfully treat wastewater are also found in naturally occurring CPDW's.

Healthy geographically isolated wetlands are effective at preventing excess nutrients and harmful bacteria in agricultural and wastewater runoff from entering navigable waters. However, it is important to note that diverse wetland systems with a combination of shallow and deep zones are most effective at treating poor quality waters. Maintaining the natural ecology and hydrology of the wetland will maximize its pollutant removal potential (Euliss et al 2004). Early work on the same cypress domes studied by Fox et al. (1984) illustrated the effect aquatic plants have on nutrient removal in these systems. Daily phosphorus uptake by duckweed in late summer was approximately 83% of the total influent P (Deghi and Carter 1984). Previous research showed that phosphorus removal by duckweed could reach up to 67% of the total influent in winter as well (Price 1975). Another 12% of the remaining phosphorus is incorporated into the organic layer before percolating into the underlying sediments (Deghi and Carter 1984).

A recent study on the gulf coastal plain in Galveston Bay, Texas attempted to quantify the total effect a series of coastal isolated wetlands have on water quality within the bay. Around 40% of the land area in Galveston Bay is comprised of geographically isolated wetlands and their catchments, but due to recent developments the number of undisturbed wetlands is dwindling. Researchers found that the wetlands collect and store approximately 76% of the precipitation that falls within their catchments, and retain 98% of inorganic-N and 92% of inorganic-P. It was also estimated that the wetlands provide roughly 50% of the bay's annual carbon load (Forbes et al 2012). This study shows how the removal of geographically isolated wetlands can be equally impactful in urban cities and agricultural farmlands. The poor water quality of precipitation from the Galveston/Houston area indicates that excess nutrients, chemicals, and potentially heavy metals can be found within certain stages of the hydrologic cycle. Removing the bay's surrounding wetlands would facilitate the movement of excess nutrients into the bay, potentially causing a severe algal bloom. Additionally, the removal of these wetlands would eliminate a substantial amount of the dissolved organic carbon that marine fauna rely on. Potential lower carbon inputs and higher frequency algal blooms would have a detrimental effect on any commercial fish or crab operations in the area.

BIOLOGICAL CONNECTIVITY

We found no evidence that organisms that demonstrate biological connectivity between CPDWs and downstream navigable waters prefer or require some depressional wetlands of a specific shape and orientation and not others. Much of the evidence for biological connectivity between Carolina/Delmarva Bays and navigable waters is presented in the Connectivity Report, but we review supplemental material below. We then review evidence for biological connectivity between other types of CPDWs and navigable waters.

Carolina and Delmarva Bays

Many invertebrates have specific evolutionary adaptations that cause a significant transfer of energy and nutrients between isolated ephemeral wetlands and navigable waters. Periodic flooding and drying is the single most important stressor driving adaptation in ephemeral wetlands, and invertebrate animals have adapted four primary strategies for coping: three strategies for desiccation tolerance (1. Overwintering residents remain in saturated sediment during dry-down; 2. Overwintering spring recruits oviposit on water in spring, then aestivate or overwinter as adults; 3. Overwintering summer recruits oviposit in the dry basin, and overwinter as eggs or larvae); and one desiccation avoidance strategy: adult colonization following wetland inundation, rapid juvenile development, and adult migration to permanent water after wetland dry-down (Wiggins et al. 1980). This last strategy has been termed cyclic colonization by Batzer and Wissinger (1996), and is employed by multiple taxa of ecologically important invertebrates that migrate between geographically isolated wetlands and navigable waters.

Cyclic colonizers of ephemeral wetlands are often predatory insects that are adapted to take advantage of resources in temporary wetland habitats, and avoid desiccation stress by migrating away from these habitats when they dry (Batzer and Wissinger 1996, Wissinger 1997). Some Ephemeroptera, Diptera, and Odonata adults emerge from drying wetlands and lay eggs in permanent water, so that their larvae may overwinter in permanent habitats. Cyclic colonizing Coleoptera and Hemiptera overwinter as adults in permanent waters. Some aquatic insects (such as many water striders (Gerridae:Hemiptera)) have adapted dimorphic phenotypes, whereby one phase exhibits smaller or non-existent wings and enhanced reproductive capability for rapid proliferation in a temporary wetland, and the other has fully developed wings and can disperse farther distances, at the expense of fecundity (Zera and Denno 1997). These insects can play an important role in the trophic dynamics, nutrient cycling, and ecological stability

of the permanent waters they inhabit during a portion of the year, including large rivers and their tributaries, interstate waters, navigable lakes, and their adjacent wetlands (Allan and Castillo 1995).

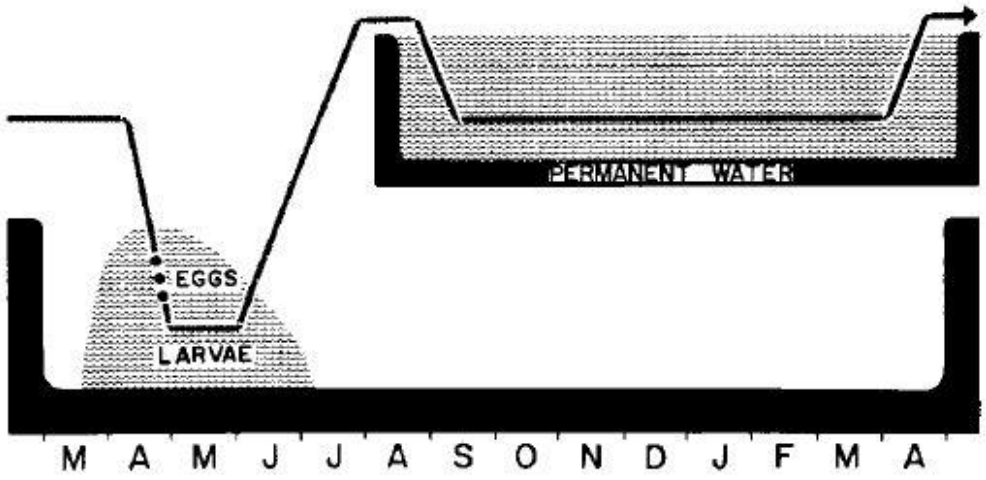

Figure 1: Cyclic colonization pattern. Shaded portions represent times of wetland inundation, black arrow represents aerial invertebrate movement between water bodies. Figure from Wiggins et al. 1980.

A summary by Taylor et al. (1999) of sampling performed in ephemeral Carolina bays in South Carolina indicates that cyclic colonizers are common (including *Anax* dragonflies, *Hesperocorixa* water boatmen, *Buenoa* and *Notonecta* backswimmers, *Tropisternus* water scavenger (hydrophilid) beetles, and *Chaoborus* phantom midges). McClure (1994) sampled two permanently flooded and three ephemeral Carolina Bays in South Carolina over 34 weeks, and found several of these type of taxa (*Tropisternus*, *Notonecta*) to be common in ephemeral Bays, and several others (*Anax, Acilius* predaceous diving (dytiscid) beetles) to be present. All of these, as well as *Hesperacorixa* and *Chaoborus*, were common in permanently flooded Carolina Bays. Many studies have found a high diversity (>100 species) of insect taxa using these temporary wetlands—we note here only those that show connectivity with jurisdictional waters.

In addition to cyclic colonization by dispersing insects, all Carolina and Delmarva Bays have a substantial impact on the biological integrity of permanent waters due to the high volume of Chironomid (non-biting midge) production. This was noted in the Connectivity Report, but in each of the studies we reviewed that quantified secondary production in CPDWs, Chironomid midges dominated and represented between 35 and 90 percent of invertebrate abundance. Leeper and Taylor (1998; cited in Connectivity Report) found densities of midges between 863 and 2674 individuals/m^2 in a Carolina Bay

in South Carolina. McClure (1994) found 63% of all taxa sampled from 5 Bays over a 36-week study period (over 9700 individuals) were Chironomids.

This Chironomid production is especially important as a source of nutrients for duck species such as wood ducks (*Aix sponsa*), which rely on invertebrate food resources in their breeding grounds to provide the necessary nutrition for reproduction and juvenile growth (Hocutt and Dimmick 1971, Landers et al. 1977, Bellrose and Holm 2004). Folk and Hepp (2003) and Hartke and Hepp (2004) found that *A. sponsa* breed in both jurisdictional waters (an impoundment of the Chatahoochee River in southwest Georgia and southeast Alabama, as well as adjacent wetlands and tributary creeks) and temporary depressions in the Southeastern United States (including Carolina Bays, see Landers et al. 1977). Ducks that rely on Chironomid production and use both geographically isolated and jurisdictional waters represent a significant transfer of nutrients (e.g. in their fecal matter) and propagules (e.g. invertebrate eggs attached to duck feet) between these systems, and are important consumers in the riverine food web.

Other vertebrates also serve as a link between ephemeral wetlands and navigable waters of the United States. As detailed in the Connectivity Report, many amphibian species are adapted to take advantage of temporary wetlands during aquatic juvenile stages, particularly because of the lack of fish predators. Some of these species (as well as several reptiles) are known to use both lentic and lotic waters in the southeast (see table 5-2 in the Connectivity Report). Amphibians use Carolina/Delmarva bays, other CPDWs, upland, and river networks for breeding, foraging, dispersal, and overwintering. Because they move among these habitats, they facilitate critical flows of nutrients, energy, and genetic information, and serve as links in an interconnected food web that exists between lentic and lotic aquatic habitats, and the terrestrial habitat between them (Nakano and Murakami 2001, Richardson et al. 2010, Bartels et al. 2011). Preservation of Carolina and Delmarva Bays with diverse and variable hydroperiods is of utmost importance for species and community maintenance, as certain species are adapted to breed in Bays with specific hydroperiods (Pechmann et al. 1989, Liner et al. 2008).

Birds and mammals also link food webs between navigable waters, their adjacent wetlands, and Carolina/Delmarva Bays. Bird and bat food resources are subsidized by insect emergence from both large rivers and tracts of habitat that contain Carolina Bays, to the point that pine forests with Carolina Bays support a higher diversity of bird species (Nakano and Murakami 2001, Czapka and Kilgo 2011). Some bats, particularly the Southeastern myotis (*Myotis austroriparius*) are more likely to be present in areas either closer to Carolina Bays or bottomland floodplain forest, indicating the species relies on insect production from both habitat types (Ford et al. 2006). Comparisons of birds found using Carolina Bays (Czapka and Kilgo 2011) to those found along the Apalachicola River by Stevenson (1977) show several

common overlaps, including Northern Parula (*Parula americana*), Acadian Flycatcher (*Empidonax virescens*), Hairy Woodpecker (*Dendrocopos villosus*), Red-eyed Vireo (*Vireo olivaceus*), Hooded Warbler (*Wilsonia citrine*) year-round, and additionally Red-shouldered Hawk (*Buteo lineatus*) in the non-breeding season. Wading birds such as Herons and Egrets forage in temporary wetlands and permanent navigable waters, and feed on invertebrates, amphibians, and fish in these waters (Taylor et al. 1999).

Extreme hydrologic events such as flooding and drought can also have uncommon but important impacts on biological connections between Carolina/Delmarva Bays and navigable waters. Gibbons et al. (1983) recorded turtle species that inhabit Carolina Bays (*Pseudemys floridana* and *P. scripta*) moving away from a dried Bay to permanent waters in drought conditions. More than 50% of all emigrating turtles were found in a nearby beaver pond, part of a jurisdictional tributary. Thus, while jurisdictional waters may not be impacted by these species in average years, mass influx in drought years likely has an effect on riverine and floodplain food webs.

Alternatively, exchange of some organisms between Carolina/Delmarva Bays and river networks is only possible during flooded conditions. As stated in the Connectivity Report, temporary surface water connections are presumed in many Carolina Bays due to the presence of fish. Additionally, two thirds of all mole salamanders and chorus frog juveniles dispersed from Carolina Bays studied by Pechmann et al. (1989) in the wettest 2 years of an 8 year study, indicating that extremely wet hydrologic conditions can have disproportionate impacts on amphibian populations, and thus organisms linked by energy flow to these animals.

Permanently ponded Carolina and Delmarva Bays are typically the only wetlands that maintain fish populations, as dry-down is most often lethal for fish when surface water connections to permanent water are not available. During periods of higher than average precipitation, surface water connections between these and navigable waters can facilitate fish migration and dispersal, triggering subsidies of nutrients and exchange of genetic information that influence the integrity of jurisdictional waters. Fish also influence the community structure of amphibians and invertebrates in temporary wetlands, reduce invertebrate secondary productivity, and can decrease the rate of detrital decomposition due to a cascading trophic effect on detritivores (Snodgrass et al. 2000, Baber and Babbitt 2003, Shurin et al. 2012).

Other types of surface water connections between Carolina/Delmarva Bays and river networks can be created by human alteration. Ditching and draining of wetlands in agricultural areas is common, and the Connectivity Report provided evidence that this practice may increase connectivity to

downstream waters through direct surface or subsurface (e.g. tile drains) hydrologic connections. Ditching likely increases connectivity to sources of biota when ditches drain to permanent water, but shortened and homogenous hydroperiods in ditched wetlands also may change community structure. Regardless, these hydrologic connections likely substantially alter chemical and physical integrity of downstream river networks (see Chemical and Physical Connectivity below). Additionally, evidence exists that Carolina Bay communities in agriculturally disturbed landscapes may quickly recover (within 30-40 years) to a pre-disturbance state following upland protection (Mahoney et al. 1990, Kirkman et al. 1996).

Some Carolina and Delmarva Bays (and other CPDWs) exist in landscapes that are characterized by complexes of many wetlands in close proximity, while others are separated by distance and/or barriers such as roads (and other linear infrastructure), buildings, and fragmented terrestrial habitat (Sharitz 2003). These scenarios have varying effects on the water chemistry and hydrologic connections of these wetlands, as well as on the biota that use them as habitat. Overland dispersers such as amphibians and reptiles are especially affected by geographic isolation, particularly in developed landscapes—amphibians disperse fairly long distances (2.5 – 15 km) and maintain genetically similar metapopulations in forested and undisturbed landscapes (Marsh and Trenham 2001). Metacommunities of invertebrates and amphibians that depend on complexes of CPDWs are important to linked terrestrial-aquatic food webs (including navigable waters), due to emergence and dispersal of organisms across upland landscapes, the nutrient subsidies they provide, and the reciprocal recycling of landscape detritus by wetland invertebrates (Bartels et al. 2011).

Spatially isolated Carolina and Delmarva Bays exhibit less biological connectivity to other waters, including navigable waters and their tributaries, than those that occur in complexes and aggregations. This dearth of one type of connectivity does not signal a lack of connection, however. The chemical and physical impacts of geographically isolated wetlands on downstream waters occur in part because their isolation allows for the retention of nutrients, sediment, and water, and the exclusion of these from river networks.

Other Coastal Plain Depressional Wetlands

CPDWs that are not Carolina or Delmarva Bays impact navigable waters in many of the same ways as those more narrowly defined systems, across their entire hydroperiod gradient. Streever et al. (1996) sampled Diptera from 10 natural seasonal and 10 permanent created depressional marshes in Florida, and found no difference between the dipteran communities. Both biting and non-biting midges

(Ceratopogonidae and Chironomidae) were extremely abundant in permanent habitats (>4000 individuals/m^2 and >2000 individuals/m^2, respectively). As stated above, these invertebrates are extremely important food resources for species using both CPDWs and navigable waters, particularly wood ducks, and usually play a large role in the linked aquatic-terrestrial food web due to their substantial abundance.

Golladay et al. (1999) studied limesink wetlands over a period of both extended inundation as well as seasonal dry-down, and observed a remarkable ability of chironomid taxa to persist and dominate invertebrate communities through adaptations for hypoxia tolerance, desiccation resistance, and adult mobility and colonization post-flooding. Entrekin et al. (2001) calculated secondary production by Chironomids in two CWDPs dominated by different plant communities, and found no overall difference in production between them. Chironomid production (up to 3200 mg/m^2) was comparable in these wetlands to a Carolina Bay studied by Leeper and Taylor (1998) and mentioned in the Connectivity Report, suggesting this type of abundant Chironomid production is common throughout the coastal plain, and is likely a significant source of nutrient and energy subsidy to other ecosystems.

Many invertebrates that are specifically adapted for migration between permanent and ephemeral water bodies have been found in CPDWs. Battle and Golladay (2001) found 9 taxa of aquatic insects adapted to cyclic colonization in three types of ephemeral CPDWs in southwest Georgia, including types of water boatmen (*Hesperacorixa*), backswimmers (*Buenoa* and *Notonecta*), dytiscid (*Acilius*) and hydrophilid (*Tropisternus*) beetles, dragonflies (*Anax*), and abundant phantom midges (*Chaoborus*). In another study of CPDWs characterized by hardwood growth and dry periods of longer than one year, Battle and Golladay (2002) found at least five of these same taxa during wet periods. Leslie et al. (1997) sampled isolated cypress domes in northern Florida during both the wet and dry periods, and found high diversity of invertebrate taxa, including abundant and diverse dytiscid and hydrophilid beetles when inundated. Streever et al. (1996, Evans et al. 1999) found abundant *Chaoborus* in seasonal depressional marshes in Florida (42 individuals/m^2). Exchange of many taxa of insects specifically adapted to migrate between temporary CPDWs and permanent waters, including navigable waters and their tributaries, intrinsically links the food webs of these systems.

Non-insect invertebrates, such as crayfish, also disperse between ephemeral wetlands and permanent water. Wygoda (1981) reported overland crayfish movement in North-Central Florida between marshes, the Hillsborough River, and upland areas, and what appeared to be seasonal occupation of ephemeral Cypress Swamps. Cooper and Braswell (1995) found sickle crayfish (*Cambarus reduncus*) in North Carolina to occupy tributaries and creeks of the Catawba River, as well as woodland pool wetlands.

While these observations were not made in the Coastal Plain, *C. reduncus* is known to occur in the coastal plain in the North Carolina sandhills and in the Pee Dee River Basin in South Carolina (Cordeiro et al. 2010). Additionally, Cooper and Braswell reported several *Procambarus plumimanus* were found in a tributary in the Northeast Cape Fear River Basin (on the coastal plain), as well as numerous individuals in unidirectional wetlands such as cypress ponds, sloughs, and borrow pits.

Amphibian communities and production have been shown in multiple CPDWs to be determined by hydroperiod, as different amphibian taxa have various developmental requirements, and face competition and predation from invertebrates and salamanders that are themselves adapted for particular hydroperiods (Liner et al. 2008). Many reptile species also disperse between CPDWs and rivers and streams, including American alligators and many freshwater turtles. The use of CPDWs and river networks by juvenile and female alligators in southwest Georgia was noted in the Connectivity Report (Subalusky et al. 2009), but this phenomenon was described much earlier by Delany and Abercrombie (1986) in north-central Florida, who suggested that a gradient of aquatic habitats (from lotic to lentic, and isolated to connected) is important for the maintenance of alligator populations due to the use of different habitats by individuals of different sizes. Alligators are ecosystem engineers and keystone species that use river networks for movement, foraging, and breeding, and significantly impact these systems ecologically (as a top predator), chemically (by introducing allochthonous nutrients) and physically (by altering basin and channel morphology) (Subalusky et al. 2009). Removal of critical CPDW habitat for female and juvenile alligators would substantially alter the integrity of navigable waters used by this species.

Birds and Mammals are also frequent users of both CPDWs and Waters of the United States. Rodgers (1982) observed coastal nesting herons in Central Florida in jurisdictional marine and estuarine waters, and found that most flew inland to freshwater wetland habitats to forage and feed. Harris and Vickers (1984) also noted that otters (*Lontra canadensis*) are frequent users of both river and CPDW habitats, and migrate between them often.

Extreme hydrologic events also play a role in connecting CPDWs that are not Carolina and Delmarva Bays to river networks. Surface water connections that are not typically present between CPDWs, including Carolina/Delmarva Bays, and other waters are often created or reflooded by storm events (Heimburg 1984, Michener et al. 1998, Battle and Golladay 2002, Kirkman et al. 2012). Even though these storm events may be extremely infrequent, temporary connections to downstream waters will always facilitate propagule and organism movement into and out of jurisdictional waters (including fish), which in turn impacts biological integrity in these systems. The Connectivity Report's authors state that 'Unidirectional wetlands that are connected to the river network through a channel (i.e., wetlands that

serve as stream origins) will have an impact on downstream waters, regardless of whether the outflow is permanent, intermittent, or ephemeral' (pg. 5-1 – 5-2). Battle and Golladay (2002) observed surface water connections between hardwood depressions in southwest Georgia and limesink wetlands (two types of CPDW), as well as between these CPDWs and a 5th order creek, following a 100-year flood due to an El Niño event. These physical connections likely served as corridors for water-borne dispersal of aquatic animals, as well as for water movement, in a landscape where these depressions are typically not flooded every year.

In landscapes with extensive surface water coverage by CPDWs and frequent precipitation and soil saturation, fish colonization of CPDWs without surface water connections can be common (Hart and Newman 1995, Baber et al. 2002). Hart and Newman reported that killifish and livebearers such as Mosquitofish (*Gambusia affinis* and *G. holbrooki*) often colonize Floridian temporary wetlands, and Baber and Babbitt (2003) found that these colonizations can have strong effects on the faunal communities of these wetlands. This exchange of fish with permanent waters represents an important link in the case of overland water flow that may be in the form of stormwater runoff and floodwater, rather than channelized surface water.

Evidence from non-Carolina/Delmarva Bay CPDWs suggests they may support wildlife populations in disturbed, poor-quality terrestrial habitat if enough CPDWs are present in the landscape to subsidize refuge and food resources (Hart and Newman 1995). These upland communities include avifauna, reptiles, and mammals that use both CPDWs and navigable waters for foraging and shelter, and influence the integrity of both types of system. Upland disturbance does tend to change biological community structure within geographically isolated wetlands, but there is less evidence that these community changes reduce the biological connectivity to downstream navigable waters mentioned above.

In particular, Leslie et al. (1999) found that clear-cutting of wetlands and pine plantation uplands altered communities and increased invertebrate abundances in cypress domes, especially among the Chironomidae, which are important primary consumers and sources of nutrition to taxa that breed and live in navigable waters and CPDWs (such as *A. sponsa*). Harris and Vickers (1984) noted that ditching of CPDWs for agricultural purposes resulted in a shift in avifaunal communities toward arboreal species due to lowering water levels. Conversely, Babbitt and Tanner (2000) found that year-to-year variation in meteorological conditions influenced anuran communities more strongly than hydrologic alteration by ditching.

Generally speaking, organisms that migrate over land and by passive dispersal between CPDWs and downstream jurisdictional waters are likely to have less success in disturbed landscapes that limit

movement. Aerial colonizing insect and bird communities are also likely to change, but at least some insects may benefit from decreased canopy cover (Leslie et al. 1999). Along a gradient of undisturbed to developed upland, faunal communities shift due to abiotic constraints and cascading trophic effects, but there is reason to believe species exchange that persists between CPDWs and navigable waters has a significant impact on the latter

SYNTHESIS AND CONCLUSIONS

Carolina and Delmarva Bays, as well as other Coastal Plain Depressional Wetlands, often exhibit a high degree of variability with respect to their hydrologic and landscape context. This variability falls on several key gradients (hydroperiod, hydrology, geographic isolation, and disturbance) and affects the way these geographically isolated wetlands influence navigable downstream waters. Despite this, the literature we reviewed, coupled with evidence presented in the Connectivity Report, suggests that CPDWs (including Carolina and Delmarva Bays) typically have a significant effect on the physical, chemical, and/or biological integrity of 'waters more readily understood as navigable.' We found that:

- A large number of invertebrates, herpetofauna, fish, birds, and mammals migrate between CPDWs and navigable waters, and have evolved life history strategies to take advantage of particular hydroperiod durations. Only maintenance of a diversity of wetlands along the entire hydroperiod gradient will not affect the biological integrity of large river food webs and ecosystems, by sustaining those communities that use both river networks and geographically isolated wetlands. Additionally, because of the many organisms that rely on resources (particularly Chironomid midges) from both CPDWs and river networks, as well as those that use both CPDWs and river networks for foraging and habitat, these systems are inextricably linked.
- Some organisms found in both Carolina Bays (and other CPDWs) and river networks, such as invertebrates that are cyclic colonizers, have specific evolutionary adaptations to take advantage of both ephemeral pools and permanent water in their life histories. These organisms represent a clear flow of energy, nutrients, organic material, and genetic information between CPDWs and navigable waters.
- Landscape disturbance such as deforestation can create opportunities for certain biota to colonize and proliferate in CPDWs, such as some invertebrates that are important food resources in both isolated and navigable waters. Agricultural ditches may serve as organismal pathways between CPDWs and navigable waters. Conversely, CPDWs in undisturbed landscapes support a variety

of wetland biota that use both isolated waters and navigable waters, and may act as storage and sinks for water, nutrients, and sediment that would otherwise enter river systems.

- Uncommon hydrologic events, such as flooding and drought, can cause connections between CPDWs and downstream waters not seen in average conditions. High flows can cause atypical surface water connections to river networks, the transfer of sediment and nutrients between CPDWs and navigable waters, and increased biotic exchange between the systems. Alternatively, extremely isolated CPDWs can act as water storage during periods of high stormwater runoff, and influence river flows by retaining water on the landscape. In drought, some connections may be increased by organisms (such as turtles) migrating away from geographically isolated wetlands to navigable waters that remain inundated.
- Isolated CPDWs can intercept nutrients in overland runoff before they enter river networks, and ephemeral wetlands can act as nutrient sinks on the landscape because their alternating anoxic and oxic conditions support microbial transformation of biologically available nitrogen to nitrogen gas (denitrification). As noted in the Connectivity Report, these wetlands could also support sulfate reducing bacteria that produce methylmercury—CPDWs with temporary (during high flows) or permanent (e.g. agricultural ditching and drainage) hydrologic connections to navigable waters may influence these systems by exporting this methylmercury, along with nutrients, sediment, water, biota, and propagules.
- CPDWs with surface and subsurface hydrologic connections to river networks can influence navigable water flow, sediment loading, nutrient concentrations, and organic matter input through groundwater recharge and overland flow (common in wetlands ditched for agricultural purposes). Isolated CPDWs can act as water storage and sinks, as most water in these systems is lost to evapotranspiration.

These findings represent substantial connections between Coastal Plain Depressional Wetlands (including Carolina/Delmarva Bays) and downstream navigable waters across a variety of important gradients. While a large amount of variation exists in these connections, we contend that this variation does not influence whether a 'significant nexus' exists between an individual CPDW (or complex of wetlands) and navigable waters—rather, wetlands only vary in the type of influence they exert on downstream waters. For this reason, we see all Carolina and Delmarva Bays, as well as all Coastal Plain Depressional Wetlands that do not share a characteristic elliptical shape, to be a class of wetlands that should be considered as Waters of the United States under section 404 of the Clean Water Act.

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EXHIBIT D

Comments on "Physical, Chemical, and Biological Impacts of Geographically Isolated Wetlands on Waters of the United States " and "Evidence of Significant Impacts of Coastal Plain Depressional Wetlands on Navigable Waters

Paul H. Zedler
7 Oct. 2014

Overall evaluation

I found both reports to be well written and thoroughly referenced. I am not an expert on the literature of all these kinds of wetlands, but the papers cited are drawn primarily from high quality peer reviewed journals. From a scientific point of view the reports are highly credible, and a suitable basis for evaluating the function and value of these wetlands. I concur with the authors' assertion that the set of ephemeral wetlands is remarkably diverse and is best thought of as a continuum with respect to hydrology and function.

Legalistic Disclaimer

As an ecologist, I have only a layman's understanding of the intricacies of legal terminology. I am not intimately familiar with the reasoning that is involved in the definition of "waters of the United States", or the exact point at which the law and regulations place the limits of "nexus", or the size of the vessel that must pass to permit a water body to be considered navigable. Indeed, although ecology as a science requires putting concepts, phenomena, and ecosystems into categories, this is done reluctantly (by thoughtful ecologists) and with the understanding that these categories are largely or wholly artificial and not indicative of some immutable imperative of nature. I accept that it is necessary to organize the reports around "types" of wetlands, but concur with the authors that there is considerable heterogeneity within each type. The types do on average differ but they do not fall into unambiguously distinct categories.

An appeal for recognition of larger systems, longer time scales, and the inherent interconnectedness of everything.

From an ecological point of view, the human use of landscapes imposes burdens on the environment. It is understood that this is necessary if the human race is to meet its needs. Soils must be plowed and exposed to wind and water erosion if crops are to be grown. Unlike any other animal, however, humans have the capacity to understand how their activities can have cumulatively negative affects on the ability of the earth to provide the needed resources. There is abundant evidence that thinking only about the immediate future (can I increase my profit if I discharge into this pond?) and only about one small part of the earth (should we fill in this ephemeral wetland?) can have bad effects at the regional and global scales.

From this view, the "waters of the United States" include every part of the system where liquid water collects -- from a rill that flows only for a few hours to the Mississippi River and the Great Lakes. Therefore there is a nexus in both the biological and physical sense, and it is cumulatively significant. By ecological reasoning all parts of this continuum deserve protection.

The case for the hydrological "nexus"?

Storage Function. With the exception of certain types of seepage wetlands, there cannot be a wetland without a basin. Because of this, wetlands perform a water storage function, reducing peak flows and except where basins are on impermeable substrates, recharging groundwater. Whether this reduction has significant effects downstream depends on precipitation amounts and patterns and the likelihood that water moving through the wetlands will reach larger bodies. In regions with higher and more consistent precipitation, overflow and contributions to groundwater will be frequent. In regions with less precipitation these connections will be less frequent and of shorter duration, but because of the greater aridity the contributions of the storage function may be relatively much more significant. Given that more intense episodes of precipitation are predicted for the future, this function will only become more important for wetlands across the precipitation gradient, and natural capacity for flood attenuation proportionately more demanding of protection.

Water quality improvement function. The reports indicate several ways in which ephemeral wetlands can improve water quality. Most notable is related to the storage function. Water collected in basins will cause suspended solids to settle, a fact that justifies the creation of artificial basins when engineering solutions are employed to offset the negative affects of the expansion of impermeable substrates. For certain wetlands and conditions nitrogen can be removed through denitrification. Phosphorus can be sequestered in plant material and if a wetland is of a type to accumulate organic matter can remove it from regional cycling.

The reports note that the value of natural ephemeral wetlands has been demonstrated by situations in which the drainage patterns have been disrupted by channelization, and other human disturbances resulting in increased siltation and decreased water quality for downstream sources.

The case for a biological "nexus"

A biological "nexus" can be said to exist if organisms or their propagules (seeds, eggs) are regularly exchanged between ephemeral wetlands and the more permanent wetlands and bodies of flowing and standing water. It is clear from the many examples cited that there is in this sense a strong and biologically significant nexus. Further, ephemeral wetlands have unique ecological functions within this nexus that either cannot be provided by larger more permanent bodies of water as well as others that are provided at higher levels. Most notable among these biological attributes is the common absence or delayed arrival of larger predators which makes the ephemeral wetlands important habitat for predation-susceptible animals both vertebrate and invertebrate

A significant proportion of the biota of ephemeral wetlands consists of species that are locally and even regionally migratory, opportunistically exploiting wetlands across seasonal and longer term fluctuations in wetland filling and drying. Commonly species move between ephemeral and more permanent bodies of water. Truncating a portion of the possible habitats cannot help such species, and may result in significant population losses.

Many ephemeral wetlands play a crucial role for migratory waterfowl, serving as breeding habitat and stopover sites during migration. The loss of these wetlands would significantly diminish the capacity of landscapes to support waterfowl.

Can the ecological services provided by ephemeral wetlands be sustained against the pressure of economic expediency?

The continual erosion of natural habitats is fostered by economic and political systems that fail to properly weight cumulative effects. Resources that consist of multiple small sites over a large area are especially vulnerable. Collections of ephemeral wetlands often occur in multiple ownerships and jurisdictions, making it difficult to do an accounting of collective loss of function. The well know process in which at each stage the loss of "just one small puddle" can be shown as economically and even biologically insignificant relative to the value to be gained by its destruction works strongly to the disadvantage of these small bodies of water.

These reports make a strong case for why a more enlightened approach to preservation of ephemeral wetlands requires a regional and national view.

Physical, Chemical, and Biological Impacts of Geographically Isolated Wetlands on Waters of the United States

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For the Natural Resources Defense Council

October 2014

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INTRODUCTION

This report reviews evidence for the influence of certain types of geographically isolated wetlands in the United States on the integrity of navigable waters. For the purposes of declaring any class or type of wetland a jurisdictional Water of the United States, as per the Clean Water Act and Supreme court decisions made in Rapanos v. United States (2006) and Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (2001), primary consideration must be given to the capability of those wetlands to "significantly affect the chemical, physical, and biological integrity of other covered [jurisdictional] waters more readily understood as 'navigable'" (Rapanos 2006). In an effort to contribute more information to the determination of a proposed rule for the 'Definition of ''Waters of the United States'' Under the Clean Water Act' (79 FR 22188), we reviewed literature specifically related to the significant ways in which geographically isolated wetlands affect downstream waters.

Rather than review evidence already known to regulators, we provide supplementary evidence to information presented in the Environmental Protection Agency (EPA) Office of Research and Development's report detailing the 'Connectivity of Streams and Wetlands to Downstream Waters' (hereinafter referred to as the Connectivity Report). Aside from introductory background information about each wetland type, we make an effort to not duplicate citations found in the Connectivity Report. For a more detailed overview of geographically isolated wetlands we recommend the Connectivity Report, Tiner (2003), Meltz and Copeland (2013), or Leibowitz (2003). For this report, we used the wetland classifications originally presented in Tiner (2003).

VERNAL POOLS

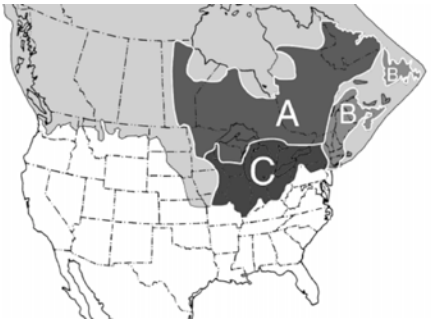

Figure 1. Extent of Northern Vernal Pools (Calhoun and deMaynadier 2007) (p. xviii)

Vernal Pools, as defined in the Connectivity Report, are 'shallow, seasonal wetlands that accumulate water during colder, wetter months and gradually dry down during warmer, dryer months.' They typically do not have surface water connections to permanent waters, and are usually situated on underlying substrate that functions as an aquitard, impeding water

infiltration (Zedler 2003). Wetlands in both the western and northeastern United States are commonly referred to as Vernal Pools, although these two types have differing geomorphic origins. Additionally, the biological communities and the temporal hydrologic dynamics of these two types of vernal pools are somewhat different, as noted in the Connectivity Report. We consider northern and western vernal pools separately here, although many similarities exist in the connections between these types of unidirectional wetlands and navigable waters.

Northern Vernal Pools

Northern vernal pools were predominantly formed by glacial movement in what is now the northeast and north-central United States during the most recent ice age (approx. 12,000 years ago). Glacial transport and deposition of ice and debris caused scouring, subsidence, and relief across the landscape, leaving many topographic depressions that now are inundated or saturated for portions of most years. Today, northern vernal pools in the United States are located as far west as Minnesota, and as far south as the furthest glacial extent in southern Indiana**.** Below we review evidence for the significant effects of northern Vernal Pools on the physical, chemical, and biological integrity of downstream navigable waters and river networks.

Physical and Chemical Impacts

The timing and duration of inundation varies amongst northern vernal pools, but five general hydrologic types have been described (length of cycle, time of filling, duration of inundation): (1) short, spring, 3-4 months, (2) long, spring, 5-8 months, (3) short, fall, 7-9 months, (4) long, fall, 9-11 months, and (5) semi-permanent, any season, 36-120 months (Colburn 2004). In contrast to western vernal pools, which dry completely by late spring, northern vernal pools are more likely to remain incompletely dry, with saturated soil and/or standing water lasting throughout the year in certain sections (Colburn 2004).

While precipitation and evapotranspiration are by far the most common inlets and outlets, under certain conditions vernal pools may be hydrologically connected to adjacent wetlands, shallow or perched aquifers, groundwater interflow, ephemeral streams, or navigable waterways. During high intensity rain and/or snowmelt events vernal pools may receive water from nearby uplands via overland and subsurface flows, lose water to adjacent wetlands and waterways through temporary outlets that form in swales, and gain

or lose water through groundwater exchange and interflow associated with perched aquifers (Leibowitz and Brooks 2007). However, northern vernal pools are often located in forested landscapes (Brooks 2005), characterized by high infiltration rates, and as such overland flows are unlikely to be an important vector except during spring snow melt and storm events when antecedent soil moisture is high (Leibowitz and Brooks 2007). Vernal pools that overlay porous materials, such as those found in Massachusetts, are likely hydrologically connected to adjacent shallow aquifers (Phillips and Shedlock 1993, Brooks 2005) . As northern vernal pools are found to be intermittently, or in special cases permanently, connected to surface water and/or groundwater, they are not completely isolated, but rather are situated within an "isolation-connectivity continuum over space and time" (Leibowitz and Brooks 2007, p. 55).

Vernal pools contribute to both the physical and chemical health of downstream waterways. All vernal pools, whether connected or isolated, provide benefits to downstream waterways by reducing peak flows during storm events, by storing water on-site and either releasing it slowly or losing it to evapotranspiration (Leibowitz 2003). Vernal pools store a portion of stormwater runoff on site, thereby reducing the erosion and sedimentation downstream associated with peak flows (Butterwick 1998). Soluble materials are transported between vernal pools and other waterways through groundwater connections, while surface water connections may transport soluble materials, sediments, and organic compounds (Leibowitz and Brooks 2007). Vernal pools without these hydrologic connections may help prevent excess nutrients and contaminants from entering navigable waterways (Duffy and Kahara 2011). Wetlands, such as vernal pools, have been shown to remove suspended solids, fecal coliform, nutrients, trace metals, and other contaminants from stormwater (Birch et al. 2004). The loss of geographically isolated wetlands, such as vernal pools, has been shown to increase the export of nutrients to rivers and streams (Whigham and Jordan 2003).

Numerous models have been developed to simulate vernal pool hydrology. A model developed by Boone et al. (2006) for central Minnesota simulated the hydrology of over eight pools. If there's sufficient pool depth data, then this model can be extended to vernal pool complexes at a regional scale. While Light Detection and Ranging (LiDAR) technologies have the potential to provide microtopographic data at regional scales, from which pool-depth data can be derived, the dense forest cover and high incidence of evergreen vegetation reduce the accuracy of LiDAR in many northern regions (Brubaker et al. 2013).

Golden et al. (2014) overview mechanistic models that show potential for estimating extent of hydrologic connection between geographically isolated wetlands and navigable waters, as well as for describing how these connections affect downstream surface water systems. Watershed models overviewed include: Soil and Water Assessment Tool (SWAT), the Hydrologic Simulation Program-FORTRAN (HSPF), DRAINMOD for Watershed (DRAINWAT), TOPMODEL, Grid Based Mercury Model (GBMM), and Visualizing Ecosystems for Land Management Assessment (VELMA). Groundwater models include: MODFLOW Wetlands Package and Analytic Element Method (AEM). Coupled surface-subsurface flow models, the class of models preferred by Golden et al. (2014) include: GSFLOW and Coupled MIKE SHE.

Biological Impacts

Many invertebrates have specific evolutionary adaptations characterized by movement between isolated ephemeral wetlands and navigable waters. Wiggins et al. (1980) detail the evolutionary and ecological strategies of animals present in temperate temporary wetland pools. Periodic flooding and drying is the single most important stressor driving adaptation in ephemeral wetlands, and invertebrate animals have adapted several strategies for coping by either tolerating desiccation or avoiding it. Invertebrates that have evolved this latter strategy typically colonize and breed in ephemeral wetlands following inundation, undergo rapid juvenile development, and migrate to permanent water after wetland dry-down. This has been termed Cyclic Colonization by Batzer and Wissinger (1996), and is employed by multiple taxa of ecologically important invertebrates that migrate between isolated wetlands and navigable waters. Cyclic colonizers of ephemeral wetlands are often predatory insects that are adapted to take advantage of resources in temporary wetland habitats, and avoid desiccation stress by leaving these habitats when

they dry (Batzer and Wissinger 1996, Wissinger 1997).

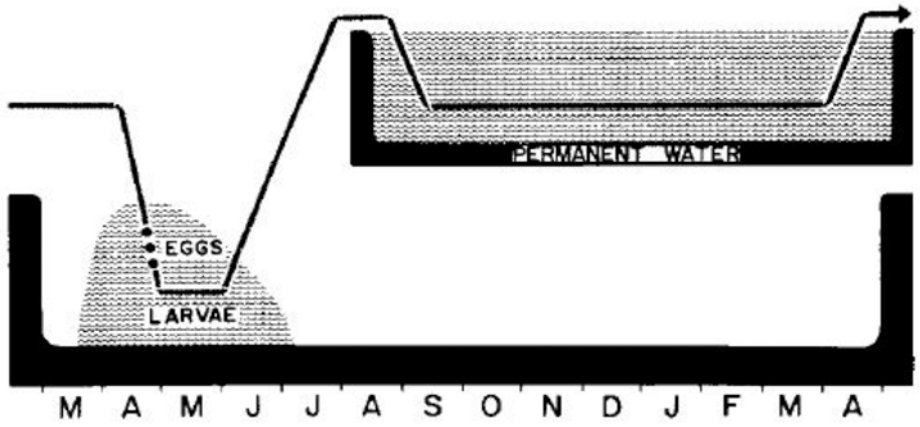

Figure 2: Cyclic colonization pattern. Shaded portions represent times of wetland inundation; black arrow represents aerial invertebrate movement between water bodies. Figure from Wiggins et al. (1980).

Some Ephemeroptera, Diptera, and Odonata adults emerge from drying wetlands and lay eggs in permanent water, so that their larvae may overwinter in permanent habitats. Cyclic colonizing Coleoptera and Hemiptera overwinter as adults in permanent waters. Some aquatic insects (such as many water striders (Gerridae:Hemiptera)) have adapted dimorphic phenotypes, whereby one phase exhibits smaller or non-existent wings and enhanced reproductive capability for rapid proliferation in a temporary wetland, and the other has fully developed wings and can disperse farther distances, at the expense of fecundity (Zera and Denno 1997). These insects can play an important role in the trophic dynamics, nutrient cycling, and ecological stability of the permanent waters they inhabit during a portion of the year, including large rivers and their tributaries, interstate waters, navigable lakes, and their adjacent wetlands (Allan and Castillo 1995).

Higgins and Merritt (1999) found that many cyclic colonizing invertebrate taxa colonized Michigan vernal pools in April and May, including water striders (*Gerris* spp.), backswimmers (*Notonecta undulata*), predaceous beetles (*Acilius* spp., *Dytiscus* spp.), scavenger beetles (*Hydrochara* spp., *Tropisternus* spp.), water boatmen (Corixidae), green darner dragonflies (*Anax junius*), giant water bugs (*Belostoma* spp.), and whirligig beetles (*Gyrinus* spp.). Schneider (1999) found many of these same taxa in vernal pools in Wisconsin, including widespread (present in majority of pools sampled) *Gerris, Hesperocorixa (*Corixidae) *Acilius, Gyrinus, Tropisternus, Dytiscus, Chaoborus* (phantom

midge; Chaoboridae), *Sigara* (Hydrophilidae), *Callicorixa* (Corixidae), and *Hydrochara*. Batzer et al. (2004) sampled 66 vernal pools in Minnesota and found 18 taxa that were widespread, including 5 that dispersed from permanent waters to vernal pools across the landscape (*Acilius, Dytiscus, Tropisternus, Chaoborus,* and *Tanyponidae* (Chironomidae)). The authors classified four other cyclic colonizing taxa as common. Tarr et al. (2005) found that some cyclic colonizers (*Acilius* spp.) dominated the predatory invertebrate community in short hydroperiod (<4 months) vernal pools in southern New Hampshire, while others (*Notonecta* spp.) dominated in longer hydroperiod wetlands. The authors found eight additional taxa known to migrate between vernal pools and permanent waters. Ray and Evans (2004) found 95 genera of invertebrates in 18 vernal pools in Pennsylvania, including 11 that are adapted to disperse between isolated wetlands and permanent waters. Finally, Colburn (2004) cited 17 taxa of cyclic colonizing invertebrates as common inhabitants of vernal pool habitats.

Invertebrates adapted to colonize northern vernal pools from their overwintering sites in permanent navigable waters do so in all landscapes (disturbed and undisturbed) and across all vernal pool hydroperiods, regardless of vernal pool abiotic characteristics (Palik et al. 2001, Batzer et al. 2004, Tarr et al. 2005). Many invertebrates, including cyclic colonizers and those that tolerate desiccation and survive in dry vernal pool basins, can act as sources of nutrients and energy for other organisms that use both vernal pools and navigable waters for foraging and shelter, and serve as a link between the two systems. In particular, non-biting midges (Chironomidae) are typically widespread and very abundant in vernal pools: Palik et al. (2001) found them to be the most abundant non-mollusk taxa in Minnesota vernal pools, Batzer et al. (2004) found that they were the most widespread taxa in a larger cross-section of Minnesota vernal pools, and Ray and Evans (2004) found these midges to be by far the most abundant invertebrate in Pennsylvania vernal pools, accounting for 34% of all sampled invertebrates. Chironomidae are particularly important as a source of nutrients for duck species such as wood ducks (*Aix sponsa*) and American black ducks (*Anas rubripes*), which rely on invertebrate food resources in their breeding grounds to provide the necessary nutrition for reproduction and juvenile growth (Hocutt and Dimmick 1971, Landers et al. 1977, Bellrose and Holm 1994). These ducks are known to be common in vernal pools (Mitchell et al. 2008), and use both vernal pools and navigable waters for foraging and breeding (DeGraaf and Yamasaki 2001).

Both emerging invertebrates and amphibians from temporary pools are important nutrient subsidies to adjacent habitats, and birds (hawks, barred owls), reptiles (garter snakes), and mammals (primarily bats) are known to use these resource subsidies from both vernal pools and other aquatic systems as part of their diets (Nakano and Murakami 2001, Mitchell et al. 2008, Bartels et al. 2011). This link is strengthened by amphibians that move between vernal pools and permanent riparian wetlands, such as beaver ponds. Both wood frogs (*Rana sylvatica*) and marbled salamanders (*Ambystoma maculatum*) in New York reproduce in vernal pools that dry each summer, as well as in beaver wetlands that are part of permanent river networks (Karraker and Gibbs 2009). *R. sylvatica* survival can be much higher in beaver wetlands than vernal pools, even though the wood frog is considered to be reliant on vernal pools. This led the authors to conclude that the presence of beaver wetlands along navigable waters and their tributaries could lead to their use as refuge for these amphibians during extended drought. Cunningham et al. (2006) provided similar evidence that beaver damming of streams and rivers provided habitat for anurans that prefer breeding habitat without fish (*R. sylvatica*) as well as those that breed in pools with fish (American bullfrog, *R. catesbeiana*).

Dispersal by amphibians between vernal pools and beaver wetlands represents a significant energy and nutrient flow between so-called isolated vernal pools and jurisdictional waters of the United States. Baldwin et al. (2006) radio tracked dispersing *R. sylvatica* in a vernal pool landscape in Maine, and found that most moved from breeding pools to forested wetlands hundreds of meters away. Three of eight frogs dispersing some distance from breeding pools during dry down chose summer refugia in riparian wetlands and stream edges. Additionally, dispersing wood frogs crossed both a fast shallow stream and a slow deep stream, and dispersed between vernal pools of differing hydroperiods as well as permanent stream habitat.

Some mammals, reptiles, and birds may link vernal pools and jurisdictional waters as well. Brooks and Doyle (2001) reported capturing several water shrews (*Sorex palustris*) dispersing between permanent water and other water types in a vernal pool landscape in Massachusetts. In a subsequent (exceptionally dry) year, however, no difference in shrew communities was detected between areas surrounding vernal pools and upland areas. Bats, such as the Little Brown Bat (*Myotis lucifugus*), Northern Myotis (*M. septentrionalis*), and Big Brown Bat (*Eptesicus fuscus*) commonly use both vernal pools and other woodland clearings for foraging (Francl 2005). Newman and Griffin (1994) tracked otter visitation of multiple

wetland types in Massachusetts (scrub-shrub and forested, lentic and lotic) and suggested that 'all freshwater wetlands in central Massachusetts may provide river otter habitat and should be considered in management programs.'

Some snakes, such as the northern water snake (*Nerodia sipedon)* and the common ribbon snake (*Thamnophis sauritus*), are known to use both isolated lentic waters such as vernal pools, ponds, lakes, and lotic waters such as rivers and streams as habitat (Ernst and Ernst 2003). *N. sipedon* are often important predators of amphibians and invertebrates in vernal pools (Kenney and Burne 2000). Spotted (*Clemmys guttata*) and Blanding's turtles (*Emydoidea blandingii*) have been radio-tracked in Maine moving between large permanent ponds used for hibernacula in winter and summer, and vernal pools used for breeding, foraging, and basking in spring and early summer (Beaudry et al. 2009). Additionally, birds such as Great Blue Herons (*Ardea Herodias*) and Green Herons (*Butorides virescens*) are known to use both vernal pools and coastal jurisdictional waters in Rhode Island (Mitchell et al. 2008).

Conclusions

Northern vernal pools may have temporary surface water and groundwater connections to navigable waters, or act as water storage and sinks on the landscape; in addition to their nutrient transformation capabilities and extensive habitat functions, they have many physical, chemical, and biological impacts on navigable waters:

- During high precipitation events or in specific landscape positions, northern vernal pools can have surface water connections to adjacent or nearby navigable waters, and may provide groundwater input to adjacent waters, shallow aquifers, ephemeral streams, and river networks.
- Northern vernal pools that do not share surface or groundwater connections to navigable waters impact hydrology in river networks by intercepting and storing water before either discharging it slowly or exporting it via evapotranspiration.
- The dynamic nature of vernal pool hydrology allows for nutrient retention and nitrogen transformation, and vernal pools likely retain pollutants and toxins and prevent these compounds from entering downstream waters. Soluble compounds, alternatively, may be delivered to nearby navigable waters through groundwater connections.

- Many hydrologic models have been developed to model the hydrology of specific northern vernal pools, and may be important regulatory tools for understanding water movement into, through, and out of these systems.
- Many types of cyclic colonizing invertebrates adapted to migrate between ephemeral wetlands and permanent water are found in northern vernal pools, and represent an important flow of energy and nutrients into navigable waterways following vernal pool dry down.
- Northern vernal pools are productive ecosystems that export many invertebrate and vertebrate resources used by consumers that move between navigable waters and vernal pools, including birds, reptiles, and mammals that transfer nutrients, energy, and genetic material between these systems.

Western Vernal Pools

Western vernal pools form in uneven mound and swale topography in the Mediterranean climate of California and the eastern Oregon and Washington semi-desert (Tiner 2003). These wetlands often occur in wetland complexes isolated from navigable surface water except during unusually intense precipitation events, and typically have a regular annual wetting and drying cycle, becoming inundated during winter and drying completely by late spring to mid-summer. Unlike northern vernal pools, most western vernal pools occur in grassland uplands, and the main threat to these wetlands is agricultural activities. Western vernal pools usually exhibit high biodiversity and support many endemic species, as well as many waterfowl and shore birds migrating between navigable waters along the Pacific flyway. The significant physical, chemical, and biological impacts of western vernal pools on downstream waters are detailed below.

Physical and Chemical Impacts

Western vernal pools are characterized by a regular cycle of filling via winter rains and spring snowmelt, maximal inundation in the early spring aquatic phase, receding waters due to evapotranspiration in mid-spring, and drying by late spring or early summer. In contrast to northern vernal pools, western vernal pools have relatively consistent hydrologic cycles and are likely to remain dry throughout much of the year**.** As is the case with northern vernal pools, precipitation and evapotranspiration are the most common inlets and outlets, and vernal pools may be hydrologically connected to adjacent waterways under certain circumstances. High intensity rain events may lead vernal pools to receive

water via overland and subsurface flows, lose water through temporary outlets that form in swales, and form temporary discharge or recharge connections with the groundwater table (Leibowitz and Brooks 2007). In the early spring aquatic phase, western vernal pools in complexes are likely to be hydrologically connected via surface and subsurface flows (California Wetland Monitoring Workgroup 2013).

Vernal pools contribute to both the physical and chemical health of downstream waterways. As is the case with northern vernal pools, western vernal pools reduce erosion and sedimentation downstream associated with peak flows (Butterwick 1998). Western vernal pools may also reduce the amount of nutrients and contaminants entering navigable waterways (Duffy and Kahara 2011). Prevention of water quality degradation, associated with nutrient and sediment runoff, is one of the most effective ways of increasing water supplies in arid agricultural regions, an important function of vernal pools in the Central Valley region of California (Duffy and Kahara 2011). "Vernal pools store and regulate salts within a given pool complex or network of vernal pools, and modulate the episodic release of salts at the onset of the wet season" (Bauder et al. 2009, p. 46). Additionally, "vernal pools process and cycle elements (e.g., carbon, nitrogen, phosphorus) that are important to sustaining viable populations and communities in the catchment basin and downstream" (Bauder et al. 2009, p. 63).

Unlike northern vernal pools, the majority of western vernal pools are not located in densely forested areas, but rather in valleys (Leidy and White 1998), and as such LiDAR more accurately maps landscape depressions at a regional scale. LiDAR has been successfully employed to map entire regions of western vernal pool complexes, including projects in Placer County, California (Clark 2012), Sacramento County, California (Calderaro 2011), and the Sacramento-San Joaquin Delta (California Natural Resources Agency 2013). Moreover, LiDAR, in conjunction with ArcHydro Tools, has effectively determined hydrologic connectivity at the vernal pool complex scale (Calderaro 2011).Using flow lines and sub-basin data produced by ArcHydro, based upon LiDAR elevations, Calderaro (2011) was able to identify individual vernal pools within a complex as either hydrologically isolated or connected, for all of Sacramento County. There is likely potential to extend these methods for defining vernal pool connectivity at regional scale to other areas where LiDAR data is available, which would greatly aid jurisdictional determination.

Biological Impacts

The yearly cycle of western vernal pools consists of soil saturation, standing water, evaporation and dry land. This cycle creates a gradient of conditions from wet to dry where different classes of organisms are favored for growth and reproduction based on their unique life histories (Zedler 1987). The ephemeral nature of the ecosystem allows for higher productivity compared to non-seasonal wetland habitats, due in part to aerobic microbial activities in the dry phase. Accordingly, western vernal pools produce large quantities of high protein invertebrates and a variety of plants in a short period of time (Swanson et al. 1974, Witham et al. 1998).

This glut of invertebrate production attracts numerous species of birds including waterfowl, shorebirds and wading birds (Baker et al. 1992), adding essential energy and nutrients to their diets. Western vernal pools are attractive forage sites because they are "always shallow (10-60 cm deep)" (Zedler 1987), and all food resources produced are readily available near the surface of the water. The occurrence of these highly enriched environments often coincides with periods of high energetic demands, including migration and mating. Western vernal pools are considered "critical links" between permanent waters on the Pacific Flyway, and resource limitation in these stopover sites can have population effects that significantly impact bird use of navigable waters in breeding or wintering sites (Myers 1983, Witham et al. 1998).

Due to the spatial variation of "disturbance, food availability, and wetland conditions" some waterfowl move unpredictably between water bodies, seeking out the best resources (Heitmeyer et al. 1989). Thus, western vernal pools supply an ephemeral, yet crucial source of energy and nutrients necessary for recruitment, rest and survival (Fredrickson and Reid 1988), which temporarily, yet regularly, increases the total available wetland habitat for the birds that rely on them. After using vernal pools to augment body condition and nutrient reserves, migratory birds are able to disperse to permanent waters in northern breeding habitats, taking with them the additional energy and nutrients necessary for fruitful procreation (Witham et al. 1998).

Energy and nutrients are not the only things dispersed between western vernal pools and navigable waters. Birds also provide transportation and dispersion for plants seeds and invertebrate eggs and larvae (Witham et al. 1998). While a small minority of

these propagules survives the journey, the ones that do are thought to be important in maintaining the species diversity of both vernal pools and permanent waters (Zedler 1987).

Conclusions

Western vernal pools are unique wetland ecosystems that have a variety of significant physical, chemical, and biological impacts on downstream waters due to their hydrology, isolation, and landscape context. These include:

- Western vernal pools typically have predictable hydrologic cycles that regulate run-off flow and volume, nutrient, carbon, and salt export, and facilitate nutrient cycling among uplands, wetlands, and navigable waterways.
- Storage of stormwater and sediment in vernal pools limits erosion and run-off that would otherwise reduce water quality of navigable waters.
- Many western vernal pools are connected to other wetlands as a complex during the wettest season, and may be connected to navigable waters through ephemeral streams, swales, or overland sheet flow, facilitating nutrient, sediment, and organic matter transfer.
- LiDAR and developed hydrologic modeling techniques will likely be useful tools for determining regional hydrologic connectivity and flows among western vernal pools and between these wetlands and navigable waterways.
- Migrating birds commonly use western vernal pools as stopover sites along the Pacific Flyway to take advantage of extensive nutrient- and energy-rich resources from these productive habitats in spring, and many move to navigable waters further along their migration route or in their breeding grounds in summer. Population level effects due to resource limitations in vernal pools likely lead to ecosystem effects in navigable waters, due to fluctuations in large populations of birds importing and extracting nutrients and energy.
- Animals migrating between western vernal pools and navigable waters carry passively dispersing propagules and invertebrates to navigable waters, where they help maintain species and genetic diversity.

POCOSINS

Pocosins are the only true bogs of the Southeastern United States. They naturally occur in broad swaths of flat or slightly depressed land on the Atlantic coastal plain, typically in three general topographical situations: 1. On elevated interfluves separating ancient rivers and coastal drainage basins; 2. In blocked drainages or swales; and 3. In the North Carolina Sandhills at the heads of streams and drainage basins (Weakley and Schafale 1991, Richardson 2003, Richardson 2012). Pocosins are ombrotrophic (rainwater fed) scrub-shrub bogs defined by their vegetation communities (dominated by broad-leaved evergreen sclerophyllous shrubs and *Pinus serotina* (pond pine)) and soils (organic matter and peat-based), and occur from Virginia to northern Florida, although the vast majority of pocosins are found in North Carolina (Christensen et al. 1981, Sharitz and Gibbons 1982, Richardson 1992, Richardson 2012). Usually pocosins are not connected or adjacent to navigable surface water, have relatively long hydroperiods with temporary inundation, and are a source of water on the coastal landscape due to their topographically high position (Richardson 2012).

Pocosins most often occur in large tracts on topographic plateaus, the result of organic matter and peat accumulation beyond depressional boundaries (Richardson et al. 1981). Much of the original pocosin expanse (over 2.2 million acres in North Carolina alone) has been altered for agricultural and residential land, so that many pocosin tracts are either partially or fully developed, and only about 30% of original pocosin area exists in its natural state (Richardson et al. 1981). Pocosins have been characteristically difficult to define, in no small part because they typically do not have readily identifiable borders and tend to grade into bottomland hardwood swamps and floodplains (Sharitz and Gibbons 1982). From a landscape perspective, Weakley and Schafale (1991) concluded that no characteristic difference exists between these wetlands and those typically called Atlantic White Cedar (AWC) wetlands; both occupy the same sites, and shift characteristics over time likely due to catastrophic fire events.

Pocosins are usually divided into two classes based on vegetation height (short and tall), and undeveloped pocosins usually exist on a downslope gradient from short pocosin at the highest, central location, followed by tall pocosin, followed by bay forest/gum swamp/AWC wetland (Bridgham and Richardson 1993, Richardson 2012). Because boundaries along these gradients are not easily differentiated, and because all of these

'types' of wetlands have similar hydrologic and chemical impacts on downstream navigable waterways, we incorporate this entire wetland gradient in our discussion of pocosin connectivity to navigable waterways. Pocosins have characteristic and important impacts on the hydrology, chemistry, and energy flow in coastal streams and estuaries because of their elevated positions on the landscape. Many of these effects are due to the lack of surface water connections to navigable waters, rather than because of them, and evidence of many of the most important impacts of pocosins is shown by changes in downstream waters following the creation of artificial surface water connections. There are usually obvious, often negative consequences on streams or sounds that have been connected to pocosins by canals and ditches for the purpose of drainage and development. Typical physical, chemical, and biological impacts of pocosins on downstream navigable waters are detailed below.

Physical Impacts

Physical impacts of pocosins on downstream waters include the determination of run-off patterns and volume, and changes in sediment loading in coastal and downstream waters. Typical pocosin water budgets include only one source of water (precipitation), and two principal outputs (evapotranspiration and surface flow). Groundwater flow into and out of pocosins is usually negligible, as the peat soils act as water reservoirs with a seasonally fluctuating water table. Approximately two thirds of water entering undisturbed pocosins leaves by evapotranspiration, which represents an exclusion of water from downstream water bodies (Daniel III 1981, Richardson and McCarthy 1994). Undisturbed pocosins export the remaining hydrologic input via overland sheet flow (Richardson 2003). Thus, hydrologic inputs to coastal streams and estuaries downstream of pocosins are represented by low- and medium-flow velocities entering over a large cross-sectional area (Daniel III 1981, Sharitz and Gibbons 1982). This allows for even and gradual mixing of freshwater run-off with coastal estuarine waters, stable water salinity and chemistry (see chemical impacts below), and reduced flooding and sediment input into estuarine systems (Thomas 1983).

Many hectares of pocosins (nearly 600,000 ha in North Carolina alone) have been drained and developed for commercial agriculture, forestry, and peat mining operations (Richardson 2012). By comparing these developed pocosin tracts to those remaining undisturbed pocosins, researchers have quantified the positive physical impacts of

undisturbed pocosins on navigable waters. Specifically, Daniel III (1981) compared hydrology and quality of drainage water in natural undisturbed pocosins and those cleared and drained for agriculture, and found that drainage canals increased both high- and low-flow run-off events to downstream waters, at the expense of mid-flow events. Drainage ditches and canals increase point-source high-flow events, replacing non-point sheet flows from natural pocosins. Gilliam and Skaggs (1981) found similar results in comparing three pairs of undisturbed and developed pocosins: natural pocosins regulated water flow and promoted slow release of sheet-flow surface runoff to navigable waterways, while drained pocosins dramatically increased high-flow events (Skaggs et al. 1980). Development for agriculture also reduces leaf interception and evapotranspiration by typical pocosin vegetation, and reduces infiltration because of reduced porosity of drained organic soils; this typically results in higher overall volumes of runoff into navigable waterways (Richardson 1983).

Richardson and McCarthy (1994) used a field-tested hydrologic model to investigate the potential consequences of alteration and various land-uses on several existing North Carolina pocosins. Based on average precipitation data over 20-year simulations, the authors suggest that total run-off volume increases significantly (50%) in pocosins mined for peat, and noticeably in deforested pocosins (13%) and those cleared for agriculture (9%). The model indicated that those pocosins replanted for forestry purposes may exhibit reduced runoff due to increased evapotranspiration, but when common forestry practices such as forest thinning were included this effect was negated. Drainage for pine plantation forestry also increased the rate of peak flow events to jurisdictional waters three-fold, even though the overall average volume of runoff was similar to undeveloped pocosins. These increases in both overall run-off volume and peak-flows following pocosin development shed light on the physical impact of pocosins on downstream waters: they serve as water pumps, by sequestering water that is later exported by evapotranspiration instead of draining to navigable waterways; and they serve as water storage, slowing and diffusing water discharge to streams and coastal waters, especially after high precipitation events. Additionally, drainage water from pocosin areas that have been drained for development is typically higher in turbidity, and increased sediment export can add to the turbidity of tidal streams and estuaries (Kirby-Smith and Barber 1979, Daniel III 1981, Richardson 1983).

Changes in seasonal hydrology in pocosins due to drainage can have a significant impact on nutrient retention, transformation, and export to downstream waters, the presence of oxygen in pocosin peat and sediments dictate much of the biogeochemical cycling (Walbridge and Richadson 1992). Thus, the physical impacts of pocosins on navigable waters are inextricably linked to the chemical impacts they have: natural water storage and sequestration in these systems provides for nutrient retention and organic carbon export to streams and coastal waters. Alternatively, pocosins altered for human development have large effects on downstream waters by exporting high quantities of limiting nutrients and altering downstream water chemistry (Daniel III 1981).

Chemical Impacts

Pocosins impact the chemistry of downstream navigable waters in a multitude of significant ways, many of which are due to their ability to retain, recycle, and transform nutrients, as well as to store and sequester water. Undisturbed pocosins are also a source of organic nitrogen and organic carbon to downstream waters, and retain organic phosphorus in peat porewater (Brinson 1992, Walbridge and Richadson 1992). Pocosins that are drained for development exhibit much higher export of inorganic N and organic P, and affect downstream waters by delivering these limiting nutrients in high amounts (Richardson 1981).

As pocosins lose on average two thirds of their hydrologic input to evapotranspiration, and export the remainder through sheet-flow surface runoff, they play a large role in maintaining the brackish salinity of coastal streams and estuaries. Typical freshwater discharge from pocosin landscapes to coastal waters is characterized by non-point inputs with little flow fluctuation (Daniel III 1981). Drainage infrastructure such as ditches, canals, and tile drains change the 'quantity, quality, and pattern' of this runoff (Ash et al. 1983), increasing the frequency of high-flow events that cause estuarine flushing and low-flow events that reduce normal freshwater inputs (Richardson 1992). High precipitation events in drained pocosins can have particularly severe consequences, reducing estuarine water salinity as much as 12 parts per thousand and essentially changing brackish water to fresh (Polsgrove 1983, Richardson 1992).

Undisturbed pocosins are relatively low-nutrient environments, as they receive the vast majority of their nutrient input from rainfall (i.e. they are ombrotrophic) (Kuenzler et al. 1977). In addition, hydrologic fluctuation, microbial nutrient transformation, nutrient

retention in pocosin porewater (specifically organic P), and plant uptake limit nutrient export from undisturbed systems (Richardson 1992, Walbridge and Richadson 1992). Pocosins do tend to be significant exporters of organic carbon, as rainwater leaches organic matter directly from living vegetation, from leaf litter, and from fulvic and humic substances in accumulated peat (Kuenzler et al. 1977, Mulholland and Kuenzler 1979). Walbridge and Richadson (1992) found total C in pocosin drainage to be higher than in receiving water bodies, and carbon export may be even greater in altered and drained pocosins because of vegetation community change and more rapid decomposition (Richardson 1983, Bridgham et al. 1991, Bridgham and Richardson 2003). Both organic carbon and organic nitrogen exported in pocosin run-off likely have a significant positive impact on productivity in navigable waters, especially in tidal and coastal waters receiving runoff from landscapes with large pocosin tracts (Brinson 1992, Walbridge and Richadson 1992). Fire dynamics in pocosins also affect nutrient export in runoff to downstream navigable waters. Peat fires can be common occurrences in pocosins; these events typically release nutrients from the accumulated organic material, and increase nutrient export due to reduced water storage, vegetation densities, and evapotranspiration (Richardson 1992, Walbridge and Richadson 1992).

Many researchers have noted elevated nutrient, ion, and bacterial concentrations in water exported from pocosins that have been drained for development. Daniel III (1981) found pH, turbidity, conductivity, nitrate, calcium, magnesium, sulfate, and bicarbonate were significantly higher in drainage water from pocosins developed for agriculture on the Albemarle-Pamlico peninsula in North Carolina, relative to undisturbed pocosins. Total N in these waters was double that of undisturbed pocosins, thought to be a result of both the land use (agriculture) and reduced nutrient immobilization and transformation in drained organic soils. Gilliam and Skaggs (1981) analyzed runoff at paired undisturbed and developed pocosins, and found higher N, P, total organic carbon, calcium, potassium, chlorine, sodium, biological oxygen demand, and pH in water draining from developed pocosins.

Skaggs et al. (1980) also noted a significant increase in the export of fecal coliform bacteria from developed pocosins used for pasture sites. Organic phosphorus does not adsorb efficiently to drained organic soils, so drained pocosins retain little phosphorus, and P export has been reported to be as much as 28-times higher from pocosins developed for agriculture than from undisturbed sites (Richardson 1981). This represented 20% of P

inputs to Albemarle Sound, NC, which is a P limited system, and thus is likely a significant contributor to ongoing eutrophication (Richardson 1981, Copeland et al. 1983).

Intact pocosins are extremely important to water quality in downstream navigable waters because of their water and nutrient retention capabilities, and greatly affect primary production and higher trophic levels by exporting organic carbon and nitrogen in non-point run-off. Altered and drained pocosins exhibit significantly more concentrated nutrients and ions in their drainage waters due to reduced retention and transformation capabilities, and high-flow point-source discharges from drainage ditches and canals can greatly impact navigable waters by leading to eutrophication and wildly fluctuating salinity levels. Kirby-Smith and Barber (1979) monitored water in the upper South River estuary for four years following the drainage and development of surrounding pocosins for the development of Open Grounds Farm. The authors found an increase in nitrate, ammonia, and phosphate in estuarine waters that correlated with decreased salinities post-development.

Biological Impacts

There has been limited study of pocosin biota published in the literature, in some part because these systems overlap ecologically with many other types of wetlands on the Atlantic coastal plain. They share much of the same flora and fauna with southeastern depressional wetlands, which themselves have significant physical, chemical, and biological impacts on downstream waters. Monschein (1981) provided anecdotal evidence that some animals such as otter (*Lontra canadensis*) and mink (*Neovison vison*), as well as muskrat (*Ondatra zibethicus*) in northern North Carolina, use streams and canals running through pocosin habitats, as well as navigable waters in the same region. Upland associated species such as bobcat (*Lynx rufus*), fox (*Vulpes vulpes*), raccoon (*Procyon lotor*), and opossum (*Didelphis virginiana*) are common facultative users of both pocosins and jurisdictional waters such as streams and floodplains. Marsh rabbit (*Sylvilagus palustris*) are extremely common in pocosins, and excellent prey for larger animals such as fox and bobcat; their status as fur-bearing game may also affect interstate commerce (Monschein 1981, Wilbur 1981). Pocosins can also be refuge for black bear (*Ursus americanus*), as much of the remaining upland region is unsuitable habitat for this large mammal. These and other animals that migrate between navigable waters and pocosins represent a transfer of energy and nutrients between these systems, and likely move invertebrates and propagules between these aquatic habitats attached to fur, feet, and other body parts.

Bird use of pocosins is not well known, but is likely to be similar to depressional wetlands on the coastal plain. Some game birds, such as American Woodcock (*Scolopax minor*), Bobwhite Quail (*Colinus virginianus*), and Mourning Dove (*Zenaida macroura*) are common users of these sites, and Woodcock in particular typically use jurisdictional coastal habitats as well as pocosins (Monschein 1981). Lynch (1982) and Lee (1986) inventoried birds in pocosin habitats in North Carolina, many of which were found by Sallabanks et al. (2000) to also use riparian habitat on the Lower Roanoke River in the same area, including: Acadian Flycatcher (*Empidonax virescens*), Carolina Chickadee (*Poecile carolinensis*), Carolina Wren (*Thryothorus ludovicianus*), Eastern Wood-pewee (*Contopus virens*), Great-crested Flycatcher (*Myiarchus crinitus*), Northern Cardinal (*Cardinalis cardinalis*), Prothonotary Warbler (*Protonotaria citrea*), Red-bellied Woodpecker (*Melanerpes carolinus*), and Tufted Titmouse (*Baeolophus bicolor*), as well as seven other species reported present in both pocosin and riparian habitats by just two of the studies.

Herpetofaunal communities in pocosin wetlands are similar to other coastal plain wetlands in the southeastern United States (Sharitz and Gibbons 1982, Meyers and Pike 2006). The authors of the Connectivity Report assembled a partial list of amphibian and reptile species that are 'known to use both streams and unidirectional wetlands or other lentic waters' (Table 5-2, pg. 5-34—5-35), and many of these species have been found by researchers in pocosin habitats. Meyers and Pike (2006) found four anurans known to use stream habitats in pocosins in North Carolina's Alligator River National Wildlife Refuge (*Rana clamitans, Rana catesbeiana, Rana sphenocephala, Bufo fowleri*). Hutchens and DePerno (2009) found three anuran species and two turtle species in typical pocosin habitats at Bull Neck Swamp in North Carolina (*Rana clamitans, Rana catesbeiana, Rana sphenocephala, Clemmys guttata, Chelydra serpentina*).

Both studies found little difference in amphibian communities between habitat types within a pocosin, as well as between pocosin and other wetland types, suggesting that pocosins likely represent habitat for herpetofauna meta-populations (Marsh and Trenham 2001, Meyers and Pike 2006, Hutchens and DePerno 2009). Movement of individual reptiles and amphibians between aquatic habitats in a heterogeneous landscape represents an exchange of nutrients, genetic information, and energy that has a significant impact in all sites used by those animals.

Some fish species are present in pocosins due to periodic connection to navigable surface water, or to drainage canals and ditches that create a permanent physical connection to a source of fish and cause altered water chemistry that is more hospitable to fish survival (Monschein 1981). Species that exist in pocosins and in coastal streams include pickerel (*Esox amaericanus*), perch (*Perca* spp.), crappie (*Pomoxis* spp.), warmouth (*Lepomis gulosus*), flier (*Centrarchus macropterus*), bluegill (*Lepomis macrochirus*), and largemouth bass (*Micropterus salmoides*). Fish moving between pocosins and navigable waters either in streams or in drainage canals are a clear representation of energy and nutrient flow between these systems, and of the potential biological impact of pocosins.

Finally, many of the chemical impacts of pocosins can have severe consequences for biological systems in streams and coastal waters receiving pocosin drainage. In particular, most commercial fisheries in North Carolina are dependent on estuarine nursery grounds with brackish water habitats. Salinity kept in check by intact pocosins, or dramatically altered by developed pocosins, has enormous impacts on populations of shrimp and shellfish (Street and McClees 1981, Polsgrove 1983). Shellfish and fish catch have declined most in North Carolina waters in regions with the most pocosin area lost to development (Albemarle and Pamlico sounds), and historical oyster fishery grounds have been lost (Street and McClees 1981). As filter feeders such as bivalve mollusks can combat water quality changes (e.g. eutrophication and turbidity increases), these negative effects on coastal populations may act as a positive feedback and enhance the negative effects of pocosin development in coastal watersheds.

Conclusions

Pocosins are ombrotrophic bogs on the southern Atlantic coastal plain that typically occur on broad flat interfluves in relatively high topographic areas, in blocked drainages, and at stream- or drainage-basin-heads in the North Carolina sandhills. Pocosins are ill defined due to their tendency to exist on a gradient of peat depth, vegetation height, and elevation adjacent to other 'types' of wetlands. In considering the connectivity and impacts of these wetlands on downstream navigable waters, we find that this gradient represents a system of wetlands dictated by hydrologic, nutrient, and fire dynamics, and the term pocosins should be taken to mean the entire system; indeed, Weakley and Schafale (1991) analyzed landscape positions of many types of wetlands with pocosin characteristics, and found gradational boundaries between short/tall pocosins and other wetland 'types' to be

indistinguishable on a centuries-long time scale. Richardson (2003) posits that this system of wetlands is not hydrologically isolated from navigable waters downstream. In evaluating the published impacts of pocosins on downstream navigable waters, we found:

- Pocosins affect the quantity and pattern of water delivery to streams and coastal waters by sequestering and losing (through evapotranspiration) the majority of precipitation entering the systems, and exporting the remainder by overland sheet flow. Pocosins with drainage infrastructure increase point-source delivery, increase the frequency of both high- and low-flow events, and usually increase the total volume of run-off to downstream waters.
- Pocosins are important sources of organic carbon to navigable streams and coastal waters, as acidic pocosin water leaches organic compounds from living vegetation, leaf litter, and accumulated humic and fulvic matter in peat.
- Pocosins affect the water quality of downstream navigable waters by retaining organic P (in porewater) and inorganic N (through nutrient recycling and transformation) that would otherwise be exported with run-off. Drained and developed pocosins exhibit increased export of total N (2- to 3-fold) and total P (as much as 28-fold), which can contribute to coastal and estuarine eutrophication.
- Pocosins help maintain brackish salinities in coastal estuaries and rivers by limiting high-flow freshwater run-off events and delivering non-point sheet flows. Pocosins with drainage infrastructure have been shown to drastically affect estuarine salinity fluctuations.
- Unaltered pocosins export less calcium, sodium, magnesium, bicarbonate, and sulfate than those drained and developed for agriculture, and drainage waters of unaltered systems are lower in pH, conductivity, and turbidity. These differences likely have important and synergistic effects on downstream water quality.
- The chemical impacts of pocosins on downstream navigable waters have important consequences for biota in coastal streams and estuaries. Coastal estuarine waters serve as nursery habitat for many marine species, and animals and plants in these habitats depend on brackish salinities maintained by limited, non-point freshwater run-off. Salinity changes and nutrient loading caused by pocosin alteration and destruction have had negative effects on shellfish populations in North Carolina, and likely other types of aquatic species as well.

- Many mammals, birds, amphibians, reptiles, and fish use both pocosin and riparian areas as habitat, and their movement between these two systems represents a transfer of energy and nutrients that affects the integrity of both. Additionally, propagules and invertebrates attached to fur, feathers, and feet of birds and mammals moving between pocosins and navigable waters could have significant biological impacts.

SINKHOLE WETLANDS IN KARST REGIONS

Sinkhole wetlands occur in topographic depressions, which are formed when limestone bedrock is dissolved and the overlying soil collapses (Hill and Neary 2012). Two major types of sinkhole wetlands that form in karst regions are compound sinks, which are directly connected to groundwater systems, and karst pans, which are disconnected from groundwater systems (Wolfe 1996). Karst pans are further classified by their hydroperiod as either seasonally or semi-permanently inundated (Hill et al. 2006). The hydroperiod of seasonally inundated wetlands is controlled by climate, topography, and geologic substrate (O'Driscoll and Parizek 2008). While sinkhole wetlands occur in karst regions throughout the United States, we focus on the three regions identified by Tiner (2003) in New Mexico, the Ozarks, and the southeast (see Figure 3); we provide only limited reference to areas of the southeastern coastal plains covered in the report by Woolford and Carroll (2014).



Figure 3. Tiner (2003, p. 498)

Physical Impacts

Similar to other depressional wetlands, karst sinkholes store surface water runoff and attenuate peak flows, thereby mitigating the effects of floods (Hill and Neary 2012). Stream flows downstream of wetlands in the Wolf Branch sinkhole basin (Lake County,

Florida), are characterized by peak discharges that are of a lesser volume and longer duration than those upstream (Schiffer 1996). However, the capacity of sinkhole wetlands to store runoff and sediments is affected by land use and catchment characteristics (Roberts et al. 2005, Noble et al. 2013). Minor modifications to karst wetlands may lead to dramatic changes in surface or ground water flow patterns, as was seen with both construction and restoration efforts in the Florida Everglades (Sullivan et al. 2014).

Chemical Impacts

Karst landscapes are characterized by a complex subsurface system of fractures, joints, and macropores (Bonacci et al. 2009). These voids may allow rapid transport of surface water runoff to aquifers, potentially contaminating water quality (Gondwe et al. 2011, Lines et al. 2012). Sinkhole wetlands may reduce the likelihood of groundwater contamination by either eliminating surface water-aquifer connectivity, as is the case with karst pans, or temporarily storing surface runoff long enough to allow settling and processing of pollutants, as is the case with compound sinks (Schiffer 1996, Noble et al. 2013).

Karst sinkhole wetlands maintain water quality through the transformation and cycling of nutrients (Hill and Neary 2012). Rates of organic carbon cycling are higher in sinkhole wetlands than other systems in karst regions, such as forests or streams (Noble et al. 2013). The capacity of sinkhole wetlands to store nutrients and cycle carbon depends upon the thickness of the O-horizon, or the uppermost layer of soil with high concentrations of organic matter (Noble et al. 2013). Anthropogenic disturbances, such as draining or filling sinkhole wetlands, alter rates of organic carbon cycling and may lower nutrient storage capacity (Noble et al. 2013). Ephemeral streams often originate from or flow through seasonally flooded sinkhole wetlands of the Eastern Highland Rim, during which time these streams may receive inputs of organic carbon (Wolfe 1996).

Biological Impacts

While karst regions are widely studied for their geology, hydrology, and chemistry, specific studies documenting wetland biodiversity in these particular karst regions are fewer in number. Additionally, these sinkhole wetlands are sometimes referred to by different names (e.g. palustrine forested wetlands, montane depression wetlands) (Studinski and Grubbs 2007, VDCR 2014).

In New Mexico's karst region a diverse group of sinkhole wetlands, shallow lakes and streams is designated as the Bitter Lake National Wildlife Refuge (BLNWR). Though the BLNWR's namesake is dubbed a lake, it has a maximum depth of only 4 feet (MacRae et al. 2001) giving it properties more similar to a wetland. In addition to wetlands, the Pecos River flows through the eastern portion of the BLNWR and the Rio Hondo, a tributary of the Pecos, flows through the southern part of the refuge. Ultimately, the Pecos River joins the Rio Grande near the Texas-Mexico border. The close proximity of these karst wetlands to navigable waters provides ample opportunity for biological connectivity as detailed below.

Interestingly, the BLNWR is home to some of the highest diversity of odonates (dragonflies and damselflies) in the US with at least 28 families (Macanowicz et al. 2013) and over 100 species (Larsen 2008) identified. The BLNWR also acts as both a permanent home for some waterfowl, as well as a major stopover location for many migrating birds. The U.S. Fish and Wildlife Service (USFWS) have identified 350 bird species using the refuge with some of the most abundant species being Lesser Sandhill Cranes (*Grus canadenis canadenis*), Ross's (*Chen rossii*) and Snow Geese (*Chen caerulescens*), Northern Pintails (*Anas acuta*), Mallards (*Anas platyrhynchos*), Canvasback Ducks (*Aythya valisineria*), and Northern Shoveler Ducks (*Anas clypeata*) (USFWS 2003). Because these wetlands are in relatively close proximity to navigable waters such as the Pecos River and the Rio Hondo, these birds necessarily provide a connection among these water bodies and sinkhole wetlands, both when migrating and moving around the refuge.

A USFWS Contaminants Assessment Process report provides additional evidence of connectivity. The USFWS studied Interior Least Terns (*Sternula antillarum*), Sandhill Cranes (*Grus canadensis*), and other waterfowl and concluded that these taxa transport heavy metal, pesticide, and nutrient pollution to BLNWR from other locations along their migration and then deposit them as waste at BLNWR. These pollutants then become part of the ecosystem and are taken up by other organisms. Since concentrations of waterfowl are increasing at the BLNWR, in part due to decreased wetland habitat elsewhere, it is possible that as pollutant concentrations increase, birds will uptake more of the pollutants they are depositing and then transport them to other water bodies as they continue their migration (USFWS 2000, MacRae et al. 2001).

Another karstic region of the U.S. comprises parts of Kentucky, Tennessee, Indiana, Alabama, Virginia and West Virginia (Tiner 2003). Mammoth Cave National Park in Kentucky is home to several temporary ponds, which attract different types of wildlife and are home to many invertebrates. These ponds are normally less than one meter deep, so as with many other wetland types, the majority of the volume is available to use by organisms at or near the surface of the water (Studinski and Grubbs 2007). In a study of 10 of these temporary ponds, 32 invertebrate taxa were identified, either to family, genus, or species, based on the difficulty of identification (Studinski and Grubbs 2007). Of these 32 taxa, 25 taxa are also identified in the master list of macroinvertebrates "collected from the surface waters of Kentucky" (KDEP 2009). Studinski and Grubbs (2007) found four taxa of cyclic colonizing invertebrates adapted to migrate between ephemeral wetlands and permanent waters in these ponds (*Acilius, Hydaticus, Hydrochara,* and *Chaoborus*). Additionally, the authors note that the majority of the macroinvertebrates collected are "not capable of active dispersal," and instead they hitch rides on larger animals such as waterfowl; the National Park Service notes that ducks, geese, grebes and herons all live in Mammoth Cave National Park (NPS 2014). Therefore it is probable that these temporary ponds are biologically connected to other surface waters by invertebrates migrating between them, water birds seeking out better habitat and resources, and those invertebrates that tag along for the journey.

The Shenandoah Valley Sinkhole Pond system, found in the karstic region of western Virginia, is part of a broader class of montane depression wetlands. These sinkhole ponds do not support fish because of their impermanent nature and thus act as a refuge for amphibians and reptiles to escape predation by fish. However, these ponds also have a variety of hydroperiods: some are wet nearly year round, while other ponds dry often (Mitchell and Buhlmann 1999). As a result, there is often a gradient of conditions available from standing water to dry land, both temporally and spatially, which allows animals to take advantage of a variety of habitats.

While many of the amphibian and reptile species identified by Mitchell and Buhlmann (1999) may connect these wetland ponds to streams and rivers, the Eastern Snapping Turtle (*Chelydra serpentina serpentina*) almost certainly does. The Virginia Department of Game and Inland Fisheries asserts that the Eastern Snapping Turtle occurs throughout the state of Virginia in "any permanent body of water" and that individuals may migrate half a mile or more

between water bodies (VDGIF 2014). In addition, it has been observed in Florida's cypress dome wetlands (another type of karst wetland) that Snapping Turtles migrate on dry land between temporary ponds and permanent swamps of distances greater than half a kilometer. Data from cypress dome wetlands "suggest that *C. serpentina* has the ability detect water from relatively long distances and may prefer moving to new water" (Aresco et al. 2006). In addition, this species has been observed returning to newly inundated sections of water bodies, even though they had been dry for the previous 5 to 6 months (Aresco et al. 2006). According to records compiled by the USGS, *C. serpentina* is a species with an extremely wide distribution, comprising most of the Eastern and Central United States, from Maine to Florida and west from Montana to New Mexico and Texas (Fuller et al. 2014). This means that the Snapping Turtle is found in all karst wetland regions identified by Tiner (2003) and most likely provides biological connectivity among these and many other isolated wetlands types and larger permanent water bodies.

Conclusions

Sinkhole wetlands in karst regions fit into several categories that have differing hydrologic connections to groundwater, various hydroperiods, and contrasting topography and geography. While this creates difficulty in generalizing the types of impacts these wetlands have on navigable waters, sinkhole wetlands of each category generally have significant physical, chemical, and/or biological impacts on downstream wetlands:

- Sinkholes are created by dissolution of underlying karstic bedrock, but geology and soils closer to the surface determine the level of connection to an underlying groundwater aquifer; compound sinks are typically connected to groundwater systems, while karstic pans are usually isolated.
- Karst wetlands can mediate flooding and stormwater run-off, and reduce peak flows by retaining water on the landscape before it reaches navigable waterways.
- Compound sinks can slow water infiltration to aquifers in karstic landscapes and allow for sedimentation and pollutant removal, while karstic pans eliminate water quality deterioration by retaining water and restricting surface water-aquifer connectivity.
- Karstic wetlands transform nutrients and organic compounds, and cycle organic carbon that can be exported to navigable waters via ephemeral streams or aquifer connections to river networks.

- Karst wetlands in New Mexico are important stopover sites for birds migrating between navigable waters, and exist as part of a system of lotic and lentic waters connected by the movements of organisms, propagules, and nutrients. Birds in this region are both the source and sink of heavy metal and pesticide pollution, and likely transport toxins to navigable waters in other parts of their range.
- Karst wetlands in the Mammoth Caves region are home to a diversity of invertebrates, including cyclic colonizers that migrate between these wetlands and permanent waters, as well as passively dispersing invertebrates that move among lentic and lotic systems on the feet, fur, and feathers of other animals.
- Some sinkhole wetlands in Virginia are connected to navigable waters by the movement of *C. serpentina*, which can be a frequent colonizer of newly inundated waters and is commonly present in permanent sinkhole wetlands (such as some compounds sinks); this is likely the case in all karstic regions in the United States

RAINWATER BASIN WETLANDS

The Rainwater Basin in south-central Nebraska comprises approximately 4,200 square miles, the majority of which is dominated by row crop agriculture. The basin was originally home to over 100,000 acres of playa lake wetlands, but the extent of these wetlands has dramatically decreased: between 1900-1980 nearly 90% of the historical wetland area was ditched, drained, or filled for the benefit of agriculture (Gersib and U.S. Fish and Wildlife Service 1991, Ekstein and Hygnstrom 1996, LaGrange 2005). Siltation caused by crop soil erosion, water quality degraded by fertilizer and agricultural chemical runoff, and hydrology altered by irrigation runoff and reduced water inputs have diminished the function of remaining wetlands (Rainwater Basin Wetland Management District 2011, Riens et al. 2013).

Rainwater Basin wetlands range in size from less than 1 to over 100 acres, and are typically shallow depressions thought to have been formed by aeolian processes (LaGrange 2005). These wetlands usually have little connection to groundwater or surface water because of a clay soil layer that impedes infiltration. Some groundwater recharge and overland flow can occur during times of excessive precipitation, but water loss beyond evapotranspiration is typically minimal (Tiner 2003). Many wetlands in the basin are ephemeral and dry in the summer months.

Wetlands in the Rainwater Basin support a vast array of wildlife, including millions of birds using the site as a staging area during spring and fall migrations (Tiner 2003, LaGrange 2005). The basin's location in the heart of the Central Flyway makes wetlands in the region extremely important resources for migrating waterfowl and shorebirds, and they serve as year-round habitat for many nesting birds and other types of flora and fauna. These wetlands exhibit various physical, chemical, and biological impacts on navigable waters, many of which are similar to other depressional wetlands in this report. Our findings are below.

Physical Impacts

Playa wetlands of the Rainwater Basin trap sediments that are transported in runoff from agricultural fields and construction sites (Gersib and U.S. Fish and Wildlife Service 1991, Tang et al. 2012). In fact these wetlands are so efficient at trapping sediments eroded from agricultural fields that their function and persistence is actually threatened; an estimated 70% are currently degraded by sedimentation (Cariveau et al. 2011). Culturally accelerated sedimentation affects biogeochemical cycling and hydrologic functions of Rainwater Basin wetlands (LaGrange et al. 2011, Beas et al. 2013).

Rainwater Basin wetlands reduce soil erosion by lessening peak flows associated with storm events, i.e. flood storage (Stutheit et al. 2004), and decreasing the total amount of runoff leaving the watershed (Rainwater Basin Wetland Management District 2011). Downstream water quality is also improved when vegetation of these wetlands stabilizes soil at the water's edge, a process known as shoreline anchoring, thereby reducing soil erosion (Gersib and U.S. Fish and Wildlife Service 1991).

Floodwater storage and attenuation of storm flows are two critical hydrologic functions of Rainwater Basin playa wetlands (Gersib and U.S. Fish and Wildlife Service 1991, Smith et al. 2011, Tang et al. 2012). Floodwater storage functions of Rainwater Basin wetlands provide an estimated annual net benefit of approximately $135 per acre ($41.14 per acre in 1978) (Rainwater Basin Wetland Management District 2011)

While it is generally assumed that little infiltration, and therefore aquifer recharge, occurs in Rainwater Basin playas (Stutheit et al. 2004, Robichaux 2009), evidence of the relative importance of infiltration as compared to evapotranspiration has been found, particularly for deeper portions of these wetlands (Wilson 2010), macropores (Gurdak and

Roe 2009), and around basin edges (Foster 2010). Vertic soils, or those with a large proportion of fine clay, allow rapid infiltration of surface water through cracks while dry, but eventually these cracks seal up during wet conditions, greatly reducing infiltration rates (Wilson 2010).

Chemical Impacts

Downstream water quality and habitat is improved when Rainwater Basin wetlands sequester, remove, or convert nutrients and pollutants (Stutheit et al. 2004). Two major functions of these playa wetlands that may impact the chemical integrity of Waters of the US are the retention of nutrients (Gersib and U.S. Fish and Wildlife Service 1991) and pollutants, such as herbicides and pesticides (Rainwater Basin Wetland Management District 2011). Playas of the Rainwater Basin are known to process nutrients exported with agriculture runoff into less polluting forms (Rainwater Basin Wetland Management District 2011). Denitrification is promoted by anaerobic conditions in the wetland sediments, particularly in continuously flooded playas (Gurdak and Roe 2010).

Biological Impacts

Rainwater Basin wetlands are a primary staging area for many migrating bird species using the North American Central Flyway in spring and fall (Figure 4). An estimated 7-14 million individual spring-migrating ducks and geese are thought to stopover in the basin annually, accounting for a large portion (30-90%) of the continental populations of several species (White-fronted Geese (*Anser albifrons*), Snow Geese (*Chen caerulescens*), Northern Pintails (*Anas acuta*), and Mallards (*Anas platyrhynchos*)) (Gersib and U.S. Fish and Wildlife Service 1991, LaGrange 2005). Many migrating waterfowl and shorebirds move between jurisdictional navigable waters in their wintering and/or breeding grounds, and wetlands in the Rainwater Basin along their migration route. For instance, Henaux et al.



Figure 4: Map of the North American Central Flyway (USFWS 2011, p. 4)

(2012) used stable isotopes in bird tissue to track the wintering origins of Snow Geese in the Rainwater Basin, and found that the majority (91%-98%) overwintered on the Gulf coast of Louisiana and Texas.

Staging areas on migration routes can have large effects on bird populations: due to the temporary concentration of individuals in one location and stress caused by long-distance migration, Myers termed these areas geographic bottlenecks (Myers 1983, Skagen and Knopf 1993). Waterfowl that do not find proper nutrition in stopover areas like the Rainwater Basin can exhibit smaller clutch sizes, delayed nesting, or can forego nesting altogether (Tidwell et al. 2013). These large scale changes in bird population and community likely have large effects on the navigable waters and jurisdictional wetlands used by migrating waterfowl and shorebirds in the winter and summer, as population fluctuations alter overall food consumption, nutrient input, and energy transfer.

Bird stress and morbidity in the Rainwater Basin that contributes to survival and population-level effects is often a result of wetland-specific pressures, including food availability, habitat availability, and disease. A bio-energetic study of the region estimated that only approximately one third of the wetland area still exists that is required to meet the nutritional and energetic needs of migratory birds in an average year (Bishop and Vrtiska 2008). Most migrating waterfowl tend to rest and roost in or around inundated wetlands (as opposed to dry basins—with the exception of most dabbling ducks), and migrating shorebirds and waders use wetlands primarily for foraging (Smith 2003). Tidwell et al. (2013) also found that Mallards and Teal preferentially foraged on aquatic invertebrates in higher proportion than their availability, signifying the importance of wetland resources for springtime protein acquisition. In dry years, birds are especially limited by food and habitat availability, and the resulting concentration can contribute to disease outbreaks, particularly avian cholera (Smith and Higgins 1990). As many of these birds migrate to navigable waters, population level effects in migrating birds due to limitations in Rainwater Basin wetlands likely have significant ecosystem level impacts in navigable waters.

Some researchers have shown that complexes of wetlands (as opposed to singular isolated wetlands) in the Rainwater Basin can ease some of these population pressures on bird survival, by allowing species to make use of a diversity of wetland resources and segregate spatially in their foraging and roosting grounds (Webb et al. 2010a, b, Tidwell et al. 2013). In addition to moving between wetlands in complexes, some birds move between

isolated Rainwater Basin wetlands and navigable waters in the Rainwater Basin. Pearse et al. (2011) radio-marked Northern Pintails, which used marshes, rivers, lakes, and man-made lagoons over three years for both foraging and resting. This movement among wetland types represents nutrient, energy, and genetic information transfer that can impact navigable waters used by these birds. In addition, Jorde et al. (1983) studied Mallards that overwintered on and around the Platte River and drainage canals in the basin, due to heated water returns from a steam plant maintaining open water when isolated wetlands had iced over.

Many waterfowl that move between rainwater basin wetlands and navigable waters incorporate aquatic invertebrates from rainwater basin wetlands into their diet in the spring, due to the need for extra protein in preparation for egg formation and laying (Bishop and Vrtiska 2008, Pearse et al. 2011, Tidwell et al. 2013). In addition, many invertebrates found in rainwater basin wetlands themselves represent a link between these wetlands and navigable waters, due to their life history strategies as cyclic colonizers: invertebrates that take advantage of abundant resources in ephemeral wetlands when they flood, and return to permanent waters when they dry down (Wiggins et al. 1980, Batzer and Wissinger 1996). Riens et al. (2013) found six genera (*Dytiscus, Gyrinus, Tropisternus, Chaobous, Gerris, Notonecta*) of macroinvertebrates with this adaptation in 12 rainwater basin wetlands with and without vegetated buffers. Davis and Bidwell (2008) found similar invertebrate abundance and biomass across four wetlands managed in different agricultural environments, and four genera of cyclic colonizers (*Buenoa, Hesperecorixa, Notonecta, Enochrus*) in all types of management schemes they investigated. Gordon et al. (1990) did not identify invertebrates to the genus, but did find Corixidae and Chaoboridae in eight rainwater basin wetlands, the vast majority of which are cyclic colonizers.

Finally, some amphibians and reptiles in the basin make use of temporary isolated wetlands and navigable waters. Northern cricket frogs (*Acris crepitans*) are frequent users of riverine habitat in most of eastern Nebraska, and use ponds and wetlands in the Rainwater Basin as well (Lynch 1985). Rocky mountain toads (*Bufo woodhousii woodhousii*) use isolated pools in sandy riverbanks, as well as pools and stock ponds in the Rainwater Basin to breed. The western striped chorus frog (*Pseudacris triseriata*) breeds mostly in roadside ditches and marshes, but is also found adjacent to permanent water bodies (Lynch 1985). Additionally, the common water snake (*Nerodia sipedon*) occurs in marshes and along streams and rivers in the Rainwater Basin area (Lynch 1985). Individuals of each of

these species moving between isolated wetlands and navigable waters in this region represent a pathway for the transfer of nutrients, energy, genetic information, and propagules. Collectively, the impact on navigable waters of species migrating from isolated Rainwater Basin wetlands should be expected to be significant.

Conclusions

Wetlands in Nebraska's Rainwater Basin are depressional playa lakes in a region dominated by row crop agriculture, and serve as staging areas for millions of migrating birds using the Central Flyway each spring. Their physical, chemical, and biological impacts on downstream waters include:

- Rainwater Basin wetlands provide important water storage functions and regulate the timing and volume of flow to downstream waters, as they typically do not have surface water connections.
- Evidence exists for the connection of some Rainwater Basin wetlands to groundwater, and they may play important recharge functions.
- Rainwater Basin wetlands retain and transform nutrients, and retain toxins and pollutants in herbicides and pesticides in a heavily farmed landscape.
- Wetlands in the Rainwater Basin support millions of migratory birds in a 'geographic bottleneck'; bird populations depend on wetland resources, and population-level changes due to resource restrictions likely have significant ecosystem effects on navigable waters visited by those birds in other seasons.
- Some species of birds, reptiles, and amphibians move between isolated wetlands and navigable waters in the Rainwater Basin, representing a direct transfer of nutrients, energy, organic matter, and genetic material.
- Many taxa of invertebrates found in Rainwater Basin wetlands are cyclic colonizers specifically adapted to migrate to permanent water when the wetlands dry, and play important roles in energy and nutrient cycling in navigable waters.

SAND HILLS WETLANDS

The Sand Hills region of Nebraska is the largest sand dune ecosystem in the western hemisphere, covering more than 50,000 square kilometers of the central and northwest parts of the state (Tiner 2003). The region is generally semi-arid, and receives less precipitation in the west than in the east. Wetlands in the Sand Hills exist in interdunal

valleys between xeric dune-tops that support a grassland ecosystem and can reach 400 feet above the valley floor (Bleed and Flowerday 1990, Schneider et al. 2005). Most wetlands in the region are fed primarily by groundwater from the Ogallala aquifer, due to the permeable sand and gravel soils; streams and rivers in the region are also fed from the same source, especially in the eastern Sand Hills (Bleed and Flowerday 1991, Tiner 2003). Of over 3000 wetlands in the Sand Hills totaling over 1.3 million acres, approximately 2000 of them are small (<0.25 hectares) ephemeral pools (Novacek 1989, LaGrange 2005).

The Sand Hills ecosystem is productive rangeland for ranchers in the region, and relatively few wetlands have been lost to agriculture and development compared to other areas of Nebraska. Some ditching and draining, as well as groundwater extraction for irrigation, has caused a decline in about 15% of wetland surface area since 1900 (LaGrange 2005). Similarly to wetlands in the Rainwater Basin of Nebraska, the location of the Sand Hills in the Central Flyway migration route makes them an important site for migratory waterfowl and shorebirds. The ecosystem supports many types of flora and fauna due to the variety of resources and habitats provided by the wetland valleys and xeric dunes. Sand Hills wetlands have a broad variety of physical, chemical, and biological impacts on downstream navigable waters, which are detailed below.

Physical Impacts

Wetlands in the Nebraska Sand Hills are areas of significant aquifer discharge and recharge (Chen et al. 2012), which is important, as groundwater discharge constitutes a major component of stream flows in the region (Chen et al. 2003). In fact approximately 98% of the Dismal River and 95% of the Middle Loup River flows are derived from groundwater seepage (Chen and Chen 2004). A USGS study found the annual rate of negative ground-water irrigation effects on simulated base flow for the Elkhorn and Loup River Basins to be steadily increasing (Peterson et al. 2008); this, combined with more frequent and severe droughts predicted to occur with climate change, make aquifer recharge an ever more critical wetland function (Chen and Chen 2004).

The condition of water resources of the Sand Hills region affects economically important waterways in other parts of Nebraska. Notably, flows from the Loup River were able to prevent a portion of the Platte River from drying during a severe drought in 2002 (Chen and Chen 2004). Many towns in the Sand Hills obtain their municipal water supply from discharged and recharged groundwater from wetlands (Gersib and U.S. Fish and

Wildlife Service 1991), an especially important source of municipal water because it is resilient to drought conditions (LaGrange 2005).

Chemical Impacts

There are important chemical interactions between Sand Hills' wetlands and groundwater, the primary source of surface water in the region (LaBaugh 1986). Geographically isolated shallow lakes and other wetlands contribute dissolved organic carbon to underlying aquifers (LaBaugh 1986). Moreover, they affect the composition of major ions, such as bicarbonate, sodium, and calcium, in adjoining ground water (LaBaugh 1986). Microbes adapted to the wetting-drying cycles and saline conditions of wetlands in the western Sand Hills region are important parts of both hydrological and geochemical cycles, especially with regards to sulfate reduction (Joeckel and Clement 2005). Sand Hills' wetlands are sites of nutrient uptake, particularly phosphate and nitrate (Gersib and U.S. Fish and Wildlife Service 1991).

Biological Impacts

More than 300 species of birds make use of the Sand Hills, with 125 species 'having an ecological affinity to wetland habitats, including waterfowl, shorebirds, and wading birds (LaGrange 2005). The region is considered by some to be the greatest area of duck production outside the prairie potholes to the north, with over 200,000 ducks visiting or nesting in the wetlands each season (Bellrose and Kortright 1980). The migratory bird community in the Sand Hills wetlands is similar to that in Nebraska's Rainwater Basin, and like species in that area, many migrate to navigable coastal waters in their wintering and/or breeding grounds. Shorebirds and waders such as Tern (Sternidae), Avocet (*Recurvirostra americana*), Heron (*Ardea herodias* and *Nycticorax nycticorax*), Cormorant (*Phalacrocorax* spp.), Pelican (*Pelecanus erythrorhynchos*), Bittern (*Botaurus lentiginosus*), Willet (*Tringa semipalmata*), and Sandpiper (Scolopacidae) are common migrants and breeders in the Sand Hills that use navigable rivers, estuaries, and coasts in their over-wintering sites (Novacek 1989). Resource limitation in migratory and breeding habitats can have substantial population-level effects in migrating birds, and these effects are likely to lead to significant ecosystem-level impacts on navigable waters, in the form of altered nutrient and energy cycling determined in part by visiting birds (Myers 1983).

Some bird species make use of both isolated Sand Hills wetlands and navigable waters in the Sand Hills region for roosting and/or foraging, including major rivers draining

the area such as the Dismal, Loup, Niobrara, and Platte. These include waterbirds such as Least and Black Terns (*Chlidonias niger*), Coots (*Fulica americana*), Shovelers (*Anas clypeata*), and Ruddy Ducks (*Oxyura jamaicensis*), as well as Red-winged Blackbird (*Agelaius phoeniceus*), Common Yellowthroat (*Geothlypis trichas*), Yellow-headed Blackbird (*Xanthocephalus xanthocephalus)*, and Brown-headed Cowbird (*Molothrus ater*) (Whitcomb 1989, Johnsgard 2007). The endangered Whooping Crane (*Grus Americana*) also makes use of palustrine, lacustrine, and riverine wetlands in the Sand Hills during migration (Gersib and U.S. Fish and Wildlife Service 1991). Movements among isolated Sand Hills wetlands and navigable waters by these birds, some populations of which are extremely numerous, likely have significant impacts on the biota and water quality in navigable waters. These impacts are due to nutrients and energy entering and exiting navigable water ecosystems, as well as the transfer of invertebrates, propagules, and organic matter.

In a similar fashion, many mammals and herpetofauna in the Sand Hills region move indiscriminately between isolated waters and lotic waters. Mammals include shrews (*Sorex cinereus* and *Blarina brevicauda*), minks (*Neovison vison*), muskrat (*Ondatra zibethicus*) and many other opportunistic users of both habitats, such as fox, raccoon, weasel, skunks, and several species of mice (Freeman 1998). Amphibians such as the western striped chorus frog (*Pseudacris triseriata*) and rocky mountain toad (*Bufo woodhousii woodhousii*), as well as reptiles such as painted turtles (*Chrysemys picta*) and northern water snakes (*Nerodia sipedon*), tend to use both navigable and isolated waters to breed and/or forage (Freeman 1998, Bury and Germano 2003). Additionally, 75 species of fish exist in Sand Hills waters; many wetlands, especially in the eastern Sand Hills, have temporary surface water connections to permanent water bodies that allow fish to move between these systems (Paukert and Willis 2003, LaGrange 2005).

There has been limited study of aquatic invertebrates in the Sand Hills region, but it is likely that Sand Hills wetlands share many of the same cyclic colonizing taxa that are found in Rainwater Basin wetlands. Insects that have evolved specific strategies to migrate between permanent navigable water and isolated ephemeral wetlands represent an influx of nutrients, energy, organic matter, and genetic information into navigable waters when ephemeral wetlands dry, and thus have a significant impact on their functioning (Wiggins et al. 1980, Batzer and Wissinger 1996). Ratcliffe (1998) reported Corixidae and Gerridae in Sand Hills pools, many of which are cyclic colonizers, along with Notonectidae, Dytiscidae, Gyrinidae, Hydrophilidae, and Belostomidae as common occupants, some genera of which

are cyclic colonizers. In addition, Jolley et al. (2013) found Corixidae and Chaoboridae in Sand Hills wetlands, both likely cyclic colonizers. Finally, Chironomid midge production in Sand Hills wetlands was found to be high by Paukert and Willis (2003) and Jolley et al. (2013) (18.9% and 23.7% of all invertebrates sampled in sand hill lakes, respectively); chironomids are important protein resources for ducks that move between isolated wetlands and navigable waters, particularly where these invertebrate resources are abundant (Landers et al. 1977, Pearse et al. 2011).

Conclusions

Wetlands in the Sand Hills region of Nebraska are rare inland interdunal wetlands fed by a vast underground aquifer, and represent a special case because of their location in the heart of the Central Flyway (Figure 4). Significant physical, chemical, and biological impacts of these wetlands on navigable waters include:

- Sand Hills wetlands typically share extensive connections to groundwater, both receiving groundwater discharge and functioning to recharge the Ogallala aquifer. Because this aquifer is the principal source of many rivers in the region, these connections have significant hydrologic impacts on navigable waters.
- The water quality of navigable waters fed by groundwater is also impacted by processes in Sand Hills wetlands, as they contribute to the organic carbon, nutrient levels, and ionic composition of groundwater.
- As in Rainwater Basin wetlands, migrating birds that depend on Sand Hills wetlands can experience population-level changes due to wetland resource availability; these changes can have impacts on navigable waters due to altered nutrient inputs and energy cycling in coastal or riverine breeding and over-wintering sites.
- Many birds, reptiles, amphibians, and mammals move between Sand Hills wetlands and permanent navigable water in the region, particularly rivers and streams that are fed by groundwater discharge. These movements represent a direct transfer of nutrients, energy, organic matter, and genetic material.
- Sand Hills wetlands are a prolific source of invertebrates that are food for breeding and migrating birds, and invertebrates adapted to migrate between permanent water and ephemeral wetlands likely take advantage of Sand Hills wetlands and regional navigable waters.

PLAYA LAKES

Playa lakes are ephemeral isolated wetlands of the southern High Plains, primarily in eastern New Mexico and the Texas Panhandle, but stretching north to Oklahoma, Colorado, and Kansas (Fretwell et al. 1996). These shallow, roughly round depressions are of unknown origin, but thought to have been created by either aeolian processes or soil subsidence. Limited rainfall in the arid playa lakes region causes nearly all playas to dry for the majority of the year, with wetlands typically inundated only during periods of heavy precipitation and frequent thunderstorms in summer and fall, and fluctuating water levels common due to high rates of evapotranspiration (Tiner 2003). As some of the only water bodies in the region, playa lakes play a large role in maintaining biodiversity and sustaining populations of migrating birds, as well as in groundwater recharge, nutrient cycling, and water quality enhancement.

Physical Impacts

Playa wetlands are known to recharge aquifers, mitigate floods, and reduce sediment inputs to nearby waterways. Playas in the Southern High Plains of New Mexico and Texas were shown to play a significant role in recharging aquifers by collecting runoff and focusing rapidly flowing surface waters through macropores (Wood and Sanford 1995, Wood et al. 1997, Wilson 2010). In fact, playas represent the only sites for aquifer recharge in some areas (Smith et al. 2011). Playa lakes of the Southern High Plains mitigate floods by catching and storing storm runoff (Haukos and Smith 2003). Suspended solids generally settle out of runoff over time in playas (Lehman and Hauser 1970).

Chemical Impacts

Playa lakes gather and store nutrients that are carried in surface water runoff (Smith et al. 2011). Once runoff is stored, biological and chemical processes may reduce nutrient and pollutant concentrations. Playa lakes have been shown to improve water quality, and historically they have often been used to treat irrigation and animal feedlot runoff (Sharpley et al. 1995, Johnson et al. 2012). In a study by Lehman and Hauser (1970), concentrations of nitrate and chemical oxygen demand (COD) in a Texas playa were shown to decrease with time to levels that were less than nearby aquifers and often were lower than drinking water quality standards (Lehman and Hauser 1970). These water quality improvements were consistently found at all playa depths (Lehman and Hauser 1970).

Biological Impacts

Many waterfowl, shorebirds and wading birds use playa lakes either as a wintering residence or as a stopover location while migrating to points further North or South within the North American Central Flyway (Figure 4). The biological connections that playa lakes share with waters of the surrounding areas as well as distant locales have been well documented through the tagging, tracking, study, and observation of these birds. Playa lakes are home to an estimated "30% of all waterfowl wintering in Texas" (Bolen et al. 1989) and as such, are second only to Gulf Coast wetlands in the number of overwintering waterfowl. The result is unexpectedly high biodiversity on these flat treeless plains, which includes over 115 bird species, 10 mammal species (Haukos 1992) and over 124 taxa of macroinvertebrates (Hall et al. 1999).

Of the many migratory birds that use playa lakes, some of have been particularly well studied. Wintering Mallard (*Anas platyrhynchos*) ducks have been banded and tracked, revealing a migratory flyway stretching well over 1,000 miles from the Texas panhandle to western Saskatchewan, Canada. During their migration they pass through portions of Colorado, Kansas, Nebraska, South Dakota and Montana (Bolen et al. 1989), crossing several major rivers (e.g. Arkansas, Platte, Yellowstone, Missouri), numerous lakes and countless smaller rivers, streams and wetlands, any of which might be used for feeding and recuperation during the physically taxing migration.

Green-winged Teals (*Anas crecca*) are another species of waterfowl using these playa lakes that have been banded and tracked. Unlike the Mallards, playa lakes are not the final wintering destination for these Teals; instead, playas serve as a stopover, providing important foraging and resting habitat for the birds before they continue their journey to the Gulf Coast and Central Mexico. They later use the playas as a stopover location again during the spring migration (Bolen et al. 1989).

While the seasonal migrations of the birds using the playa habitats connect the playas to water bodies hundreds or even thousands of miles away, these birds are also creating biological connectivity while inhabiting the playa lakes as well. Ducks and geese often fly for miles to forage on waste corn in agricultural fields. Based on stomach content analysis, corn makes up the majority of the diet of the five most abundant duck species (Bolen et al. 1989). However, these animals also consume wetland plants and macroinvertebrates as well and thus often move from lake to lake in search of the best

feeding and habitat. In addition, during cold winters, many playas freeze over, which necessitates that waterfowl relocate to rivers or reservoirs less prone to freezing (Texas Parks and Wildlife 2014).

Though waterfowl are the most studied organisms that use playa lakes, macroinvertebrates also provide biological connectivity. Macroinvertebrates have different life history strategies to cope with the yearly inundation and drying cycle of playa lakes. While some bury in the soil or lay eggs that can survive desiccation, other taxa immigrate to playas soon after inundation from permanent bodies of water. Similar to other types of wetlands, some taxa are passively transported by other organisms, and some macroinvertebrate eggs even survive in bird digestive tracts and then are deposited after the bird arrives (Hall et al. 1999).

Conclusions

Playa lakes are often the only source of surface water on a landscape dominated by agricultural activities, and are threatened by water withdrawal, contaminants in run-off, and sedimentation. Their significant physical, chemical, and biological impacts on downstream waters include:

- Playa lakes mitigate floods, retain stormwater, and recharge the Ogallala aquifer in the southern High Plains, a source of streams, lakes, and irrigation water throughout the region.
- Sediment and attached nutrients and contaminants in stormwater runoff are retained in playa lakes through colloidal settling of suspended solids, and prevented from entering navigable waters.
- Common water level fluctuations and microbial activity facilitate nutrient transformation and water quality improvement in playa lakes, and can work to counteract the negative impacts of livestock waste and animal feedlot runoff on navigable water quality.
- Playa lakes support a large portion of migrating and wintering waterfowl, wading birds, and shore birds using the North American Central Flyway. Many of these birds, such as Teals and Mallards, move nutrient and energy resources between playa lakes and navigable waters used in other portions of their range.

- Invertebrates migrating between playa lakes and permanent waters impact the biological integrity of navigable waters by serving as an energy source, and by maintaining diversity and nutrient inputs.

INTERDUNAL WETLANDS

Isolated interdunal wetlands in the United States exist in all of the country's major coastal regions: the Atlantic and Pacific Ocean coastlines, along the Gulf Coast, and surrounding the inland Great Lakes. In each of these regions, interdunal wetlands share a similar landscape context, interspersed among dunes that were formed by the interacting processes of wind and water on coastal and suspended sand (Wiedemann 1984, Odum and Harvey 1988, Maynard and Wilcox 1997). Deposition by rising and falling seas and inland transport by aeolian processes are credited with building dunes, which can be subsequently stabilized by colonizing vegetation (Wiedemann 1984, Albert 2003). Dunal landscapes are constantly in flux, however, and dunes can shift or disappear with a powerful storm surge or wind event. Because of their sand substrates, interdunal wetlands are commonly connected to groundwater sources, and exist where depressions and dunal valleys intersect the water table (Odum and Harvey 1988, Albert 2003). Rainwater and surface runoff from surrounding dunes are important sources of water in these wetlands as well.

Much of the existing literature regarding interdunal wetlands is restricted to the Great Lakes basin and the sand dunes surrounding those bodies of water. Wilcox et al. (2005) identified 6,872 hectares of barrier beach wetland—one type of interdunal wetland located behind a coastal barrier beach—surrounding just Lake Ontario and the upper St. Lawrence River Basin. Many more interdunal wetlands are farther inland in dunal swales (valleys), due to higher lake levels in the last 10,000 years (Kost et al. 2007). Similarly, while many interdunal wetlands near ocean coastlines are close to a beach head, some are scattered kilometers inland due to differing sea levels throughout the Pleistocene (Wiedemann 1984). Their desirable coastal locations put interdunal wetlands in constant danger of development and destruction, and many dune landscapes on America's coasts have been lost or fragmented by roads and infrastructure supporting coastal communities (Feagin et al. 2005). Below, we present evidence of the impacts of these wetlands on navigable waters, typically rivers and streams flowing through dunal landscapes and the nearby oceans and lakes.

Physical Impacts

Dunal landscapes are characterized by porous sand and gravel soil, so unrestricted groundwater flow is common. Most interdunal wetlands are fed primarily by groundwater, where interdunal swales or blowout scours reduce elevation to the level of the groundwater table (Odum and Harvey 1988, Fretwell et al. 1996, Crowe and Shikaze 2004). Because of seasonal fluctuation in the height of the groundwater table, as well as shifting dunes and infilling due to nearshore processes, interdunal wetlands can be ephemeral and dry in summer months, or inundated year-round (Fretwell et al. 1996, Kost et al. 2007). The physical impacts of interdunal wetlands on navigable waters are due to groundwater flow between wetlands and nearby waters (streams, lakes, and oceans), direct surface water connections with streams or nearby lakes and oceans, and storage and sink functions for water and sediment.

Interdunal wetlands in the Great Lakes are typified by transient groundwater flow directions and rates, due to seasonal climactic shifts as well as vegetation and elevation conditions at individual wetlands that impact evapotranspiration and inundation (Crowe and Shikaze 2004). Groundwater discharge and recharge often occurs in the same wetland during different parts of the year, and they act as flow-through systems at times as well (Doss 1993, Shedlock et al. 1993, Crowe and Shikaze 2004). Regardless, groundwater flow from interdunal wetlands to the nearby Great Lakes (and the reverse) is common, especially in wetlands closer to a lake; directional changes are based on seasonal variation in the hydraulic gradient due to evapotranspiration (Doss 1993, Crowe and Shikaze 2004, Kost et al. 2007). Wetlands located further from the shore are typically hydrologically connected to adjacent wetlands through groundwater flow, providing an indirect connection to the nearby lake through a wetland complex; they can also be sources of water to creeks and streams within the dunes (Shedlock et al. 1993, Crowe and Shikaze 2004).

Interdunal wetlands along ocean coastlines are typically connected to a freshwater groundwater table that is their principal water source, along with precipitation in areas of high rainfall (Wiedemann 1984). Coastal areas in these climates, particularly along the northern Pacific coast of Oregon and Washington, tend to have streams and drainages that run through dunes, and that are fed in part by groundwater in the porous sand soils (Wiedemann 1984). Groundwater connection to adjacent oceans may be more common as

sea levels rise and freshwater extraction increases, causing incursions of saline groundwater into the water table (Masterson et al. 2014).

Interdunal wetlands also exhibit hydrologic connectivity during temporary periods of surface water connections to navigable waters. These temporary connections are often in the form of overtopping or erosion caused by storm surges or high winds (Albert 2003). In east coast wetlands from the barrier islands of Florida to the Cape Cod National Seashore, these connections are often the result of Nor'easters and Hurricanes (Rheinhardt and Faser 2001, Forman et al. 2008).

Interdunal wetlands also have the ability to act as water storage and sediment sinks on the landscape, regulating the volume and rate of water and suspended solids flowing to downstream navigable waters (Maynard and Wilcox 1997). Interdunal wetlands that receive incoming surface water either slow flow rates or prevent these flows from entering nearby Great Lakes, as much of the water is exported through groundwater seepage or evapotranspiration. Kadlec and Robbins (1984) studied the ability of two types of interdunal wetland to intercept and retain suspended solids, and found that an open water interdunal pond served as a sink for the majority of incoming sediments, and greatly reduced the fraction exported. Conversely, the authors found that a forested bottomland interdunal wetland was a net exporter of suspended solids to downstream culverts and streams, due to low accumulation capacity in wetlands with little open water. In the interdunal context, the forested wetland may be a successional interdunal pond that has filled in by accumulating sediment and organic matter. In either case (sediment retention and export), these wetlands have significant impacts on downstream waterways. Sediment retention also did not change following major storm events in interdunal wetlands, possibly exhibiting the potential of the sand substrate and groundwater flow to mitigate storm erosion (Kadlec and Robbins 1984).

Chemical Impacts

The chemical impacts of interdunal wetlands on navigable waters stem from their ability to retain and transform nutrients such as nitrogen and phosphorus. Dynamic hydrology in interdunal wetlands allows for both aerobic and anaerobic microbial processes that promote denitrification, which can allow wetlands to function as a nitrogen sink and prevent excess N from entering downstream waters, such as the Great Lakes or coastal oceans (Maynard and Wilcox 1997). Open water interdunal wetlands can also trap

phosphorus bound to suspended solids as they retain incoming sediment, as well as other heavy metals and pollutants entering through surface water channels and run-off (Maynard and Wilcox 1997, Sierszen et al. 2012). These processes are especially important in watersheds dominated by agricultural use, such as in the Great Lakes region. Finally, interdunal wetlands are saturated areas on sand dunes that promote plant growth and facilitate seed dispersal, thereby supporting dune stabilization and preventing erosion of sandy soil, which could alter downstream turbidity and water quality (Maynard and Wilcox 1997).

Biological Impacts

Interdunal wetlands, like their Nebraska Sand Hills cousins, support a wide variety of life due to the sharp shift from hot, dry dune-tops to wet swales and valleys. Surrounding Lake Huron, Burton and Uzarski (2009) estimated that interdunal and barrier protected wetlands without surface water connections supported approximately 1,400 species, with about equal numbers of plant and animal species. Most animal species in these wetlands are invertebrates (500-600), with over half thought to be macroinvertebrates (>10mm). Additionally, these wetlands provide year round habitat for more than 40 species of reptiles and amphibians, 50 species of mammals, and 80 species of birds.



Figure 5: North American biological flyways used by migrating waterfowl (USFWS Migratory Bird Program and Johnson, M.A., 2014).

In addition to birds nesting and residing in interdunal wetlands year round,

the location of Great Lakes interdunal wetlands provides ideal stopover and foraging sites for birds migrating along the Mississippi and Atlantic flyways in the spring and fall (Albert 2003) (Figure 5). Interdunal wetlands are quick to warm In spring, and provide critical nutritional resources to waterfowl and shorebirds that will then impact nutrient and energy flow in waters throughout their migration pathway (Kost et al. 2007). All waterfowl, shorebirds, and wading birds that use interdunal wetlands in the Great Lakes basin also use marshes and embayments in the Lakes themselves for nesting, or in the case of some gulls and waterfowl, over-wintering (McNicholl 1985). Transport of energy, nutrients, and propagules between interdunal wetlands and the Great Lakes is likely to be common, and with large numbers of birds using these habitats, likely to have a significant impact.

In interdunal wetlands of the Atlantic and Pacific coasts, birds make up a large portion of the resident vertebrate population. Additionally, some birds using the coastal flyways and wintering in these wetlands transport nutrients and organic matter to navigable waters at their destination or in their breeding grounds; diminished bird populations due to the deterioration of temporary habitats during migration or over-wintering would have significant biological impacts on navigable waters (Myers 1983). Resident and visiting birds that use interdunal wetlands of the northwest coast and immediately adjacent navigable waters (either rivers or ocean) include Great Blue Heron (*Ardea herodias*), Osprey (*Pandion haliaetus*), and Belted Kingfisher (*Megaceryle alcyon*) (Wiedemann 1984). In barrier island interdunal wetlands on the east coast of North Carolina, Cooper (1988) found 31 bird species associated with the interdunal pond and edge community, including 7 (Northern Parula (*Parula americana*), Carolina Chickadee (*Poecile carolinensis*), Carolina Wren (*Thryothorus ludovicianus*, Great-crested Flycatcher (*Myiarchus crinitus*), Northern Cardinal (*Cardinalis cardinalis*), Prothonotary Warbler (*Protonotaria citrea*), and Pileated Woodpecker (*Dryocopus pileatus*)) that were also noted by Sallabanks et al. (2000) to frequent riparian habitat along the Lower Roanoke River on the mainland. Kingfisher and Osprey were common hunters in open water areas of North Carolina interdunal ponds, in addition to navigable rivers and ocean waters.

Invertebrate communities in interdunal wetlands are typically extremely diverse. In the Great Lakes region the zooplankton communities likely transfer between interdunal wetlands and the Lakes themselves (e.g. by wind, larger animal transport, or periodic overland water transport such as a storm surge), as evidenced by correlation of zooplankton communities with proximity to the lake (Krieger 1992). Additionally, many

cyclic colonizing insects are adapted to leave interdunal wetlands that dry down in summer or ice over in winter, and colonize these wetlands to make use of the abundant resources following re-flooding (Wiggins et al. 1980, Batzer and Wissinger 1996). Petersen (1926) found that *Gerris* spp. water striders were springtime colonizers of a interdunal wetland south of Lake Michigan: after refilling in April, *Gerris* were the last of the taxa he studied to be present, much later than other organisms that are adapted to tolerate desiccation. Like all cyclic colonizers, *Gerris* water striders migrated away from the ephemeral interdunal pool to a nearby permanent water source (such as Lake Michigan), and are adapted to return in the spring to make use of abundant wetland resources.

Burton and Uzarski (2009) compiled invertebrate data from their own and two other studies of Great Lakes interdunal wetlands (Gathman et al. 1999, Keas 2002), and noted that at least 13 other taxa of cyclic colonizing invertebrates are present (*Anax junius, Belostoma, Hesperocorixa, Gerris, Acilius, Dytiscus, Graphoderous, Laccophilus, Enochrus, Hydrochara, Tropisternus, Gyrinus, Chaoborus*), along with a subfamily of Chironomid midges that include many cyclic colonizing taxa (Tanypodinae). Similarly, nine taxa of cyclic colonizing invertebrates were identified from four interdunal wetlands on North Carolina barrier islands (*Anax junius, Belostoma, Notonectus, Graphoderus, Tropisternus, Chaoborus, Ablabesmyia, Procladius,* and *Glyptotendipes*) (MacPherson 1988).

Fish can often be present in interdunal wetlands that do not dry completely. This is a legacy of a shifting dunal landscape, where periodic connections occur to the nearby Lake or Ocean (e.g. because of storm surge erosion followed by re-deposition), or to through-flowing streams that change course easily and frequently in unstable dunes (Wiedemann 1984, Burton and Uzarski 2009). Though infrequent, these temporary connections allow for transfer of biota, water, nutrients, organic matter, and sediment from interdunal wetlands to navigable waters, and represent clear connections between these systems. In Great lakes wetlands, interdunal wetlands that become connected to lake waters can act as important nursery and spawning grounds for larger fish such as northern pike (*Esox lucius*), and smaller forage fish such as alewife (*Alosa pseudoharengus*), yellow perch (*Perca flavescens*), white sucker (*Catostomus commersonii*), brook sticklebacks (*Culaea inconstans*), mudminnows (*Umbra limi*), fathead minnows (*Pimephales promelas*), and gizzard shad (*Dorosoma cepedianum*) may remain viable in wetlands after beach building processes have removed connections with a lake (Jude and Pappas 1992, Burton and Uzarski 2009). Burton and Uzarski (2009) estimated nine or fewer fish species to be associated with interdunal

wetlands, all of them tolerant of common high temperature and low dissolved oxygen conditions during summer months. Schwartz (1988) found seven species of fish in interdunal ponds in North Carolina barrier islands, presumably present due to temporary connections to rivers and streams, artificial culverts, or (in the case of 2 of 7 species) introduction for sport fishing.

Little information exists on the herpetofauna and mammal communities using interdunal wetlands. It is clear that habitat fragmentation and destruction of interdunal wetlands in the Great lakes region has decreased populations of amphibians that often exist in metapopulations within a wetland/upland landscape (Hecnar 2004). Reptiles that move between interdunal wetlands and the Great Lakes likely impact the biological integrity of both, and include snapping turtles (*Chelydra serpentina*), painted turtles (*Chrysemys picta*), and northern water snakes (*Nerodia sipedon*) (Burton and Uzarski 2009). In North Carolina, the secretive Rainbow Snake (*Farancia erytrogramma*) is known to feed in interdunal ponds and navigable streams (Braswell 1988).

In the Great Lakes region, streams flowing through dunal landscapes are often dammed by beaver (*Castor canadensis*), causing them to connect to interdunal wetlands in dune swales (Kost et al. 2007). Mammals such as mink (*Neovison vison*), beaver, muskrat (*Ondatra zibethicus*), shrews (*Blarina brevicauda* and *Cryptotis parva*), and river otter (*Lontra canadensis*) are common in northwest coast interdunal wetlands, and move between navigable streams and interdunal ponds (Wiedemann 1984). River otter are 'relatively common in the marshes of all barrier islands' in North Carolina, including interdunal wetlands, and supplement resources in their primary stream habitat by migrating between interdunal wetlands and navigable waters (Webster 1988). Additionally, muskrat, mink, nutria (*Myocastor coypus*), short-tailed shrew, and least shrew use both lentic and lotic habitats in and around interdunal wetlands in North Carolina.

Conclusions

Interdunal wetlands exist along the coastlines of America's oceans and Great Lakes among sand dunes formed by nearshore processes and historically higher water levels. These dynamic landscapes have several significant physical, chemical, and biological impacts on navigable waters, including streams, the Great Lakes, and the coastal oceans:

- Interdunal wetlands are fed primarily by a free exchange with the groundwater table through porous sandy soils, and hydrology is driven by seasonal fluctuation in water table height. Seasonal shifts in the groundwater hydraulic gradient cause exchange with navigable waters, including streams, the Great Lakes, and coastal oceans.
- Fluctuating dunes shaped by nearshore processes, shifting stream channels, storm surges, and aeolian forces commonly create temporary connections between interdunal wetlands and navigable waters, stimulating exchange of water, sediments, nutrients, and organic matter.
- Interdunal wetlands regulate and determine water flow into nearby navigable waters, as incoming water is exported through evapotranspiration or slowly to the groundwater table, rather than directly to downstream waters.
- Open water interdunal wetlands can sequester incoming suspended solids, as well as attached phosphorus and pollutants such as heavy metals and pesticides, and may prevent them from entering nearby navigable waters.
- Ephemeral interdunal wetlands can sequester and transform nitrogen through aerobic and anaerobic microbial processes leading to denitrification.
- Interdunal wetlands support some 1,400 species of living organisms, and are extremely important staging and breeding areas for waterfowl, shore birds, and wading birds that migrate along the Atlantic, Mississippi, and Pacific flyways (Figure 5). Population-level changes due to limited wetland resources likely have ecosystem impacts in navigable waters used by migrating birds in other seasons due to changes in nutrient and energy cycling.
- Many resident birds, mammals, reptiles, and (during times of temporary connection to navigable waters) fish in interdunal wetlands move between these habitats and navigable waters such as streams and rivers, Great Lakes, and coastal oceans, and represent transfers of energy, nutrients, genetic material, and organic matter.
- Interdunal wetlands support a diverse invertebrate community, many taxa of which are specifically adapted to take advantage of ephemeral interdunal wetland resources when they are inundated, and migrate to permanent water when they dry; these cyclic colonizers transfer important nutrient and energy resources to organisms in navigable waters.

SYNTHESIS AND CONCLUSIONS

In this report we have reviewed relevant published literature about eight categories of geographically isolated wetlands differentiated by geology, hydrology, geography, and climate, and summarized the significant effects they have on the integrity of navigable waters. Most of these categories contain more than one of (what the EPA and others consider to be) the four primary wetland types: marshes, swamps, bogs, and fens (EPA 2001). Indeed, the many similarities between different categories of unidirectional wetlands can give rise to difficulty in grouping particular isolated wetlands into subdivisions; in reality, most isolated wetlands exist on environmental gradients, and share characteristics with other types of wetlands. Some wetlands may even be defined differently by scientists of different disciplines (Sharitz and Gibbons 1982).

In separating isolated wetlands into categories in this report, we made an attempt to use geographic and ecological wetland boundaries that would suit the purpose of providing additional information to federal regulators. The groupings we have used parallel those in the review of geographically isolated wetlands in the United States by Tiner (2003). This information is intended as a supplement to material presented in the Connectivity Report regarding the relationship of 'unidirectional' wetlands and river networks.

We believe it is irrefutable that geographically isolated wetlands are vital ecosystems that must be protected in order to maintain biodiversity and population levels of many organisms that are obligate and facultative wetland users, and that these systems provide important ecosystem services including water quality enhancement, flood buffering, food and fiber production, and passive recreation opportunities. Federal protection of these wetlands as Waters of the United States under the Clean Water Act, however, has little to do with these qualities of isolated wetlands. In an attempt to contribute more information to the formation of a proposed rule for the 'Definition of ''Waters of the United States'' Under the Clean Water Act' (79 FR 22188), we have identified existing scientific evidence in published literature related to Justice Kennedy's concurring opinion in Rapanos v. U.S. (2006)—namely, that waters of the United States include those that "significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable.'"

In this sense, researchers working in a variety of geographically isolated wetlands have made many common observations. Those isolated wetlands with little connection to

groundwater (such as Rainwater Basin wetlands, playa lakes, vernal pools, pocosins, and some karst sinkhole wetlands) regulate flooding and limit peak run-off flows by initially retaining water, losing some to evapotranspiration, and slowly releasing the remainder. This property limits run-off associated erosion, and thus the influx of sediment, nutrients, pollutants, and water to navigable waters. Alternatively, wetlands with characteristic groundwater connections (such as interdunal wetlands, Sand Hills wetlands, and some karst sinkhole wetlands) can be the source of water to navigable waters through groundwater flow and aquifer recharge.

Most isolated wetlands have variable hydrology and fluctuating water levels, primarily due to seasonal shifts in evapotranspiration and longer-term precipitation and climate patterns. This common feature, along with ponded water, aquatic vegetation, and saturated soils commonly allows many isolated wetlands to trap incoming suspended solids and attached pollutants through colloidal settling, and to transform nitrogen through aerobic and anaerobic microbial processes. These features commonly provide benefits to downstream navigable waters, as altered, drained, and filled isolated wetlands may cause sediment, nutrients, and pollutants to be exported to lakes and river networks.

Diverse communities of organisms move between isolated wetlands and navigable waters, and in doing so provide physical, chemical, and biological links between these systems. These links are in the form of nutrient, energy, organic matter, and genetic material transfers such as: cyclic colonizing invertebrates adapted to migrate to ephemeral wetlands when they fill, and return to permanent water upon dry-down; facultative users of lentic and lotic waters like some amphibians (e.g. leopard frogs and green frogs), reptiles (e.g. northern water snakes and painted turtles), mammals (e.g. water shrews and mink), and birds (e.g. American Coots and Ruddy Ducks); passively dispersing invertebrates, eggs, and plant propagules attached to these facultative users; and population-level effects experienced by migrating animals that depend on wetland resources, that then alter navigable water ecosystems in other parts of their range.

It is difficult to generalize any characteristic within even a single category of geographically isolated wetland, let alone across eight or more. Isolated wetlands are notably variable in their hydroperiods, hydrologic connections, the extent of their geographic isolation from other waters, and the landscape context in which they exist. Regardless of these differences, we have attempted to compile evidence showing the

impacts of certain categories of isolated wetlands on navigable waters, across a broad spectrum of variability in their characteristics. For many, if not all, of these categories, no single significant impact can be assumed to exist for all wetlands; nevertheless, it is more than likely that each isolated wetland exerts at least some kind of significant effect on the physical, chemical, or biological integrity of "waters more readily understood as 'navigable.'"

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WATERKEEPER® ALLIANCE

Comments on Proposed Definition of Waters of the United States Under the Clean Water Act Docket ID No. EPA-HQ-OW-2011-0880








































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Nov. 14, 2014

VIA Email and Online Submission to ow-docket@epa.gov and www.regulations.gov

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue NW
Washington, DC 20460

Re: Comments of Waterkeeper Alliance and Waterkeeper Organizations – Proposed Definition of Waters of the United States Under the Clean Water Act Docket ID No. EPA-HQ-OW-2011-0880

To Whom it May Concern:

Thank you for the opportunity to submit comments on the United States Environmental Protection Agency ("EPA") and Department of Defense, Department of the Army, Corps of Engineers ("Corps") proposed Definition of "Waters of the United States" Under the Clean Water Act rulemaking, 79 Federal Register 22188 (April 21, 2014) (hereinafter "Proposed Definition" or "Proposed Rule").

INTRODUCTION

Waterkeeper Alliance is a global movement uniting more than 225 Waterkeeper Organizations around the world and focusing citizen advocacy on the issues that affect our waterways, from pollution to climate change. Waterkeepers patrol more than 1.5 million square miles of rivers, streams and coastlines in the Americas, Europe, Australia, Asia, and Africa. Part scientist, teacher and legal advocate, Waterkeepers combine firsthand knowledge of their waterways with an unwavering commitment to the rights of their communities and to the rule of law. Whether on the water, in a classroom, or in a courtroom, Waterkeepers

speak for the waters they defend with the backing of their local community and the collective strength of Waterkeeper Alliance.

Waterkeepers are a steadfast and powerful voice for swimmable, fishable, drinkable waters in 136 watersheds across the nation. The federal Clean Water Act ("CWA") is the bedrock of Waterkeepers' work to protect rivers, streams, lakes, wetlands, bays, and channels for the benefit of their communities. We use the CWA water quality standards and Section 303(d) List of Impaired Waters to evaluate pollution levels in waterbodies. We work with broad coalitions of government, private, non-profit, and individual partners to restore these waters through the Total Maximum Daily Load ("TMDL") process, participating in permitting and rulemaking processes, and development of innovative pollution control and cleanup projects. We use the CWA's citizen suit provisions to enforce CWA permits and regulatory standards against facilities that would otherwise pollute our waterways in violation of the law. In these and in many other ways, Waterkeepers depend on the CWA to protect waterways and the people who depend on clean water for drinking water, recreation, fishing, economic growth, food production, and all of the other water uses that sustain our way of life, health and well-being.

Our work - in which we have answered Congress's call for "private attorneys general" to enforce the CWA when government entities lack the time or resources to do so themselves - is extremely challenging and resource intensive – requiring us to develop and maintain scientific, technical and legal expertise on a broad range of water quality issues. We understand and have seen firsthand how important a clear definition of the "waters of the United States" is to the functioning and effectiveness of the CWA. We believe that a strong, clear definition and agency interpretation of "waters of the United States" is critical to our collective work to protect our waterways.

The importance of maintaining a broad definition of "waters of the United States" under the CWA cannot be overstated. In the simplest terms, if a waterbody is not included within the definition, it cannot be protected from pollution or destruction under the CWA, and failure to protect a waterbody from pollution or destruction will adversely impact downstream waters and water users. It has been well known for decades that if we want to control water pollution, we must control pollution at its source. This entails protecting waters throughout the

entire watershed and all waters that form the hydrologic cycle without regard to whether the waters are traditionally navigable. This concept was firmly established with the passage of the CWA in 1972 and in agency definitions of "waters of the United States" in 1973 (EPA) and 1975 (Corps).

While the CWA has been very effective in controlling pollution in many respects, many of our major waterways remain polluted, and by some indications pollution appears to be increasing. For example, while water quality in a large percentage of our nation's waters has not been assessed, the most recent available data from EPA shows water pollution in assessed waters has impaired 558,999 river/stream miles, 12,197,097 lake acres, 26,120 sq. miles of estuarine waters, 7,204 miles of coastal waters, and 53, 270 sq. miles of the Great Lakes.[1] By comparison, EPA's 2004 CWA Section 305b Report showed that there were 246,002 miles of impaired rivers/streams and 10,451,401 acres of impaired lakes as of 2004.[2] As noted in the 2013 Draft Connectivity Report and the 2014 Science Advisory Board ("SAB") Review of that Report, there is strong scientific evidence to support the conclusion that ephemeral streams, intermittent streams, perennial streams, flood plain wetlands, non-floodplain wetlands, and other waters are either connected to downstream waters or sustain the physical, chemical, and/or biological integrity of downstream waters.[3]

Our organizations support the Proposed Rule to the extent that it maintains protections for Traditionally Navigable Waters, Interstate Waters and Territorial Seas. Additionally, we support the agencies' and the EPA Science Advisory

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[1] EPA, Watershed Assessment, Tracking & Results, National Summary of State Information, *available at* http://ofmpub.epa.gov/waters10/attains_nation_cy.control.

[2] EPA, Findings on the National Water Quality Inventory: Report to Congress, 2004 Reporting Cycle, *available at:* http://water.epa.gov/lawsregs/guidance/cwa/305b/upload/2009_05_20_305b_2004report_report2004pt3.pdf.

[3] U.S. Environmental Protection Agency, Office of Research and Development, Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence - EPA/600/R-11/098B (Sept. 2013) (hereinafter "Connectivity Report"); U.S. Environmental Protection Agency, Science Advisory Board, Review of the Draft EPA Report *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence*, EPA-SAB-15-001 (Oct. 17, 2014) (hereinafter "SAB Report"). Both available at: http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/Watershed%20Connectivity%20Report?OpenDocument

Board's ("SAB") work to document the "significant nexus" between these historically regulated waters and tributaries and adjacent waters. We agree that all of these waters (including headwaters, intermittent streams, ephemeral streams, and adjacent waters) are connected to downstream waters that are covered under the CWA, and that they should be categorically protected.

At the same time, we are greatly concerned by, among other things, the agencies' decision to narrow the class of tributaries and impoundments that have been historically given categorical protection, the agencies' removal of the broader interstate commerce grounds for protection of tributaries, adjacent waters and other waters, and the addition of new categorical exclusions for waters that have been covered historically and can have a significant impact on downstream water quality.

In recent years, the EPA and the Corps have implemented guidance documents that have reduced protections for our nation's waters by limiting jurisdiction in a manner that "was not justified by science or law."[4] If we can ever hope to restore the chemical, physical and biological integrity of our nation's waters as envisioned and required by the CWA, it is essential that the definition of "waters of the United States" under the CWA protect traditionally navigable waters, interstate waters, tributaries, adjacent waters, wetlands, closed basins, playa lakes, vernal pools, coastal wetlands, Delmarva Bays, Carolina Bays, pocosins, prairie potholes, lakes, estuaries, and other waterbodies that either provide important functions themselves or have an influence on downstream waters.

It is also essential that the agencies avoid creating definitional limitations and categorical exclusions designed to protect particular sources of pollution from regulation under the CWA. For example, while everyone agrees that agriculture is essential to our way of life, everyone also agrees that clean water is essential to our way of life. Agriculture remains one of the largest unaddressed sources of water pollution in the United States.[5] As described in the National Enforcement Priorities document for FY 2008-2010:

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[4] Congressional Research Service Report R43455, EPA and the Army Corps' Proposed Rule to Define "Waters of the United States" (June 10, 2014), p. 6.

[5] Watershed Assessment, *supra* note 1.

> States have consistently reported to EPA that agricultural activities, including CAFOs, are leading sources of pollutants such as nutrients (nitrogen and phosphorus), pathogens (bacteria), and organic enrichment (low dissolved oxygen) that are contributing to water quality impairment in U.S. surface waters. Adverse impacts on ecosystems and human health associated with discharges of animal wastes include fish kills, algal blooms, and fish advisories, contamination of drinking water sources, and transmission of disease-causing bacteria and parasites associated with food and waterborne diseases.[6]

Agricultural pollution is a major contributor to well-documented, severe problems in key water resources like Lake Erie, the Chesapeake Bay, the Gulf of Mexico, North Carolina's coastal estuaries, and many other significant water resources across the country.[7] We believe that it is possible to protect and

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[6] http://www.epa.gov/compliance/data/planning/priorities/cwacafo.html [Emphasis added] [Webarchive]; See also, e.g., http://www.epa.gov/compliance/resources/publications/data/planning/priorities/fy2008prioritycwacafo.pdf.

[7] *See, e.g.*, (Utah) http://www.deq.utah.gov/FactSheets/docs/handouts/nutrients.pdf; (Ohio) http://epa.ohio.gov/Portals/35/visioning_workshop/Ohio%20Nutrient%20Fact%20Sheet.pdf; (Univ. of California) http://anrcatalog.ucdavis.edu/pdf/8055.pdf; (Illinois) http://www.epa.state.il.us/water/nutrient/; (Massachusetts) http://www.mass.gov/eea/docs/dep/water/drinking/alpha/i-thru-z/manure.pdf; (North Carolina) http://www.cals.ncsu.edu/wq/wqp/wqpollutants/nutrients/factsheets/FactsheetNM1.pdf; (Coastal Waters) http://moritz.botany.ut.ee/~olli/eutrsem/Howarth02.pdf; (EPA) http://water.epa.gov/polwaste/nps/agriculture_facts.cfm; (USGS) http://pubs.usgs.gov/fs/fs218-96/; (EPA) http://water.epa.gov/type/rsl/monitoring/upload/EPA-MARB-Fact-Sheet-112911_508.pdf; (Gulf) http://midwestadvocates.org/assets/resources/nutrient_pollution_factsheet.pdf; (EPA) http://www2.epa.gov/nutrientpollution/where-occurs-lakes-and-rivers; (Iowa) http://www.iowapolicyproject.org/2010docs/100927-nutrients.pdf; (Neuse River) http://portal.ncdenr.org/c/document_library/get_file?uuid=e438d6bc-d147-4d7b-8224-08e5a7c74b86&groupId=38364 and http://portal.ncdenr.org/c/document_library/get_file?uuid=48bc46d8-c344-4f07-a656-7a211157c985&groupId=38364; (Tar-Pamlico River) http://portal.ncdenr.org/c/document_library/get_file?uuid=b4f40c70-fc0f-4bd7-b4a1-

support both agricultural production and clean water, but we cannot protect water quality by grafting new exemptions for agriculture into the definition of "waters of the United States" under the CWA.

We urge the agencies to strengthen and clarify the final rule in line with our more detailed comments below, and to revise the preamble and Proposed Definition so that it protects the broadest category of waters allowed under the Commerce Clause, Article 1, Section 8, Clause 3 of the U.S. Constitution, as intended by Congress. Among other things, we urge the agencies to leave in place all portions of the existing definition that have not been invalidated by the Supreme Court, to remove new definitions and other language that limit jurisdiction in a manner not supported by law or science, remove categorical exclusions that are not supported by law or science, and to rely on all valid jurisdictional tests for categorically protecting waters to the full extent allowed under the Commerce Clause. While we agree that waters with a "significant nexus" to Traditional Navigable Waters, Interstate Waters and Territorial Seas should be jurisdictional, we do not agree that these are the only "other" waters that should be protected under the CWA.

I. THE PROPOSED DEFINITION SHOULD PROTECT ALL WATERS TO THE FULLEST EXTENT OF CONGRESS' COMMERCE POWER.

Passed in 1972, the CWA is a "comprehensive water quality statute designed to 'restore and maintain the chemical, physical, and biological integrity of the

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Nation's waters.'"[8] Accordingly, Congress provided that it intended for the CWA to apply to all "waters of the United States, including the territorial seas." 33 U.S.C. § 1362. The Supreme Court, in *United States v. Riverside Bayview Homes, Inc*., held that Congress took a "broad, systemic view of the goal of maintaining and improving water quality" with the word integrity referring to "a condition in which the natural structure and function of ecosystems [are] maintained" and, the "[p]rotection of aquatic ecosystems, Congress recognized, demanded broad federal authority to control pollution, for '[w]ater moves in hydrologic cycles and it is essential that discharge of pollutants be controlled at the source.'"[9] To accomplish these goals, the *Bayview* concluded, Congress defined the "waters covered by the Act broadly" to encompass all "waters of the United States."[10] The intended breadth of the CWA is apparent in the comprehensive goals, programs and directives in the Act, as well as in the legislative history, administrative decisions and case law interpreting the CWA.

Thus, unlike the Rivers and Harbors Act of 1899, the CWA was not focused on the prevention of "navigation-impeding" conduct in navigable waters.[11] Instead, as the Supreme Court held in *International Paper Co. v. Ouellette*, the CWA established "an all-encompassing program of water pollution regulation" that "applies to all point sources and virtually all bodies of water."[12] While it was clear that the Commerce Clause provided adequate authority for regulation of navigable waters as demonstrated by extensive Rivers and Harbors Act precedent, it was equally clear that Congress' Commerce Clause authority to control pollution was not limited to traditionally navigable waters or traditional tests of navigability.

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[8] *PUD No. 1 of Jefferson County v. Wash. Dep't. of Ecology*, 511 U.S. 700, 704 (1994) (*quoting* 33 U.S.C. § 1251(a)).

[9] *U.S. v. Riverside Bayview Homes, Inc.,* 474 U.S. 121, 132-33 (1985) *(citing* H.R.Rep. No. 92–911, p. 76 (1972); S.Rep. No. 92–414, p. 77 (1972); U.S.Code Cong. & Admin.News 1972, pp. 3668, 3742).

[10] *Id.*

[11] *See U.S. v. Holland*, 373 F. Supp. 665, 699-70 (M.D. Fla. 1974).

[12] *International Paper Co. v. Ouellette*, 479 U.S. 481, 492 (1987) (emphasis added; internal quotations omitted).

For example, in invalidating portions of the Corps' 1974 regulations that limited their CWA jurisdiction to waters "which had been, are, or may be, used for interstate or foreign commerce," the U.S. District Court for the District of Columbia held that "when Congress defined the term 'navigable waters' as 'the waters of the United States, including the territorial seas' it "asserted federal jurisdiction over the nation's waters to the maximum extent permissible under the Commerce Clause of the Constitution. Accordingly, as used in the [Clean] Water Act, the term is not limited to the traditional tests of navigability."[13] This holding is consistent with the Conference Committee Report for the final bill which states "[t]he conferees fully intend that the term 'navigable waters' be given the broadest possible constitutional interpretation unencumbered by agency determinations which have been made or may be made for administrative purposes."[14] When Representative John Dingell presented the Conference version of the bill to the House of Representatives, he explained that in defining "navigable waters" broadly for the purposes of the CWA as "waters of the United States, including the territorial seas":

> The Conference bill defined the term 'navigable waters' broadly for water quality purposes. It means 'all the waters of the United States' in a geographic sense. It does not mean 'navigable waters of the United States' in the technical sense as we sometimes see in some laws. . . . Thus, this new definition clearly encompasses all water bodies, including main streams and their tributaries, for water quality purposes. No longer are the old, narrow definitions of navigability, as determined by the Corps of Engineers, going to govern matters covered by this bill.[15]

The Supreme Court has explicitly recognized on at least three occasions that "navigable waters" under the CWA include "something more than traditional

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[13] *NRDC v. Callaway*, 392 F.Supp. 685, 686 (D.D.C. 1975); 39 Fed.Reg. 12119, (April 3, 1974).

[14] Conference Report, Senate Report No. 92-1236, Sept. 28, 1972, page 144, U.S.Code Cong. & Admin. News 1972, p. 3822; Reprinted in Legislative History, Committee on Public Works, Committee Print, 93rd Cong., 1st Sess., Legislative History of the Water Pollution Control Act Amendments of 1972, p. 327 (hereinafter "1972 Legislative History").

[15] 118 Cong. Rec. 33, 756 (1972); 1972 Legislative History, *supra* note 14, at 250-51.

navigable waters."[16] In *Bayview*, the Supreme Court held that "Act's definition of "navigable waters" as "the waters of the United States" makes it clear that the term "navigable" as used in the Act is of limited import. In adopting this definition of "navigable waters, Congress evidently intended to repudiate limits that had been placed on federal regulation by earlier water pollution control statutes and to exercise its powers under the Commerce Clause to regulate at least some waters that would not be deemed "navigable" under the classical understanding of that term."[17] The *Bayview* Court also noted that, while "it is one thing to recognize that Congress intended to allow regulation of waters that might not satisfy traditional test of navigability, it is another to assert that Congress intended to abandon traditional notions of "waters" and include in that term "wetlands" as well. Nonetheless, the evident breadth of congressional concern for protection of water quality and aquatic ecosystems suggests that it is reasonable for the Corps to interpret the term "waters" to encompass wetlands adjacent to waters as more conventionally defined."[18]

Consistent with Congressional intent, the EPA (1973)[19] and the Corps (1977)[20] adopted regulations further defining "waters of the United States" for the purposes of the CWA to include broad categories of waters beyond those protected by traditional navigability tests. When the Corps adopted its definition of "waters of the United States" in 1977, it recognized that "[t]he regulation of activities that cause water pollution cannot rely on . . . artificial lines . . . but must focus on all waters that together form the entire aquatic system."[21] In the Preamble to the Corps' 1977 rule defining "waters of the United States," the Corps stated:

> Waters that fall within categories 1, 2, and 3 are obvious candidates

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[16] *Rapanos v. United States*, 547 U.S. 715, 731 (2006).

[17] *Bayview*, 474 U.S. at 133 (emphasis added).

[18] *Id.*

[19] 38 Fed. Reg. 10834 (1973).

[20] 42 Fed. Reg. 37122 (1977).

[21] 42 Fed. Reg. 37128 (July 19, 1977).

> for inclusion as waters to be protected under the Federal government's broad powers to regulate interstate commerce. Other waters are also used in a manner that makes them part of a chain or connection to the production, movement, and/or use of interstate commerce even though they are not interstate waters or part of a tributary system to navigable waters of the United States. The condition or quality of water in these other bodies of water will have an effect on interstate commerce. The 1975 definition identified certain of these waters. These included waters used:
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> - By interstate travelers for water-related recreational purposes;
> - For the removal of fish that are sold in interstate commerce;
> - For industrial purposes by industries in interstate commerce; and
> - In the production of agricultural commodities sold or transported in interstate commerce.
>
> We recognized, however, that this list was not all inclusive, as some waters may be involved as links to interstate commerce in a manner that is not readily established by the listing of a broad category. The 1975 regulation, therefore, gave the District Engineer authority to assert jurisdiction over 'other waters' such as intermittent rivers, streams, tributaries and perched wetlands, to protect water quality. Implicit in this assertion of jurisdiction over these other waters was the requirement that some connection to interstate commerce be established, even though that requirement was not clearly expressed in the 1975 definition.[22]

Under the 1977 Definition, waters in Categories 1, 2, and 3, over which jurisdiction was "obvious" under the Federal Government's broad powers to regulate interstate commerce, included: (1) Coastal and inland waters, lakes, rivers, and streams that are navigable waters of the United States, including

[22] 42 Fed.Reg. 37127-37128 (*emphasis added*).

adjacent wetlands; (2) Tributaries to navigable waters of the U.S., including adjacent wetlands; and (3) Interstate waters and their tributaries, including adjacent wetlands.[23] Additionally, based on reasoning set forth above, the Corps included "other waters" where the use or destruction of the waters could affect interstate commerce within the definition of "waters of the United States."[24]

This basic approach to broadly defining "waters of the United States" has been in place since 1975 and is consistent with the intent of Congress announced in 1972. Accordingly, the current, longstanding definition of "Waters of the United States" includes:[25]

A. All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.

B. All interstate waters, including interstate "wetlands."

C. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce.

D. All impoundments of waters otherwise defined as waters of the United States under this definition.

E. Tributaries of waters identified in paragraphs (a) through (d) of this definition.

F. The territorial sea.

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[23] 42 Fed. Reg. at 37127.

[24] *Id*. at 37127-28.

[25] See e.g., 40 C.F.R. §122.2; 33 C.F.R. § 328.3(a).

G. "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition

A. THE SUPREME COURT OPINIONS IN *SWANCC* AND *RAPANOS* DO NOT MANDATE THE NARROWING OF CWA JURISDICTION PROPOSED BY THE EPA AND THE CORPS.

It is important to recognize that this definition of "waters of the United States" has never been overturned by a court. In fact, the courts have fairly uniformly applied this definition to the CWA for several decades. Despite this fact, the Preamble to the Proposed Definition states this longstanding definition must be amended in a manner that will narrow the agencies' jurisdiction over the nation's waters in "light of the Supreme Court decisions in *SWANCC* and *Rapanos*" and that the Proposed Definition "retains many of the existing provisions of that definition where revisions are not required in light of Supreme Court decisions and other bases for revisions."[26] The Preamble further states that "[a]s a result of the Supreme Court decisions in *SWANCC* and *Rapanos*, the scope of regulatory jurisdiction of the CWA in this proposed rule is narrower than that under the existing regulations."[27]

In particular, the agencies assert without explanation or justification that *SWANCC* and *Rapanos* require amendments to the existing definition's protections for tributaries, adjacent waters, and other waters, as well as new definitions for various terms and new categorical exemptions. Of these changes, perhaps the most alarming is the agencies' assertion that *SWANCC* and *Rapanos* mandate the removal of protections for "other waters" such as intrastate lakes, rivers, streams (including intermittent streams, mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, where the "use, degradation, or destruction of which could affect interstate or foreign commerce."[28] Based on this change to the existing definition alone, the agencies conclude that "[w]aters in a watershed where there is no connection to a

[26] Proposed Definition, 79 Fed.Reg. at 22189, 22192.

[27] Proposed Definition, 79 Fed.Reg. at 22192.

[28] *Id.*

traditional navigable water, interstate water or the territorial seas would not be 'waters of the United States.'"[29]

With these changes in the existing regulatory definition, the EPA and the Corps propose to cease protecting waters across the country unless there is a demonstrable "significant nexus" to traditionally navigable waters, interstate waters or territorial seas.[30] In other words, waters will no longer be protected under the CWA to the fullest extent allowed by the Commerce Clause thereby nullifying Congressional intent and four decades of precedent to the contrary. This change to the definition is not required by the Supreme Court decisions in *SWANCC* or *Rapanos,* and the EPA and the Corps lack the authority to narrow the scope of CWA jurisdiction in this manner.[31]

With regard to *SWANCC*, in 2003, the EPA and the Corps made a similar proposal to consider, among other things, removing "other waters" and the associated commerce factors from the existing definition of "Waters of the United States" under the CWA in light of *SWANCC*.[32] In the 2003 Advance Notice of Proposed Rulemaking on the Clean Water Act Regulatory Definition of ``Waters of the United States,'' the agencies asserted that *SWANCC* "calls into question whether CWA jurisdiction over isolated, intrastate, nonnavigable waters could now be predicated on the other factors listed in the 'Migratory Bird Rule' or the other rationales of 33 C.F.R. 328.3(a)(3)(i)-(iii) [the other waters interstate commerce factors]."[33] However, the EPA and the Corps announced that they would not proceed with the proposed rule in December of 2003 after receiving opposition from around 99% of the 133,000 comments received, including numerous states,

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[29] *Id.*

[30] *Id.*

[31] *Cf. NRDC v. Costle*, 568 F.2d 1369, 1377 (D.C. Cir. 1977) (striking down an EPA rule that attempted to exempt certain categories of point sources from the permit requirements of Clean Water Act section 402 where contrary Congressional intent was clear).

[32] 68 Fed. Reg 1991 (January 15, 2003).

[33] 68 Fed. Reg at 1993.

nonprofits, individuals, and others.[34]

What was true then, is true today. *SWANCC* held solely that 33 C.F.R. 328.3(a)(3) (1999), as clarified and applied to petitioner's balefill site pursuant to the Migratory Bird Rule, 51 Fed. Reg. 41217 (1986), exceeds the authority granted to respondents under section 404(a) of the CWA."[35] Thus, the *SWANCC* decision was fact specific, related solely to Section 404 jurisdiction under the Migratory Bird Rule, and did not impact or limit the agencies' jurisdiction over any other waters, including tributaries (including non-navigable ones), adjacent wetlands, or "other waters" that could affect interstate or foreign commerce.[36] Because the Supreme Court limited its holding to the jurisdictional bases asserted by the Corps, the Migratory Bird Rule, the decision does not require or even imply that the agencies cannot rely on any other provisions of the current definition of "waters of the United States" to assert jurisdiction. The corollary is also true – *SWANCC* does not authorize the EPA and the Corps to delete any protections or jurisdictional bases under the Commerce Clause for tributaries, adjacent waters or other waters provided in the existing regulatory definition.

Similarly, the Supreme Court in *Rapanos*, did not invalidate the existing regulatory definition of "waters of the United States" when it opined on issues presented in the consolidated cases - the extent of CWA jurisdiction over wetlands adjacent to tributaries that are not traditionally navigable under Section 404 of the CWA.[37] The *Rapanos* Court issued no majority opinion, however, several differing opinions suggested three different tests for determining whether wetlands adjacent to non-navigable tributaries can be

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[34] U.S. General Accounting Office. (Feb. 2004). WATERS AND WETLANDS Corps of Engineers Needs to Evaluate Its District Office Practices in Determining Jurisdiction. (GAO Publication No. 04-297) (hereinafter "GAO Report") *available at* http://www.gao.gov/new.items/d04297.pdf.

[35] *Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001).

[36] In support of our comments, we hereby incorporate by reference the comments submitted by national environmental organizations on the 2003 ANPRM and guidance, which are a part of the official public docket in 2003 at http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OW-2002-0050-0001 at HQ-OW-2002-0050-1674 (hereinafter "2003 Comments").

[37] *Rapanos*, 547 U.S. at 787.

covered under the CWA.[38]

- **Relatively Permanent Test** - The four-justice plurality opinion, written by Justice Scalia, recognized that the CWA covers non-navigable waters in addition to traditionally navigable waters but declined to "decide the precise extent to which the qualifiers 'navigable' and 'of the United States' restrict the coverage of the Act."[39] Instead, the plurality focused on the meaning of "the waters" in 33 U.S.C. § 1362(7) ("The term 'navigable waters' means the waters of the United States, including the territorial seas.") The plurality concluded that "[o]n this definition, 'the waters of the United States' include only relatively permanent, standing or flowing bodies of water. The definition refers to water as found in 'streams,' 'oceans,' 'rivers,' 'lakes,' and 'bodies' of water 'forming geographical features.' All of these terms connote continuously present, fixed bodies of water, as opposed to ordinarily dry channels through which water occasionally or intermittently flows."[40] The plurality also noted that "[b]y describing 'waters' as 'relatively permanent,'" it did not "necessarily exclude streams, rivers, or lakes that might dry up in extraordinary circumstances" or "seasonal rivers which contain continuous flow during some months of the year . . ." and, further that it had "no occasion in this litigation to decide exactly when the drying-up of a streambed is continuous and frequent enough to disqualify a channel as a 'wate[r] of the United States.'"[41] Upon this opinion, the plurality remanded the cases back for a determination by the lower courts of "whether the ditches or drains near each wetland are "waters" in the ordinary sense of containing a relatively permanent flow; and (if they are) whether the wetlands in question are 'adjacent' to these 'waters' in the sense of possessing a continuous surface connection that creates the boundary-drawing problem we addressed in *Riverside Bayview*."[42] Based on this test,

[38] *Id.*

[39] *Id.* at 731.

[40] *Id*. at 731-32 (internal citations omitted).

[41] *Id.* at 732-33 (internal citations omitted).

[42] *Id.* at 757.

wetlands adjacent to "relatively permanent" bodies of water are covered under the CWA as long as they possess as "continuous surface connection" to that water.

- **Significant Nexus Test** – Justice Kennedy issued an opinion concurring that the cases should be remanded, but firmly rejecting the plurality's reasoning for doing so. Justice Kennedy identified the issue to be decided in the consolidated case as "whether the term 'navigable waters' in the Clean Water Act extends to wetlands that do not contain and are not adjacent to waters that are navigable in fact." According to the opinion of Justice Kennedy, "the Corps' jurisdiction over wetlands depends upon the existence of a significant nexus between the wetlands in question and navigable waters in the traditional sense. The required nexus must be assessed in terms of the statute's goals and purposes . . . With respect to wetlands, the rationale for Clean Water Act regulation is, as the Corps has recognized, that wetlands can perform critical functions related to the integrity of other waters-functions such as pollutant trapping, flood control, and runoff storage . . . Accordingly, wetlands possess the requisite nexus, and thus come within the statutory phrase 'navigable waters,' if the wetlands, either alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable.' When, in contrast, wetlands' effects on water quality are speculative or insubstantial, they fall outside the zone fairly encompassed by the statutory term 'navigable waters.'"[43] Justice Kennedy further opined that "[w]hen the Corps seeks to regulate wetlands adjacent to navigable-in-fact waters, it may rely on adjacency to establish its jurisdiction. Absent more specific regulations, however, the Corps must establish a significant nexus on a case-by-case basis when it seeks to regulate wetlands based on adjacency to nonnavigable tributaries." [44] Notably, Justice Kennedy indicated that the record before the Court contained evidence of a possible

[43] *Id.* at 779-80.

[44] *Id*. at 782.

significant nexus and that the end result of the remand may be that the "Corps assertion of jurisdiction is valid" as suggested by the dissent.[45]

- **Existing Definition Test:** The dissent, written by Justice Stevens, and joined by Justices Souter, Ginsburg, and Breyer, opined that the agencies' existing regulatory definition is a reasonable interpretation of the statutory term "waters of the United States." The dissent rejected the rationales of the plurality and Justice Kennedy, but stated that "[g]iven that all four Justices who have joined this opinion would uphold the Corps' jurisdiction in both of these cases–and in all other cases in which either the plurality's or Justice Kennedy's test is satisfied–on remand each of the judgments should be reinstated if *either* of those tests is met."[46]

In concurring with the plurality opinion, Chief Justice Roberts noted that the *SWANCC* decision issued five years prior to *Rapanos*, "rejected the position of the Army Corps of Engineers on the scope of its authority to regulate wetlands under the Clean Water Act . . ." and that, with regard to the Court's decision regarding jurisdiction over the wetlands at issue in *Rapanos* that "[i]t is unfortunate that no opinion commands a majority of the Court on precisely how to read Congress' limits on the reach of the Clean Water Act."[47] The SWANCC decision should be read as standing for the proposition that the Corps cannot rely on the Migratory Bird Rule to assert jurisdiction over a waters under the CWA and the *Rapanos* decision should similarly be applied to evaluate CWA jurisdiction over wetlands adjacent to non-navigable tributaries. However, because no opinion commanded a majority of the court, the agencies should not adopt the reasoning of any of the various opinions in the *Rapanos* decisions as the sole basis for asserting jurisdiction over any waterbody, and the agencies should not amend the existing definition of "waters of the United States" to remove the broad Commerce Clause grounds for covering tributaries, adjacent waters and other waters.

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[45] *Id*. at 784.

[46] *Id.* at 810.

[47] *Id*. at 758.

B. THE PROPOSED DEFINITION SHOULD NOT REMOVE LONGSTANDING COMMERCE CLAUSE BASES FOR ASSERTING JURISDICTION OVER WATERS OR BASE JURISDICTION FOR CERTAIN WATERS SOLELY ON THE "SIGNFICANT NEXUS" TEST.

Guidance issued by the EPA and the Corps in response to these decisions interpreted the *SWANCC* and *Rapanos* opinions more broadly than the decisions allow or require, and imposed limitations on assertions of jurisdiction that were inconsistent with those decisions resulting in less protections for historically protected waters and inconsistent application by the agencies.[48] For example, the 2008 Rapanos Guidance[49] inappropriately subjected tributary streams to less-than categorical protection although the existing regulatory definition protected, without any limitation, all tributaries to other specified jurisdictional waters and despite the fact that the Supreme Court has not issued any holding limiting the jurisdictional status of tributaries.[50] The 2003 and 2008 Guidance has left many categories of waters that had previously been protected vulnerable to pollution and destruction, and hindered regulatory and enforcement actions.[51]

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[48] In support of our comments, we hereby incorporate by reference the comments submitted by national environmental organizations on the 2011 EPA and Army Corps of Engineers Guidance Regarding Identification of Waters Protected by the CWA, http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OW-2011-0409-0001, which are a part of the official public docket in 2011 at EPA-HQ-OW-2011-0409-3608 (hereinafter "2011 Comments").

[49] U.S. Environmental Protection Agency and Army Corps of Engineers, Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. United States* and *Carabell v. United States* (2008) (hereinafter "Jurisdiction Following *Rapanos v. United States* and *Carabell v. United States*") *available at:* http://water.epa.gov/lawsregs/guidance/wetlands/upload/2008_12_3_wetlands_CWA_Jurisdiction_Following_Rapanos120208.pdf (providing for "significant nexus" analysis for "[n]on-navigable tributaries that are not relatively permanent").

[50] *Id.* at p. 13-14.

[51] *See generally*, Earthjustice et al., ABANDON: HOW THE BUSH ADMINISTRATION IS EXPOSING AMERICA'S WATERS TO HARM (2004), *available at* http://ocw.tufts.edu/data/32/386826.pdf. (hereinafter "Reckless Abandon").

However, neither the Guidance Documents nor the proposed 2011 Guidance Document[52] asserted that *SWANCC* and *Rapanos* require the agencies to adopt the "significant nexus" test as their sole basis for asserting jurisdiction over tributaries, adjacent waters, and others waters. To the contrary, the EPA, the Corps, and the Department of Justice have applied the existing rule, the "relatively permanent" test, and/or the "significant nexus" test to make CWA jurisdictional determinations depending on the water at issue. While we continue to believe that the "relatively permanent" and "significant nexus" tests only apply to wetlands adjacent to non-navigable tributaries, we understand that it may be wise to employ multiple jurisdictional tests in light of the lack of a majority opinion in *Rapanos*, as well as *dicta* in both Supreme Court decisions and some differences in the lower courts as to how to apply these holdings.[53]

However, we cannot support the EPA and the Corps' assertion that the *SWANCC* and *Rapanos* decisions compel the agencies to adopt the "significant nexus" as the sole test for making categorical and case-by-case jurisdictional determinations for tributaries, adjacent waters and other waters. Nor can we support the agencies' position that they are compelled by these decisions to make many of the other changes to the definition of "waters of the United States" that they are proposing as detailed below, including most importantly the deletion of the existing regulatory provision for other waters, including intrastate waters, where the use, degradation, or destruction of those waters could affect interstate or foreign commerce.[54]

While it is beyond dispute that the CWA applies to waters with a significant nexus to traditionally navigable waters, it equally apparent that Congress intended for the CWA to fully protect the nation's waters and aquatic ecosystems without regard to whether the waters could satisfy historic navigability tests under the Commerce Clause. It is important to note here that, prior to the enactment of the CWA, both traditionally navigable waters and their non-navigable tributaries

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[52] EPA and Army Corps of Engineers Guidance Regarding Identification of Waters Protected by the CWA (2011), *available at* http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OW-2011-0409-0001.

[53] See, e.g., cases discussed in 2011 Comments, *supra* note 48, at pp. 17-18.

[54] 40 C.F.R. § 122.2.

were believed to be well within the Commerce Clause powers of the federal government under traditional tests of navigability.[55] Congress intended to expand the number and nature of the waters covered under the CWA in order to protect water quality and aquatic ecosystems to the fullest extent permitted by the Commerce Clause. In other words, Congress intended to expand coverage under the CWA beyond traditionally navigable waters and their tributaries, and did not premise its expansion of jurisdiction on the manner in which waters were connected to traditionally navigable waters. To the contrary, Congress intended to repudiate the traditional navigability tests and limitations on federal authority and instead utilize the full authority of the federal government to regulate pollution of waters under the Commerce Clause.[56] *SWANCC* and *Rapanos* do not address, limit or establish the outer bounds of this authority for purposes of the CWA. [57]

It is essential to the continued protection of our nation's waters that the EPA and the Corps continue to assert jurisdiction over waters to the fullest extent permitted by the Commerce Clause. In order to do so, the agencies should retain the following language in the regulatory definitions of "waters of the United States":

> All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

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[55] The 1899 Refuse Act, the predecessor to the Clean Water Act Section 402 permitting program, governed discharges to traditionally navigable waters and "into any tributary of any navigable water from which the same shall float or be washed into such navigable water." 33 U.S.C. § 407.

[56] *See e.g.*, *Bayview,* 474 U.S. at 133.

[57] In *SWANCC*, the Supreme Court expressly declined to address the reach of Commerce Clause jurisdiction. *See* 531 U.S. at 162, 174; *Rancho Viejo, LLC v. Norton*, 323 F.3d 1062, 1071 (D.C. Cir. 2003) (observing that in *SWANCC*, the Supreme Court "expressly declined to reach" the Commerce Clause question.) Similarly, none of the opinions of the Supreme Court in *Rapanos* commanded a majority of the Court "on precisely how to read Congress' limits on the reach of the Clean Water Act. *Rapanos*, 547 U.S. at 758 (C.J. Roberts, concurring opinion).

1) Which are or could be used by interstate or foreign travelers for recreational or other purposes;

2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

3) Which are used or could be used for industrial purposes by industries in interstate commerce;

4) All impoundments of waters otherwise defined as waters of the United States under this definition;[58]

There are many significant waterways that provide valuable ecological, recreational, drinking water, and economic services that may lose protections under the CWA if this language is removed. In particular, EPA representatives have identified certain waters that may lose CWA protections, including so-called "closed basins" and other waters that lack a connection to Traditionally Navigable Waters, which have historically been protected under these interstate commerce factors for "other waters."[59]

"Closed-basins" make up roughly 20% of the land area in New Mexico, and include many rivers, streams and wetlands. These waters provide recreation, fishing and waters supply in a region with scarce water resources and must be protected under the CWA.[60] Similarly, in southern Idaho, the Lost River drainages contain "numerous creeks and rivers that do not flow on the surface beyond the borders of the state," but do flow into the Snake River Plain Aquifer,

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[58] *See, e.g.*, 40 C.F.R. §122.2; 33 C.F.R. § 328.3(a)

[59] See, e.g., Waters of the US Rulemaking: U.S. EPA Briefing on What it Means for Your Watershed Work, Nancy Stoner, Acting Assistant Administrator for Water, US EPA; Donna Downington, US EPA; Damaris Christensen, US EPA (May 13, 2014) http://www.rivernetwork.org/river-network-webinars#recorded

[60] Reckless Abandon, supra Note 51, p. 7, available at http://vault.sierraclub.org/watersentinels/downloads/ReckelssAbandon.pdf

which supplies water to the Snake River.[61] Some rivers and streams within the Lost River Drainages have been determined to be jurisdictional based on navigability, however, others are jurisdictional solely because they have an impact on interstate commerce, including their use for irrigation water for cropland and the fact that they support "high-quality trout fisheries that attract anglers from all over the United States."[62]

Additionally, the EPA and the Corps should maintain the original regulatory language in definition of waters of the United States, particularly the precise language for tributaries, and should expressly retain all Commerce Clause grounds for including all waters within the regulatory definition of "waters of the United States." As set forth in the 2003 Comments on the ANPRM, "the chemical, physical, and biological integrity of the Nation's waters cannot be restored and maintained without Clean Water Act regulation of all waters protected by the current regulations – including those identified by the (a)(3) factors [other waters interstate commerce factors]."[63] As stated by the court in *U.S. v. Holland*:

> It is beyond question that water pollution has a serious effect on interstate commerce and that the Congress has the power to regulate activities such as dredging and filling which cause such pollution. Congress and the courts have become aware of the lethal effect pollution has on all organisms. Weakening any of the life support systems bodes disaster for the rest of the interrelated life forms . . . Congress is not limited by the 'navigable waters' test in its authority to control pollution under the Commerce Clause.[64]

To the extent that the EPA and the Corps need to clarify the existing definition, they should do so by adding language to the existing definition or making minor

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[61] Reckless Abandon, supra Note 51, pp. 12-13, available at http://vault.sierraclub.org/watersentinels/downloads/ReckelssAbandon.pdf

[62] *Id.*

[63] *See* 2003 Comments, *supra* note 36, at pp. 29-38.

[64] *Holland*, 373 F. Supp. at 673.

amendments to address the limitations on regulation of non-adjacent wetlands and similar waters raised by *SWANCC* and *Rapanos*. We support the addition of a case-by-case analysis for waters that are not covered by the existing definition or which are called into question by *SWANCC* and *Rapanos* as one such addition to the existing rule but believe that "relatively permanent" waters must also be included. We also support the agencies significant nexus analysis in the Preamble based on the Connectivity Report and the work of the SAB to provide additional jurisdictional grounds for inclusion of tributaries, adjacent water and other waters within the regulatory definition of "waters of the United States."

II. TRADITIONALLY NAVIGABLE WATERS, INTERSTATE WATERS, TERRITORIAL SEAS, AND IMPOUNDMENTS.

The EPA and the Corps do not propose any changes to the existing definition of "waters of the United States" for: (1) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (2) All interstate waters, including interstate wetlands; and (3) The territorial seas. We support the agencies' decision not to propose any changes to these sections of the definition. It is beyond dispute that these waters are encompassed within the meaning of "waters of the United States."

However, it is essential that the agencies clarify the meaning of the term traditionally navigable waters in the Preamble consistent with our previous comments on this subject.[65] One particularly high-profile example of the potential for differing agency interpretations of navigability under the CWA involves the Los Angeles River where, in 2008, the Corps determined that only 4 miles of the 51-mile river was "navigable" and, therefore, subject to the automatic protections of CWA.[66] While public outcry and action by EPA eventually reversed

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[65] See 2011 Comments, *supra* note 48, at pp. 18-28.

[66] See Letter from Jared Blumenfeld,Region 9 EPA Adminstrator, to Colonel Mark Troy, U.S. Army Corps of Engineers District Engineer, Los Angeles District, transmitting SPECIAL CASE EVALUATION REGARDING STATUS OF THE LOS ANGELES RIVER, CALIFORNIA, AS A TRADITIONAL NAVIGABLE WATER (July 6, 2010). http://www.epa.gov/region9/mediacenter/LA-river/LASpecialCaseLetterandEvaluation.pdf.

that decision finding the river to be a Traditionally Navigable Water, the time and resources spent on this exercise would have been better spent in actually protecting the River.[67] The meaning of "navigability" under the CWA is especially important given the agencies decision to adopt the "significant nexus" test.

With regard to impoundments, although the agencies state in the Preamble that they are not making any substantive changes to this portion of the regulatory definition, the proposed language for impoundments would limit the types of impounded waters that will be subject to CWA protections. The existing regulatory definition includes "[a]ll impoundments of waters otherwise defined as waters of the United States under this definition." The proposed language only includes impoundments of traditionally navigable waters, interstate waters, the territorial seas, and certain defined tributaries. No scientific or legal basis exists for excluding impoundments of adjacent waters and other waters included on the basis of a significant nexus analysis, and none was provided in the Preamble. As stated in the preamble, "[i]mpoundments are jurisdictional because as a legal matter an impoundment of a 'water of the United States' remains a 'water of the United States' and because scientific literature demonstrates that impoundments continue to significantly affect the chemical, physical, or biological integrity of downstream waters traditional navigable waters, interstate waters, or the territorial seas."[68] There is equally true for adjacent waters and "other waters."

III. ALL TRIBUTARIES TO ANY OTHER WATER OF THE U.S. MUST CONTINUE TO BE INCLUDED IN THE DEFINITION.

The Proposed Definition improperly narrows jurisdiction over tributaries. First, it limits jurisdiction to tributaries of traditionally navigable waters, interstate waters, territorial seas, and impoundments. Second, it improperly relies on the "significant nexus test" as the sole basis for asserting jurisdiction. Third, it adopts a new definition of tributaries that reduces the types of tributaries covered by the

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[67] Id.

[68] *S. D. Warren Co. v. Maine Bd. of Envtl. Prot.*, 547 U.S. 370, 379 n.5 (2006) ("[N]or can we agree that one can denationalize national waters by exerting private control over them"), and *U.S. v. Moses*, 496 F.3d 984 (9th Cir. 2007), *cert. denied*, 554 U.S. 918 (2008) ("[I]t is doubtful that a mere man-made diversion would have turned what was part of the waters of the United States into something else and, thus, eliminated it from national concern.").

rule in a manner that is not supported by law and science. Fourth, it categorically exempts "ditches" from coverage even if the ditches are otherwise tributaries contrary to law and science.

Under the agencies' existing regulations, all tributaries to traditionally navigable waters, interstate waters, impoundments, and "other waters" are defined as "waters of the United States."[69] All of the tributaries protected under the existing regulation must continue to be covered in the Proposed Definition. As demonstrated previously, the Supreme Court has not issued any opinion that limits the jurisdiction over tributaries. To the contrary, it is well settled that tributaries are jurisdictional waters within the meaning of "waters of the United States."[70] Neither *SWANCC* nor *Rapanos* invalidated or limited the scope of jurisdiction provided by the existing definition's inclusion of tributaries.[71] Additionally, all tributaries to all other "water of the United States" must be included with the definition and given categorical protection. Tributaries are obviously connected, and thus adversely impact, their downstream waters. This is consistent with the findings of the Connectivity Report and the SAB Report, as well as the individual comment of the SAB members.[72]

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[69] *See e.g.*, 40 C.F.R. §122.2; 33 C.F.R. § 328.3(a).

[70] *See, e.g.*, *N. Cal. River Watch v. City of Healdsburg*, 496 F.3d 993, 997 (9th Cir. 2007) ("The Supreme Court has since confirmed that regulable waters of the United States include tributaries of traditionally navigable waters and wetlands adjacent to navigable waters and their tributaries. The only question reserved in *Riverside Bayview Homes* was the issue of CWA jurisdiction over truly isolated waters." citing *Bayview*, 474 U.S. at 106; 33 C.F.R. 328.3(a)(1),(4),(7); and *Rapanos*, 547 U.S. at 792 n. 3); *see also Benjamin v. Douglas Ridge Rifle Club*, 673 F.Supp.2d 1210, 1215 & n. 2 (D. Or. 2009) (indicating that jurisdiction over tributaries did not require demonstration of significant nexus); *United States v. Vierstra*, 2011 WL 1064526, at *5 (D. Id. Mar. 18, 2011) ("It is an open question as to whether Justice Kennedy's concurrence applies in the tributary context."). *But see*, *e.g.*, *United States v. Robison*, 505 F.3d 1208 (11th Cir 2007) (applying "significant nexus" analysis to tributary stream).

[71] *See* 2011 Comments, *supra* note 48, at pp. 9-15; *see also* 2003 Comments, *supra* note 36 at pp. 4-6.

[72] Compilation of Preliminary Comments from Individual Panel Members on the Scientific and Technical Basis of the Proposed Rule Title "Definition of 'Waters of the United States' Under the Clean Water Act" (August 14, 2014) (hereinafter "Member Comments").

Further, the agency must clarify in the definition of tributary and/or the Preamble what it intends when it states that in order to be defined as a tributary, the tributary must contribute "flow, either directly or through another water, to a water identified in paragraphs (l)(1)(i) through (iv)." It is unclear from this language whether the agencies will require "another water" to also be a defined "water of the United States." We urge the agencies to clarify that they mean any body of water whether it is a defined "water of the United States or not." This would be consistent with the Connectivity Report and the law. While this interpretation is implied by the language in footnote 3 of the Proposed Definition, it requires further clarification.[73]

Jurisdictional limitations for tributaries under the existing definition arose nearly exclusively from the agencies' 2003 and 2008 Guidance. This Guidance placed additional requirements on the agencies' ability to assert CWA jurisdiction over tributaries that were not required or supported by law and science. However, even under the 2008 Guidance, the agencies claimed jurisdiction over non-navigable tributaries that met the "relatively permanent" or the "significant nexus" test.[74] Although we disagree with the interpretation of the "relatively permanent" and "significant nexus" tests reflected in the 2008 Guidance for the reasons set forth in our comments,[75] the 2008 Guidance document illustrates that the agencies believed that tributaries could be protected under both of these *Rapanos* jurisdictional tests. Accordingly, it is difficult to understand why the agencies are only applying the "significant nexus" test to determine the extent of jurisdiction over tributaries in the Proposed Definition and Preamble.[76] We

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[73] *See* 79 Fed.Reg. at 22191, fn. 3.

[74] Jurisdiction Following *Rapanos v. United States* and *Carabell v. United States*, *supra* note 49.

[75] In support of our comments, we hereby incorporate by reference the comments submitted by national environmental organizations on the 2008 Guidance, which are a part of the official public docket in 2011 at http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OW--0282-0001 at HQ-OW-2002-0050-1674.

[76] Proposed Definition, 79 Fed.Reg. at 22189, 22201 ("The agencies emphasize that the categorical finding of jurisdiction for tributaries and adjacent waters was not based on the mere connection of a water body to downstream waters, but rather a determination that the nexus,

strongly object to the agencies' approach – the EPA and the Corps should be asserting jurisdiction over all tributaries covered under the existing regulations, all tributaries that meet the "relatively permanent" test and all tributaries that meet the "significant nexus" test. There is simply no valid legal or scientific reason to do otherwise.

Although we believe that the EPA and the Corps should not rely solely on the "significant nexus" analysis as the agencies' basis for including tributaries in the definition, we do agree that the inclusion of ephemeral, intermittent and perennial tributaries, as "waters of the United States" is legally and scientifically sound and is supported by the EPA's "significant nexus" analysis, the Connectivity Report, and the SAB Member Comments. We also believe that wetlands, lakes and ponds should be included as tributaries based on the findings of the Connectivity Report and many individual SAB Member Comments.[77]

In addition to the Connectivity Report and SAB Report, numerous scientific reports and government documents from across the country illustrate the importance of protecting these waters. A recent report produced by Trout Unlimited, using USGS National Hydrography Dataset, documents the abundance and importance of intermittent and headwater streams across the country showing, for example, that 48 percent of stream miles with native trout historical range are classified as intermittent or ephemeral, and 58 percent of stream miles are in headwater streams.[78] The Trout Unlimited Report also states that 64 percent of stream miles with salmon/steelhead range are classified as intermittent or ephemeral, and 57 percent of stream miles are in headwater streams. In North Carolina, research conducted by the North Carolina Department of Natural Resources – Division of Water Quality, concluded that:

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alone or in combination with similarly situated waters in the region, is significant based on data, science, the CWA, and caselaw.").

[77] *See e.g.*, Connectivity Report *supra* note 3, at 1-8 (nutrient removal and cycling); Member Comments, *supra* note 72 Rosi-Marshall at 81 and Sullivan at 85.

[78] Rising to the Challenge – How Anglers Can Respond to Threats to Fishing in America, *available at:* http://www.tu.org/sites/default/files/TU_Rising_to_the_Challenge_web.pdf.

> In summary, staff of the Division of Water Quality have been conducting intensive research on headwater streams and headwater wetlands across the state for the past several years. Headwater streams are very common and provide significant benefits to downstream water quality and aquatic life. Intermittent streams have significant aquatic life even though their flow is not constant throughout the year. Headwater wetlands are often associated with these streams and provide important water quality filtration to protect downstream water quality as well as significant aquatic life habitat. Therefore based on this on-going research, the Division of Water Quality believes that protection of these headwater streams and wetlands is essential to protect downstream water quality.[79]

Further, the agencies should not narrow jurisdiction over tributaries through the adoption of a mandatory requirement for tributaries to possess a bed, bank, and Ordinary High Water Mark ("OHWM"). The existence of an OHWM should not be a requirement for asserting jurisdiction over tributaries, as it is not supported by law and science. As noted in the Connectivity Report and the Member Comments, the requirement of an OHWM improperly limits jurisdiction, and is not consistent with the science regarding how tributaries are affected by pollution or how tributaries impact downstream waters.

The Proposed Definition incorporates the definition of OHWM from existing regulations developed for the CWA Section 404 Program into the definition of tributary. The definition is taken from 33 C.F.R. 328.3(e) which provides:

> The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical

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[79] Memo from John Dorney, Wetlands Program Development Unit, NC DWQ. April 5, 2006. Background information on the water quality and aquatic life values of headwater streams and headwater wetlands, available at http://aswm.org/pdf_lib/cover_letter_and_summary_nc.pdf.

> characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

While this definition may have some reasonable meaning in the context of determining the boundaries of waters where dredge and fill activities are proposed, it has nothing to do with the extent of "waters of the United States" in the context of regulating and responding to the discharge of pollutants. As the Corps noted in 1977:

> Prior to enactment of the FWPCA, the mean tide line or (mean higher tide line on the West Coast) was used to delineate the shoreward extent of jurisdiction over the regulation of most activities in tidal waters under the 1899 Act as well as for mapping, delineation of property boundaries, and other related purposes. In freshwater lakes, rivers and streams that are navigable waters of the United States, the landward limit of Jurisdiction has been traditionally established at the ordinary high water mark. The regulation of activities that cause water pollution cannot rely on these artificial lines, however, but must focus on all waters that together form the entire aquatic system. Water moves in hydrologic cycles, and the pollution of this part of the aquatic system, regardless of whether it is above or below an ordinary high water mark, or mean high tide line, will affect the water quality of the other waters within that aquatic system.[80]

Thus, the concept of an OHWM or High Water line was utilized in the context of the Rivers and Harbors Act of 1899 and jurisdictional consideration related to traditional navigability where "[t]he need to protect navigable capacity of a waterway above the mean high water line was obviously minimal."[81] The inapplicability of this limitation to the CWA was addressed in the *Holland* case

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[80] 42 Fed. Reg. 37122, 37128 (July 19, 1977).

[81] *Holland*, 373 F. Supp. at 670-673.

which outlined both the authority and need to regulate waters beyond the reach of the traditional navigability tests and stated that "to recognize this and yet hold that pollution does not affect interstate commerce unless committed in navigable waters below the mean high water line would be contrary to reason."[82]

These long-held views as to the inapplicability of the OHWM to the meaning of "waters of the United States" under the CWA are confirmed by the Connectivity Report which further provides that "[a]ll tributary streams, including perennial, intermittent, and ephemeral streams, are physically, chemically, and biologically connected to downstream rivers via channels and associates alluvial deposits where water and other materials are concentrated, mixed, transformed, and transported."[83] There is nothing in the Connectivity Report to support the idea that these connections are limited to tributaries with OHWMs or that OHWMs are the sole indicator of connectivity. Individual SAB members also expressed disagreement or concern with the addition of a requirement for an OHWM for tributaries. For example, on member stated that:

> The definition of the lotic-type tributary is appropriately comprehensive because it inherently includes ephemeral and intermittent streams (as well as perennial) streams. The former types are often overlooked but ecologically important, particularly in arid landscapes with seasonal patterns of precipitation. However, there may be some types of tributaries, such as spring-fed streams, that lack an obvious OHWM because their groundwater sources dominate the water budget, are temporally stable, and so there is no fluctuation in the hydrograph to generate a 'line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear line on the banks . . .' Therefore the definition should be 'bed and bank, and sometimes an OHWM.'[84]

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[82] *Id.*

[83] Connectivity Report, *supra* note 3, at 1-3, and related Chapters.

[84] Member Comments, *supra* note 72, Aldous at 2-3 (internal citations omitted).

Another SAB member similarly commented that the Proposed Definition should allow "flexibility to for [sic] field personnel to define functional tributaries, even where those functional tributaries might lack obvious indicators of bed and bank (e.g., alluvial deposits on the bed of a headwater stream in a humid mountain setting) but have less obvious indicators of tributary flows (e.g., directionally bent herbaceous vegetation and subtle debris lines in swales connecting vernal pools to downstream waters in arid and semi-arid settings)."[85]

In addition to the fact that there is no sound legal or scientific basis for adding the requirement for an OHWM to the jurisdictional requirements, it is important to note there have been extensive problems with interpretation and implementation of the OHWM requirement in the CWA Section 404 Program. This issue also demonstrates why the OHWM requirement should not be included in the definition of tributary. For example, the U.S. General Accounting Office ("GAO") has noted that the Corps' definition of OHWM is ambiguous, and may be reasonably interpreted differently by competent staff.[86] For example:

- The Portland District reported that it was difficult to identify the OHWM, even in portions of the Columbia River and that three different staff would likely make three different jurisdictional determinations.

- The Philadelphia District reported that identifying OHWMs in the upper reaches of watersheds was one of its most difficult challenges, as one progresses upstream, the depth of the bed and bank diminishes, and the key indicators of an ordinary high water mark gradually disappear.

The GAO also noted that "officials from the Chicago District said that because their district was heavily urbanized many channels had been manipulated and contained, often in ways that obscured the ordinary high water mark" and that identifying the OHWM in the arid West was particularly difficult due to intermittent flow and flooding. There is no valid scientific or legal basis for excluding channelized streams, the upper reaches of tributaries, or streams in

[85] Member Comments, *supra* note 72, *Rains* at 71.

[86] GAO Report, *supra* note 34.

arid regions that lack an OHWM from the definition of "waters of the United States." To the contrary, the need to include and protect these waters is well documented through the Connectivity Report and is supported by the SAB Report.

IV. DITCHES SHOULD NOT BE CATEGORICALLY EXCLUDED FROM THE DEFINITION.

The Proposed Definition also provides a categorical exclusion for certain defined ditches and we strongly object to this provision. There is no sound legal or scientific basis for categorically excluding ditches, and this is especially true when those ditches otherwise meet the definition of tributary or any other defined "water of the United States." The Proposed Rule establishes, for the first time, a categorical exclusion for two types of ditches and states that they are not "waters of the United States" notwithstanding whether they would otherwise meet the requirements for being identified as a traditionally navigable water, interstate water, territorial sea, impoundment, tributary, adjacent water, or other water with a significant nexus.

Although the agencies state in the Preamble that they are simply codifying longstanding exemptions for waters over which the agencies "have generally not asserted CWA jurisdiction,"[87] with regard to ditches, the proposed categorical exemption is not consistent with any longstanding exemption.[88] Historically, ditches have commonly been protected under the CWA because they are actually streams that have been altered, transport pollutants to downstream waters, or have begun to serve ecological functions like natural tributaries. Ditches can and are required to be regulated under the CWA if they flow into other "waters of the United States" even when they are man-made.[89]

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[87] 79 Fed. Reg. 22189.

[88] See 2003 Guidance, 58 Fed. Reg, 1995, 1997; Jurisdiction Following *Rapanos v. United States* and *Carabell v. United States* supra note 49, pp. 1, 8.

[89] See, e.g., *Holland*, 373 F. Supp. at 673-74; *Headwaters, Inc. v. Talent Irrigation Dist.*, 243 F. 3d 526, 533-34 (9th Cir. 2001); *U.S. v. St. Bernard Parish*, 589 F.Supp. 617, 620 (E.D. La. 1984); *U.S. v. Gerke Excavating, Inc.*, 412 F.3d 804, 805-06 (7th Cir. 2005) ("A stream can be a tributary; why not a ditch? A ditch can carry as much water as a stream, or more; many streams are tiny. It

With regard to tributaries, the Proposed Definition states "[a] tributary, including wetlands, can be a natural, man-altered, or man-made water and includes waters such as rivers, streams, lakes, ponds, impoundments, canals, and ditches not excluded in paragraph (2)(iii) or (iv) of this definition." There are compelling legal and scientific reasons for ensuring that man-altered and man-made waters are covered as tributaries, and those reasons apply equally to ditches. As the 11th Circuit stated in the case of *U.S. v. Eidson*, "[t]here is no reason to suspect that Congress intended to regulate only the natural tributaries of navigable waters. Pollutants are equally harmful to this country's water quality whether they travel along man-made or natural routes."[90]

We believe that ditches should be categorically included when they otherwise meet the definition of a "water of the United States," including specifically a tributary. We also believe that ditches should be protected when they meet either the "relatively permanent" or "significant nexus" test without regard to the agencies' unspecified policy considerations. The agencies do not possess the authority to exclude waters that Congress intended to cover from the definition of "waters of the United States" for policy or any other agency administrative purpose.[91]

We are equally concerned that the agencies are proposing to adopt a categorical exemption for ditches, yet they did not define many of the key terms in the exemptions, including "ditches," "uplands," "perennial"[92] or "through another

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wouldn't make much sense to interpret the regulation as distinguishing between a stream and its man-made counterpart."), *vacated* 126 S.Ct. 2964 (2006), *on remand* 464 F.3d 723 (7th Cir. 2006) (remanding to district court to apply *Rapanos*), *cert. denied* 128 S.Ct. 45 (2007); *Community Assn. for Restoration of Env't v. Henry Bosma Dairy,* 305 F.3d 943, 954-955 (C.A.9 2002).

[90] *US. v. Eidson*, 108 F.3d 1336, 1342, (11th Cir. 1997) *cert. denied*, 522 U.S. 899 (1997).

[91] 1972 Legislative History, *supra* note 14, p. 327; *NRDC v. Callaway*, 392 F.Supp. 685, 686 (D.D.C. 1975); *Cf. NRDC. v. Costle*, 568 F.2d at 1377.

[92] See USGS, Defining Perennial, Intermittent and Ephemeral Channels in Eastern Kentucky; Application to Forestry Best Management Practices (2001) ("Although the USGS monitors thousands of perennial streams, they seldom monitor intermittent or ephemeral streams. The

water" which are subject to varying interpretations. While as stated previously, we object to any categorical exemption for ditches, we believe it is important to point out that the failure to define these key terms can have significant impacts on the ability of the agencies to protect water quality.

For example, as noted by the plurality in *Rapanos*, a "ditch" can mean different things in different contexts, but when ditches hold water permanently they are typically referred to as "rivers," "creeks," "streams," "moats," or "canals."[93] While we are not sure that this is always the case, the *Rapanos* Court's discussion of the issue illustrates the problem with the agencies' failure to define the term "ditches." For example, it seems apparent that the agencies would not intend to categorically exempt any water that may be equally referred to as either as ditch or as a ditch or a canal, river, creek, or stream.

Simply adding a common definition of ditches will not resolve the concern with the categorical exemption because it is often difficult or impossible to determine whether a "ditch" is a natural waterway or a man-made waterway, and the answer to the question is legally and scientifically irrelevant in any event because both can have significant impacts on water quality.[94] Ditches on agricultural lands "result in rapid removal of excess water over a relatively short time period. This water flowing over the land surface has relatively high energy sufficient to detach and transport soil particles and constituents attached to them, such as phosphorus, organic nitrogen, and many pesticides." [95] Ditching and

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map delineation between perennial-intermittent and intermittent-ephemeral is based on conceptual landscape relationships with very little supportive data, and the accuracy is certainly questionable, especially at the site level.") *available at* http://water.usgs.gov/wrri/00grants/KYchannels.html.

[93] *Rapanos*, 547 U.S. at 736, fn. 7.

[94] USGS, North Carolina Water Science Center, Artificial Drainage, *available at* http://nc.water.usgs.gov/projects/tile_drains/index.html.

[95] Gilliam, J.W., D.L. Osmond, and R.O.Evans. 1997. Selected Agricultural Best Management Practices to Control Nitrogen in the Neuse River Basin. North Carolina Agricultural Research Service Technical Bulletin 311, North Carolina State University, Raleigh, NC. CONTROLLED

channelization are prevalent in the Chesapeake Bay watershed, and "[d]itching on agricultural lands in the Pocomoke River watershed is an extensive practice that has been used to drain wetlands", which have been found to be a significant source of sediment loading to the watershed."[96] A significant percentage of stream miles within the coastal plain of North Carolina are modified natural stream channels and ditches. According to the North Carolina Department of Environment and Natural Resources, "[i]t may be difficult to differentiate between an artificial feature (e.g. ditch or canal) and a natural stream that has been modified (e.g. straightened or relocated)."[97] In North Carolina, many swine concentrated animal feed operations ("CAFOs") are located "in an area of the coastal plain where the groundwater table is high which requires ditching or tile drain in order to allow for crop harvesting and waste application**.** These are direct conveyances for the highly nutrient laden water to reach surface waters**.** These operations are having a significant negative impact on the Neuse River water quality."[98] Without regulatory oversight over these waters that feed North Carolina's rivers and coastal estuaries, we are likely to be unable to restore water quality and fisheries that are severely impaired by pathogens, nitrogen and phosphorus.

DRAINAGE: WHAT IS IT and HOW DOES IT WORK?, available at http://www.soil.ncsu.edu/publications/BMPs/drainage.html

[96] A. Gellis, et al., IDENTIFYING SOURCES OF FINE-GRAINED SUSPENDED-SEDIMENT FOR THE POCOMOKE RIVER, AN EASTERN SHORE TRIBUTARY TO THE CHESAPEAKE BAY, PROCEEDINGS of the Eighth Federal Interagency Sedimentation Conference (8thFISC), April2-6, 2006, Reno, NV, USA, available at http://pubs.usgs.gov/misc/FISC_1947-2006/pdf/1st-7thFISCs-CD/8thFISC/Session%205C-1_Gellis.pdf.

[97] North Carolina Division of Water Quality, Identification Methods for the Origins of Intermittent and Perennial streams, Version 4.11 (NCDENR 2010), *available at* http://www.xerces.org/wp-content/uploads/2009/03/NC_2010_Methodology_identification_intermittent_perennial_streams.pdf.

[98] North Carolina Department of Environment and Natural Resources, Division of Water, Neuse River Basin, Water Quality Plans, Cycle 4 - July 2009, at p. 360, *available at* http://portal.ncdenr.org/web/wq/ps/bpu/basin/neuse; *See also*, USGS, Scientific Investigations Report 2004–5123**,** Ionic Composition and Nitrate in Drainage Water From Fields Fertilized with Different Nitrogen Sources, Middle Swamp Watershed,North Carolina, August 2000 – August 2001 (2004), available at http://pubs.usgs.gov/sir/2004/5123/.

Additionally, there is no sound scientific reason to categorical exclude upland ditches with less than perennial flow. Upland ditches that contribute flow ephemerally, intermittently or perennially can have substantial impacts on downstream water quality to the same extent as any other tributary. In fact, they can often have a more significant impact if they are very near a discharge point as they often serve to increase water flow downstream. As noted in the Connectivity Report, "[a]ll tributary streams, including perennial, intermittent, and ephemeral streams, are physically, chemically, and biologically connected to downstream rivers via channels and associates alluvial deposits where water and other materials are concentrated, mixed, transformed, and transported."[99] This view is echoed in the comments from many individual SAB members:

- "In response to the query, I suggest that the flow regime in identified ditches should be less than intermittent flow, rather than less than perennial flow as proposed, based on my familiarity with the science associated with the Connectivity Report. This would apply only to those ditches not excluded by the proposed regulation and that meet the proposed definition of tributary as 'waters of the United States.'"[100]

- "It is important to note, however, that even when not jurisdictional waters, these non-wetland swales, gullies, rills and specific types of ditches may still be a surface hydrologic connection for purposes of the proposed definition of adjacent under paragraph (a)(6) or for purposes of a significant nexus analysis under paragraph (a)(7). For example, a wetland may be a 'water of the United States,' meeting the proposed definition of 'neighboring' because it is connected to such a tributary by a non-jurisdictional ditch that does not meet the definition of a 'tributary.' The entire concept of water body connectivity is that integrated ecological units comprised of aquatic systems distributed across the landscape are intimately linked through a suite of pathways. How is it consistent with this notion or in the spirit of the CWA that the ditch that connects two

[99] Connectivity Report, *supra* note 3, pp. 1-3.

[100] Member Comments, *supra* note 72, Dr. Jennifer Tank Comments at 93.

'waters of the U.S.' is not jurisdictional? . . . I am not convinced that the science currently exists to summarily exclude certain groups other waters including gullies, swales, artificial lakes and ponds, and ditches that do not contribute flow to a jurisdictional water body. These waters should be assessed along a gradient of connectivity on a case-specific basis until the science is available to make an appropriate determination for the respective class as a whole."[101]

- "Exclusion b(3) – 'ditches that are excavated wholly in uplands, drain only uplands, and have less that perennial flow' – together, these three criteria may suffice, but the distinction between perennial and less-than-perennial flow may be a cause for concern. P 22203 states, 'Under this exclusion, water that only stands or pools in a ditch is not considered perennial flow and therefore any such upland ditch would not be subject to regulation.' In parts of southeast Michigan, Ohio and Indiana, topography is very flat and ditches flow primarily during times of heavy rain. Some ditches are sufficiently deep that they will pond water until the receiving river stage drops enough for water to flow from the ditch to the river. Yet such ditches commonly receive from surrounding lands, and episodically deliver, significant nutrients to downstream waters. In the aggregate, they are the source/conduit for the majority of contaminants reaching downstream waters ('most of the materials found in rivers originate outside of them.' P 22247). Indeed, this situation describes much of the drainage into western Lake Erie, where harmful algal blooms due to excessive nutrient loading have caused beach closings, and in August 2014 a three-day ban on drinking water for some 400,000 of the residents in and near Toledo, OH. In short, using the criterion of 'less-than-perennial' flow to exclude ditches may not be consistent with addressing nutrient and sediment loading that affects drinking water, beach use, fishing, and other uses." [102]

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[101] Member Comments, *supra* note 72, Dr. Mazeika Sullivan at 89-90.

[102] Member Comments, *supra* note 72, Dr. David Allen at 14.

- "On page 2203[sic], the EPA seeks guidance on the appropriate flow requirements for a ditch located wholly in uplands to be jurisdictional. In particular it would appear that ditches with intermittent flow would supply considerable water, sediment, nutrients, metals such as zinc from tire wear, etc. to downstream waters and there would appear to be no reason such features should not be considered jurisdictional."[103]

- "Each of these types of human alterations affect connectivity and therefore can impact the chemical, physical, and biological integrity of the downgradient waters. As surface water features, ditches and canals function as either perennial or intermittent streams or tributaries and should be legally treated as such. Regardless of source, these ditches convey or store water and chemical/physical/biological sediment and materials spatially on a temporal basis (rate, magnitude, and frequency). The water from ditches can leak to provide groundwater recharge to the sediments or bedrock beneath the ditch, or accumulate groundwater discharge in its flow (serve as a drain) or both. These functions can be temporal (seasonal) and spatial. In all, the ditch impacts many of the hydrologic systems in the vicinity of its location, and is connected . . . Constructed ditches change the hydrologic flow paths of local and subregional hydrologic systems. Ditches are perennial, intermittent, or ephemeral water conveyors, and should be regulated as such."[104]

V. ADJACENT WATERS.

We support the inclusion of "adjacent waters" into the definition of "waters of the United States." The inclusion of adjacent waters is generally consistent with the science and law,[105] but needs to be modified in accordance with the scientific analysis to ensure that adjacency includes the outer extent of the floodplain and

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[103] Member Comments, *supra* note 72, Dr. Judson Harvey at 22.

[104] Member Comments, *supra* note 72, Dr. Kenneth Kolm at 49-50.

[105] *See, e.g.,* Connectivity Report, *supra* note 3, at 1-9 to 1-10; Member Comments, *supra* note 72, Brooks at 17.

all riparian areas.[106] Similarly, the agencies should amend and clarify their approach to groundwater as it relates to adjacent waters and how it is considered in the Proposed Rule to conform to the extensive comments of the individual SAB members. Further, the agencies need to remove the categorical groundwater exemption from the Proposed Definition. The agencies should incorporate a more robust definition of adjacent that fully considers the four dimensional hydrologic connectivity and effects on downstream waters as discussed extensively in the Connectivity Report.

VI. OTHER WATERS SHOULD BE PROTECTED UNDER ALL OF THE JURISDICTIONAL TESTS.

We fully support the proposal to provide jurisdictional coverage in the Proposed Definition to "other waters" on a case-specific basis, "where those waters alone, or in combination with other similarly situated waters, including wetlands, located in the same region, have a significant nexus to a water identified in paragraphs (1)(i) through (iii) of this definition."[107] However, as noted previously, we do oppose the removal of other jurisdictional bases for protecting such waters, and urge the agencies to retain the existing "other waters" language in the current definition. The rule should protect waters to the fullest extent permitted by the Commerce Clause and the basis for including waters pursuant to that authority must be included in the Preamble and Response to Comments. We also urge the agencies to include all "relatively permanent" waters, maintain the existing language and jurisdictional bases for tributaries in the current definition, and include all jurisdictional bases in the Preamble. Additionally, the agencies should categorically include all waters for which there is adequate

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[106] Members Comments, *supra* note 72, Kolm at 34 ("Distance to water body frequently is not the story"); Rains at 71; Rosi-Marshall at 82 ("River ecologists have known for a *long time* that it is more appropriate to think of rivers as part of a larger landscape or "riverscape" comprised of a river's mainstem and adjacent floodplain or wetland habitats) (emphasis added); Sullivan at 86 ("…the scientific literature unequivocally supports the finding that floodplains and waters and wetlands in floodplain and riparian setting support the physical, chemical and biological integrity of downstream waters" and "[a]lthough distance can be one measure to help ascertain the degree of hydrological connectivity, biological and chemical connectivity should also be considered").

[107] 79 Fed.Reg. at 22272.

scientific and legal basis to do so. According to a recent report from the Congressional Research Service, "[s]ince issuing [the 2003 and 2008] guidance documents, the agencies have not found jurisdiction over any 'other water' based solely on significant nexus."[108] The agencies have only found other waters "jurisdictional because they meet another provision of the existing definition of 'waters of the United States,' such as a determination that the water as a traditional navigable water."[109] Because of this, it is essential that the agencies fully use the Connectivity Report, the SAB Report and the Member Comments to categorically include waters.

Additionally, in conducting its "significant nexus" analysis, the agencies need to fully consider all aspects of connectivity,[110] ensure that aggregate connections and functions are evaluated,[111] and evaluate groundwater connections.[112] Further, the agencies should make one-time determinations for similarly situated waters and apply the determinations to future decisions.[113] Lastly, the agencies should ensure that geographic proximity not be used in the analysis in a manner that inappropriately minimizes the nexus.

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[108] Congressional Research Service Report R43455, EPA and the Army Corps' Proposed Rule to Define "Waters of the United States" (June 10, 2014). (citing Personal communication, EPA Office of Water, May 23, 2014.) available at http://fas.org/sgp/crs/misc/R43455.pdf.

[109] *Id.*

[110] *See e.g.* Member Comments, *supra* note 72, Aldous at 4; Kolm at 33 ("The flowpath framework should highlight the four-dimensional nature of connectivity, because four-dimensional connectivity scaled in a habitat-to-catchment context is a foundational aspect of freshwater ecology") and 34 (noting that "these flowpaths are inherently four-dimensional (*i.e.*, longitudinal, lateral, vertical, and through time"); Rains at 73; Sullivan at 87.

[111] *See* Member Comments, *supra* note 72, Kolm at 49; Rosi-Marshall at 81-83; Sullivan at 84 and 88.

[112] *See* Member Comments, *supra* note 72, Kolm generally, especially 41 and 43.

[113] See e.g., Member Comments, *supra* note 72, Rains, at 72 (springs in Western States); Connectivity Report, *supra* note 3 at 1-12 (depressional wetlands in Texas).

VII. THE AGENCIES SHOULD CONFIRM THAT THIS RULEMAKING DOES NOT ALTER EPA'S LONGSTANDING AND CONSISTENT INTERPRETATION REGARDING DISCHARGES VIA HYDROLOGIC CONNECTION. FURTHER, THE AGENCIES SHOULD NOT CATGORICALLY EXCLUDE GROUNDWATER FROM THE DEFINITION OF WATERS OF THE UNITED STATES.

With respect to groundwater, commenters have two distinct requests:

- First, the agencies should confirm in its response to comments that nothing in this rule alters EPA's longstanding and consistent interpretation that the CWA may cover discharges of pollutants from a point source to surface water that occur via groundwater that has a direct hydrologic connection to the surface water.

- Second, EPA should not categorically exclude all groundwater from the definition of waters of the United States. Instead, consistent with the recommendations of the SAB and the conclusions of some courts, EPA should treat groundwater as "other waters" and allow groundwater to be considered a water of the United States on a case-by-case basis where a significant nexus can be established.

A. The Proposed Rule Does Not Alter EPA's Longstanding and Consistent Interpretation that the CWA May Cover Discharges of Pollutants from a Point Source to Surface Water that Occur Via Groundwater that Has a Direct Hydrologic Connection to the Surface Water.

EPA has a longstanding and consistent interpretation that the CWA may cover discharges of pollutants from a point source to surface water that occur via groundwater that has a direct hydrologic connection to the surface water. To be sure, in EPA's repeated expressions of that interpretation over the past 24 years, the Agency has *not* said that groundwater is a water of the United States, but rather that discharges to waters of the United States through groundwater may be covered by the CWA if the hydrologic connection is direct. That interpretation was not at issue in any of the Supreme Court decisions or called into question by

those decisions, and EPA is, wisely, *not* undertaking to revisit that interpretation in the current rulemaking.

Indeed, EPA could not revisit that issue in the final rule because it did not propose to do so in the April 21, 2014 Notice of Proposed Rulemaking, and such a change would not be a logical outgrowth of that notice.[114] Moreover, the proposed rule provides further scientific support for EPA's longstanding and consistent interpretation concerning discharges via groundwater in that it extensively discusses the critical role that groundwater plays in establishing hydrological, chemical, and biological connections between surface waterbodies.[115]

To aid in clarity, the agencies should confirm in their response to comments that nothing in this rule alters EPA's longstanding and consistent interpretation that the CWA may cover discharges of pollutants from a point source to surface water that occur via groundwater that has a direct hydrologic connection to the surface water. Such confirmation may be useful, for example, to those who might otherwise confuse the issue of discharges to surface waters "via groundwater" with the separate issues of: (1) whether certain surface waters, including wetlands, are waters of the United States due to their subsurface connection to a jurisdictional water; or (2) whether certain groundwaters might themselves be considered waters of the United States under the significant nexus test.

While the EPA is well aware of its own pronouncements in the Federal Register and elsewhere, we review them here for the record, along with federal court decisions on this issue. As EPA explained to Congress in 2012:

> The EPA has a longstanding and consistent interpretation that the Clean Water Act may cover discharges of pollutants from point sources to surface water that occur via ground water that has a

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[114] Furthermore, any attempt to revisit that interpretation in the future would face a heavy burden given that "[a]n agency interpretation of a relevant provision which conflicts with the agency's earlier interpretation is 'entitled to considerably less deference' than a consistently held agency view." *INS v. Cardoza-Fonseca,* 480 U.S. 421, 446 n.30 (1987).

[115] *See, e.g.*, 79 Fed. Reg. at 22196, 22207-08, 22222, 22242, and 22248.

> direct hydrologic connection to the surface water.[116]

EPA has expressed that longstanding and consistent interpretation in final regulations published in the Federal Register following notice-and-comment rulemaking, in individual and general National Pollution Discharge Elimination System ("NPDES") permits issued by EPA, in a brief filed by the Department of Justice on behalf of EPA in federal district court, and in the memorandum to Congress quoted above. In addition, the vast majority of federal courts that have considered the issue have likewise found that the CWA may cover discharges into directly hydrologically connected groundwater, if such connection can be demonstrated.

1. EPA's Rulemaking Determinations.

The earliest rulemaking decision of which we are aware came in 1990, in a final stormwater rule, in which EPA responded to a public comment concerning CWA jurisdiction by stating: ". . . discharges to ground waters are not covered by this rulemaking (*unless there is a hydrological connection between the ground water and a nearby surface water body* . . .)."[117]

The following year, in a final water quality standards regulation for Indian reservations, EPA explained the issue in slightly more detail:

> EPA and most courts addressing the issues have recognized two limited instances where, for the purpose of protecting surface waters and their uses, EPA may exercise authorities that may affect underground waters. First, the Act requires NPDES permits for discharges to groundwater *where there is a direct hydrological connection between groundwaters and surface waters* … because such discharges are effectively discharges to the directly connected surface waters. Second, it is EPA's long-established position that

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[116] Letter from Arvin Ganesan to Hon. John L. Mica, Enclosure at 1, dated Feb. 13, 2012 (internal footnotes omitted).

[117] 55 Fed. Reg. 47990, 47997 (col. 3) (Nov. 16, 1990) (citations omitted) (emphasis added).

> water quality standards are required for certain underground segments of surface waters. *See* Kentucky v. Train, 9 ERC 1280 (E.D. Kentucky 1972). In such streams, the subterranean component must be sufficiently stream-like so as to possibly allow the passage of fish and other aquatic organisms from a surface segment of the stream into the underground segment.[118]

In 1998, again in a final stormwater rule, EPA reiterated:

> EPA interprets the CWA's NPDES permitting program to regulate discharges to surface water via groundwater where there is a direct and immediate hydrologic connection ("hydrologically connected") between the groundwater and the surface water.[119]

Following those three 1990s rulemakings, EPA articulated its interpretation and legal analysis at considerable length in a 2001 proposed rule for CAFOs. Under the heading "Applicability of the Regulations to Operations That Have a Direct Hydrologic Connection to Ground Water," EPA stated:

> Because of its relevance to today's proposal, EPA is restating that the Agency interprets the Clean Water Act to apply to discharges of pollutants from a point source via ground water that has a direct hydrologic connection to surface water.[120]

Under the heading "Legal Basis," in a detailed and extensive analysis, EPA explained its statutory authority to "determin[e] that a discharge to surface waters via hydrologically-connected ground waters can be governed by the Act," and why "the Act is best interpreted to cover such discharges."

EPA's extensive legal analysis was comprehensive. First, EPA framed the legal issue. Rather than asking whether groundwater is regulated under the Clean

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[118] 56 Fed. Reg. 64876, 64892 (col. 3) (Dec. 12, 1991) (emphasis added).

[119] 63 Fed. Reg. 7858, 7881 (col. 2) (Feb. 17, 1998).

[120] 66 Fed. Reg. 2960, 3015 (col. 1) (Jan. 12, 2001).

Water Act (as a point source or as a water of the United States), EPA asked "whether a discharge to surface waters via hydrologically connected ground water is unlawful." EPA stated that it:

> does not argue that the CWA directly regulates ground water quality. . . the question of whether Congress intended the NPDES program to regulate ground water quality . . . is not the same question as whether Congress intended to protect surface water from discharges which occur via ground water.[121]

Exercising its authority to "fill gaps in the statutory framework." EPA reasoned that excluding discharges that occur via groundwater would create a loophole inconsistent with the CWA's statutory purposes:

> [T]he Act is best interpreted to covers such discharges. . . . An interpretation of the CWA which excludes regulation of point source discharges to the waters of the U.S. which occur via groundwater would . . . be inconsistent with the overall Congressional goals expressed in the statute. . . . [T]here is no evidence that Congress intended to create a ground water loophole through which the discharges of pollutants could flow, unregulated, to surface water.[122]

To reach this conclusion, EPA "utilized its expertise in environmental science and policy to determine the proper scope of the CWA," as well as the policymaking authority delegated by Congress.[123] "Given the Agency's knowledge of the hydrologic cycle and aquatic ecosystems, the Agency has determined that when it is reasonably likely that such discharges will reach surface waters, the goals of the CWA can only be fulfilled if those discharges are regulated."[124] Applying that

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[121] *Id.* at 3015-3016.

[122] *Id*.

[123] *Id*. at 3018 (col. 1).

[124] *Id*. at 3018 (col. 1-2).

knowledge of hydrology and aquatic ecosystems, EPA further explained that the existence of a hydrologic connection is a question of fact: "The determination of whether a particular discharge to surface waters via ground water which has a direct hydrological connection which is prohibited without an NPDES permit is a factual inquiry, like all point source determinations."[125] To assure itself that its reasoning was sound and well-grounded, EPA examined the legislative history and found it consistent with EPA's interpretation**:** "Congress expressed an understanding of the hydrologic cycle and an intent to place liability on those responsible discharges which entered the 'navigable waters.'"[126] EPA also found that the courts agree: "[T]he majority of courts have determined that CWA jurisdiction may extend to surface water discharges via hydrologic connections. . . . The decisions which did not find authority to regulate such discharges under the CWA may, for the most part, be distinguished."[127]

In 2003, EPA finalized that CAFO rule, which the U.S. Court of Appeals reviewed in *Waterkeeper Alliance, Inc. v. U.S. E.P.A*.[128] In that case, the Second Circuit explained that the shift from certain uniform national requirements governing discharges to surface waters via groundwater (in the proposed rule) to fully case-by-case determinations of hydrologic connection (in the final rule) did not alter EPA's position on the scope of the CWA:

> It is thus clear that when the EPA stated, in the Preamble to the Final Rule, that 'requirements limiting the discharge of pollutants to surface water via groundwater … are beyond the scope of today's ELGs,' Preamble to the Final Rule at 7216, the EPA meant only that uniform national requirements are beyond the scope of today's ELGs. The EPA did not, in other words, mean to suggest that NPDES authorities lacked the power to impose groundwater-

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[125] *Id*. at 3017 (col. 1).

[126] *Id*. at 3016 (col. 2).

[127] *Id*. at 3017 (col. 2-3).

[128] 399 F.3d 486 (2d Cir. 2005).

related requirements on a case-by-case basis, where necessary.[129]

2. NPDES Permits Issued by EPA.

In 2011, EPA issued a NPDES permit to the Menominee Neopit Wastewater Treatment Facility in Wisconsin, based on data showing that the groundwater beneath the site "has a direct hydrologic connection to the adjacent surface water, the navigable waters of Tourtillotte Creek."[130]

EPA explained:

> Based on the modeling and the porosity of the soil, the first of the new discharge plume would take 3 to 5 years to reach the creek and l3 to 21 years before the entire breadth of the plume reaches the creek. However, since the existing facility had been discharging to the groundwater since the facility began operations in the 1970's, the existing discharge plume is already reaching Tourtillotte Creek.[131]

EPA has permitted other facilities on a similar basis.[132]

3. EPA's 2012 Memorandum to Congress.

As noted above, EPA expressed its position on this issue directly to Congress. In 2012, an EPA Associate Administrator responded to questions posed by U.S. Representative John L. Mica, in a memorandum, which EPA stated:

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[129] *Id.* at 514 n.26.

[130] EPA Region 5, NPDES Permit No. WI0073059 Fact Sheet (April 2011) at 2.

[131] *Id*.

[132] *See, e.g.,* EPA Region 6, NPDES Permit No. NM0022306 Fact Sheet for Molycorp Mine (May 2006) at 4-6; *see also id*. at 7 describing NPDES permits issued to U.S. Liquids of Louisiana, Ltd. in 1999, Texas Eastman in 1976, and a CAFO general permit in 1993.

> The EPA has a longstanding and consistent interpretation that the Clean Water Act may cover discharges of pollutants from point sources to surface water that occur via ground water that has a direct hydrologic connection to the surface water. . . . Whether or not such a hydrological connection exists, and the need for a National Pollutant Discharge Elimination System (NPDES) permit for any given source, is highly dependent on the facts and circumstances surrounding each permitting situation. . . . A number of factors are relevant in evaluating the connection between ground water and surface water, such as geology, flow and slope. A fact-specific evaluation could support a determination that an NPDES permit is required. . . .[133]

4. EPA's Federal Court Brief.

In 2012, the U.S. Department of Justice, on behalf of EPA, confirmed to a federal district court that:

> There can be circumstances where a discharge to groundwater, or even a discharge to soil which eventually leads to groundwater, is so directly and immediately connected hydrologically to surface water that a NPDES permit is required . . . . Accordingly, *specific* [discharges] can, under given circumstances, be found to be subject to NPDES permitting requirements.[134]

5. Federal Court Decisions.

In numerous cases, federal courts around the country have reached similar conclusion as EPA and DOJ, upholding CWA jurisdiction over discharges of pollutants to surface waters that occur via groundwater.

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[133] Letter from Arvin Ganesan to Hon. John L. Mica, Enclosure at 1, dated Feb. 13, 2012 (internal footnotes omitted).

[134] EPA Mem. in Support of Def.'s Mtn. for Summ. Judgment at 18-19, filed in *Conservation Law Found. v. EPA*, No. 10-cv-11455 (D. Mass., Sept. 21, 2012) (emphasis in original).

As noted above, in *Waterkeeper Alliance, Inc. v. U.S. EPA*, the Second Circuit upheld EPA's requirements for the discharge of pollutants from CAFOs to surface water via groundwater to be regulated, "as necessary, on a case-by-case basis."[135] The court found "sufficient record support for EPA's determination that groundwater-related requirements are better imposed on a case-by-case basis," given "that variability in topography, climate, distance to surface water, and geologic factors influence whether and how pollutant discharges at a particular site enter surface water via groundwater."[136]

An overwhelming majority of other courts are in accord. At least 18 federal decisions have held that the CWA covers discharges to surface waters via hydrologically connected groundwater. The reasoning behind these decisions is clear: Congress did not intend to exempt from the CWA "the introduction of pollutants into the groundwater [that] adversely affects the adjoining surface waters."[137] As one court explained:

> it would hardly make sense for the CWA to encompass a polluter who discharges pollutants via a pipe running from the factory directly to the riverbank, but not a polluter who dumps the same pollutants into a man-made settling basin some distance short of the river and then allows the pollutants to seep into the river via the groundwater.[138]

Notably after EPA's comprehensive discussion of the issue in its 2001 rulemaking, courts typically have deferred to that interpretation.[139]

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[135] *Waterkeeper Alliance,* 399 F.3d at 514-15 n.26.

[136] *Id*. at 515.

[137] *Idaho Rural Council v. Bosma*, 143 F. Supp. 2d 1169, 1180 (D. Idaho 2001).

[138] *N. Cal. Riverwatch v. Mercer Fraser Co.*, No. C-04-4620 SC, 2005 U.S. Dist. LEXIS 42997, *7 (N.D. Cal. Sept. 1, 2005).

[139] *Greater Yellowstone Coal. v. Larson*, 641 F. Supp. 2d 1120, 1138 (D. Idaho 2009).

The 18 federal court decisions of which we are aware, in addition to *Waterkeeper Alliance v. U.S. EPA*, finding that the CWA may cover discharges of pollutants to surface waters that occur via groundwater having a direct hydrologic connection are:

- *Dague v. City of Burlington*, 935 F.2d 1343, 1347, 1355 (2d Cir. 1991), *rev'd in part on other grounds*, 505 U.S. 557 (1992) (where a city allowed groundwater to flow through contaminants in its landfill and then to migrate beyond the landfill boundaries into a pond and wetlands that were waters of the United States, court of appeals held that "district court's conclusion that the city discharged pollutants into navigable waters from a point source properly applied the statute");

- *U.S. Steel Corp. v. Train*, 556 F.2d 822, 852 (7th Cir. 1977) (CWA "authorizes EPA to regulate the disposal of pollutants into deep wells, at least when the regulation is undertaken in conjunction with limitations on the permittee's discharges into surface waters"), *overruled on other grounds by City of West Chicago v. U.S. Nuclear Regulatory Comm'n*, 701 F.2d 632, 644 (7th Cir. 1983);

- *Hawai'i Wildlife Fund v. County of Maui*, No. 12-00198 SOM/BMK, 2014 U.S. Dist. LEXIS 74256, *35 (D. Hawaii May 30, 2014) ("liability arises even if the groundwater under the [sewage treatment facility] is not itself protected by the Clean Water Act, as long as the groundwater is a conduit through which pollutants are reaching navigable-in-fact water");

- *Ass'n Concerned Over Res. & Nature, Inc. v. Tenn. Aluminum Processors, Inc.*, No. 1:10-00084, 2011 U.S. Dist. LEXIS 39280, *49 (M.D. Tenn. Apr. 8, 2011) ("groundwater is subject to the CWA provided an impact [*sic*] on federal waters");

- *Greater Yellowstone Coal. v. Larson*, 641 F. Supp. 2d 1120, 1138 (D.

Idaho 2009) (referring to EPA's interpretation and stating "there is little dispute that if the ground water is hydrologically connected to surface water, it can be subject to" the CWA);

- *Northwest Envtl. Def. Ctr. v. Grabhorn, Inc.,* No. CV-08-548-ST, 2009 U.S. Dist. LEXIS 101359, *34 (D. Or. Oct. 30, 2009) ("In light of the EPA's regulatory pronouncements, . . . CWA covers discharges to navigable surface waters via hydrologically connected groundwater");

- *Hernandez v. Esso Std. Oil Co. (P.R.)*, 599 F. Supp. 2d 175, 181 (D.P.R. 2009) ("CWA extends federal jurisdiction over groundwater that is hydrologically connected to surface waters that are themselves waters of the United States");

- *Coldani v. Hamm*, 2007 U.S. Dist. LEXIS 62644, *25 (E.D. Cal. Aug. 14, 2007) ("because Coldani has alleged that Lima Ranch polluted groundwater that is hydrologically connected to surface waters that constitute navigable waters, he has sufficiently alleged a claim within the purview of the CWA");

- *N. Cal. Riverwatch v. Mercer Fraser Co.*, No. C-04-4620 SC, 2005 U.S. Dist. LEXIS 42997, *7 (N.D. Cal. Sept. 1, 2005) ("the regulations of the CWA do encompass the discharge of pollutants from wastewater basins to navigable waters via connecting groundwaters");

- *Idaho Rural Council v. Bosma*, 143 F. Supp. 2d 1169, 1180 (D. Idaho 2001) ("CWA extends federal jurisdiction over groundwater that is hydrologically connected to surface waters that are themselves waters of the United States");

- *Mutual Life Ins. Co. of New York v. Mobil Corp.*, No. 96-CV-1781, 1998 U.S. Dist. LEXIS 4513, at *6-*8 (N.D.N.Y. Mar. 31, 1998) (court denied motion to dismiss complaint alleging a hydrological connection, explaining that "plaintiff ultimately will have to prove a link between contaminated ground waters and navigable waters…");

- *Friends of the Coast Fork v. County of Lane*, No. 95-6105-TC, 1997 U.S. Dist. LEXIS 22705, *8 (D. Or. Jan. 31, 1997) ("Defendant violated the CWA by discharging pollutants . . . into the groundwater which is hydrologically connected to the surface water");

- *Williams Pipe Line Co. v. Bayer Corp.*, 964 F. Supp. 1300, 1319-20 (S.D. Iowa 1997) ("Because the CWA's goal is to protect the quality of surface waters, the NPDES permit system regulates any pollutants that enter such waters either directly or through groundwater");

- *Friends of Santa Fe Cnty. v. LAC Minerals, Inc.*, 892 F. Supp. 1333, 1358 (D.N.M. 1995) ("[T]he Tenth Circuit's expansive construction of the Clean Water Act's jurisdictional reach … foreclose[s] any argument that the CWA does not protect groundwater with some connection to surface waters");

- *Wash. Wilderness Coal. v. Hecla Mining Co.*, 870 F. Supp. 983, 990 (E.D. Wash. 1994) ("since the goal of the CWA is to protect the quality of surface waters, any pollutant which enters such waters, whether directly or through groundwater, is subject to regulation");

- *Sierra Club v. Colo. Ref. Co.*, 838 F. Supp. 1428, 1434 (D. Colo. 1993) ("allegations that [defendant] has and continues to discharge

pollutants into the soils and groundwater . . . which then make their way to [a surface water] through the groundwater state a cause of action under the Clean Water Act");

- *McClellan Ecological Seepage Situation v. Weinberger*, 707 F. Supp. 1182, 1196 (E.D. Cal. 1988) (plaintiff can prevail by showing discharges into "groundwater [that] is naturally connected to surface waters that constitute 'navigable waters' under the Clean Water Act"), *vacated on other grounds*, 47 F.3d 325 (9th Cir. 1995); and

- *New York v. United States*, 620 F. Supp. 374, 380-81 (E.D.N.Y. 1985) (where State of New York asserted a claim under the CWA for an unpermitted discharge to surface water occurring via groundwater, declined to reach defendant's argument that the CWA does not apply to groundwater, "since it is clear that plaintiff has alleged that the [subsurface discharges] threaten to contaminate . . . navigable waters").

While a few decisions have found groundwater-related claims to be beyond the reach of the CWA, most of those cases pre-date EPA's 2001 explanation of the CWA's authority over hydrologically connected groundwater. Furthermore, the few contrary cases typically arose in situations where a hydrological connection to surface water had not been pled, was remote or entirely unproven, the plaintiff claimed that the CWA applies to *all* discharges to groundwater, or the court construed the issue as such. The most notable pre-2001 case is *Umatilla Waterquality Protective Ass'n, Inc. v. Smith Frozen Foods, Inc.*[140] But the holding in *Umatilla* depended heavily on the absence – at that time – of an authoritative statement from EPA.[141] Indeed, in the wake of EPA's 2001 determination, the

[140] *Umatilla Waterquality Protective Ass'n. Inc. v. Smith Frozen Foods, Inc*., 962 F. Supp. 1312, 1316-20 (D. Or. 1997).

[141] *See id.* at 1317, 1319, 1320 ("these considerations … would not signify if Congress or EPA had clearly spoken to the issue of groundwater coverage.").

same court (the District of Oregon) disavowed *Umatilla*: "contrary to *Umatilla*, the CWA covers discharges to navigable surface waters via hydrologically connected groundwater."[142]

The current rulemaking does not alter EPA's longstanding and consistent interpretation. The agencies should acknowledge that fact in thei response to comments on the Proposed Definition.

B. EPA and the Corps Should Not Categorically Exclude All Groundwater from the Definition of Waters of the United States.

The agencies' proposal to include language in the regulation categorically excluding groundwater from the definition of waters of the United States is scientifically and legal unsound. Many SAB panelists questioned this exclusion.

For example:

- Dr. David Allan questions the exclusion of **"**Groundwater, including groundwater drained through subsurface drainage systems" because "an important pathway for some nutrients and contaminants is via subsurface drainage systems to ditches that may not have perennial flow, but which may deliver much of the nonpoint runoff to downstream waters." Dr. Allan concluded that "this exclusion is a concern, and should be recognized as such."[143]

- Likewise Dr. Robert Brooks stated that this exclusion "seems ill-advised because of the likely connectivity of surface flows into features such as karst sinkholes, with a potential to contaminate groundwater aquifers used for human water supplies, plus the

[142] *Northwest Envtl. Def. Ctr.v. Grabhorn, Inc.*, 2009 U.S. Dist. LEXIS 101359, *34 (D. Or. Oct. 30, 2009).

[143] Member Comments, *supra* note 72, compilation of comments of members at 14.

possibility of reconnections to surface water a reasonable distance away."[144]

- And following a lengthy analysis, Dr. Kenneth Kolm concluded: "In no cases should groundwater that is shown to be connected to 'waters of the US' be exempt."[145]

Courts have also agreed that groundwater can, and in some circumstances should, itself, be considered waters of the United States. For example, in the *Hawai'i Wildlife Fund v. County of Maui* case cited above, the court held that "liability arises even if the groundwater under the [discharging facility] is not itself protected by the Clean Water Act, as long as the groundwater is a conduit through which pollutants are reaching navigable-in-fact water."[146] However, the court went on to note:

> That is not to say that groundwater can never be regulated under the *Healdsburg* test [i.e., under the Ninth Circuit's decision in *N. Cal. River Watch v. City of Healdsburg*, which applied Justice Kennedy's concurrence in *Rapanos* to find CWA coverage based on a subsurface connection]. An aquifer with a substantial nexus with navigable-in-fact water may itself be protected under the Clean Water Act even if it is not necessarily a conduit for pollutants.[147]

The agencies' proposed categorical exclusion of groundwater will leave ecologically important waters unprotected. The groundwater exclusions are scientifically and legally indefensible. Given that the proposed rule provides that a significant nexus between two surface waters can be demonstrated on the basis of a subsurface hydrologic connection, it makes no sense to categorically exclude

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[144] *Id.* at 17.

[145] *Id.* at 49.

[146] *Hawai'i Wildlife Fund v. County of Maui*, 2014 U.S. Dist. LEXIS 74256 *35 (D. Haw. May 30, 2014).

[147] *Id*. at *45.

all groundwater, including the very same groundwater that forms the hydrologic connection between the two surface waters and establishes that significant nexus. Instead, EPA and the Corps should include groundwater as a subcategory of "other waters," and leave its jurisdictional status to be determined on a case-by-case basis.

VIII. CATEGORICAL INCLUSION OF ADDITIONAL WATERS

The agencies requested comment on whether it should categorically include or exclude prairie potholes, vernal pools, Delmarva and Carolina bays, pocosins and playas, in the definition of "waters of the United States." These waters should be categorically included within the definition because they either alone or in the aggregate have significant impacts on the quality of the nation's water as demonstrated by the Connectivity Report and individual SAB member comments.[148]

As noted in the Connectivity Report notes, when considered in the aggregate and from a biological perspective, waters that appear isolated on the landscape are not isolated at all from a biological and hydrological perspective.[149] As noted by SAB member Dr. Sullivan, "the science is currently available (partially summarized starting 22250) to demonstrate that sufficient connectivity exists without a case-specific analysis for certain subcategories of "other waters" (22216) (e.g. prairie potholes, Carolina and Delmarva bays, pocosins, Texas coastal prairie wetlands, western vernal pools). However, I do not believe that the science is sufficiently developed to support a determination to exclude any groups of 'other waters' (or subcategories thereof, e.g., Great Plains playa lakes) from jurisdictional status at this time in spite of the resource-intensive nature of a case-specific analytical approach."[150]

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[148] With the one small exception of playas where the experts conclude that the science is not adequately developed but that it should simply mean that they be decided on a case-by-case basis, not categorically excluded. *See* Member Comments, *supra* note 72, Sullivan at 88; Connectivity Report *supra* note 3.

[149] Connectivity Report, *supra* note 3, at 1-11 and 1-12.

[150] Member Comments, *supra* note 72, Dr. Mazeika Sullivan at 88.

With regard to pocosins, "seventy percent of the nation's pocosins are found in North Carolina, and they comprise approximately 50 percent of the State's freshwater wetlands . . ." and these pocosins:

- Serve as the last refuge for many upland and floodplain species requiring large blocks of habitat, especially area-sensitive, forest-interior birds and the black bear;

- Provide important habitat for four federally-listed endangered species and one federally-listed threatened species. Two other State-listed endangered species are also found there;

- Stabilize estuaries by controlling the rate of freshwater flow thereby regulating salinity. Much of the State's $63 million commercial fishery depends on this estuarine regime;

- Contain 6 National Wildlife Refuges, 1 national and 2 State forests, 7 State parks, 5 State game lands, and 2 State natural areas. About 18 percent is owned by Federal and State forestry agencies.[151]

By 1993, Only 695,000 acres (31 percent) of North Carolina's original 2.5 million acres of pocosins remained in their natural state resulting in fragmentation of wildlife habitat and removal of pollutant filtering capacity.[152] The U.S. Department of Interior describes the impact of pocosin alteration as follows:

> The remaining "islands" support less species diversity in fewer numbers. Thousands of contiguous acres are required for forest interior bird species and the black bear to survive. Drainage systems

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[151] U.S. Department of Interior, The Impact of Federal Programs on Wetlands, Vol. II, Chapter 16: North Carolina - The Pocosins and Other Freshwater Wetlands, available at: http://www.doi.gov/pmb/oepc/wetlands2/v2ch16.cfm.

[152] *Id.*

> interrupt the sheetflow that moves slowly across the wetland surface. Under natural conditions the runoff rises slowly after storms, often peaking several days after the rain. This process modulates the flow of water and controls the salinity of receiving waters. Nutrients, pollutants, and silt from agricultural runoff are filtered, as well. Once [agricultural] drainage is installed, peak and annual flows increase, and pulses of freshwater containing increased loads of chemicals and sediments are discharged into streams, marshes, and shallow estuarine nursery areas. Over 90 percent of North Carolina's commercial fish harvest depends on the estuaries. Comparisons show that unaltered areas maintained stable salinity, while areas which received drainage from ditched pocosins and non-alluvial swamp forests had salinity which varied by 100 percent over short periods of time. The altered areas produced fewer shrimp, finfish, and oysters. Other studies have linked agricultural drainage to excessive algal blooms and food chain disruptions. Studies of the Chowan River, which flows into Albemarle Sound, have linked increased nutrient loads from agricultural drainage and point source discharges to excessive algae blooms, subsequent food chain disruptions, and red sore disease problems. In 1976, about 95 percent of the white perch and half of the commercial fish caught in Albemarle Sound was discarded due to lesions.[153]

Pocosins occur in the southeastern Coastal Plain of the U.S. from Virginia to north Florida and

> . . . are often found adjacent to estuaries and have surface hydrologic connections that are linked to the regional water quality and salinity gradients found in estuarine areas along the southeastern coast. This hydrologic connection, combine with the vast continuous expanses of pocosins on the landscape, suggests that they are connected to regulated tributary waters of the United States. In addition, a survey of U.S. Army Corps of Engineers personnel in North Carolina indicates that most pocosins are considered hydrologically connected to

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[153] *Id.*

regional water supplies since they are the source of water flow on the landscape where they dominate. [154]

IX. WASTE TREATMENT SYSTEMS SHOULD NOT BE CATEGORICALLY EXCLUDED FROM THE DEFINTION

A. History of the Waste Treatment System Exclusion

On May 19, 1980, EPA issued a final rule that made clear that waste treatment systems created by impounding "waters of the United States" are not exempt from regulation under the CWA.[155] Specifically, the rule stated:

> [w]aste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 C.F.R. § 423.11(m) which also meet the criteria of this definition) are not waters of the United States. *This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States.*[156]

In response to industry pressure, however, EPA suspended the final sentence of the regulation, which states that "[t]he exclusion applies only to manmade bodies of water which neither were original created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States," just a few months later.[157]

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[154] Richardson, Curtis J. Pocosins: Hydrologically isolated or integrated wetlands on the landscape? *Wetlands* 23(3): 563-576, available at http://nicholas.duke.edu/wetland/ab_Richardson_03.htm

[155] 45 FR 33,290, 33,424 (May 19, 1980)

[156] *Id.* at 33,424 (emphasis added).

[157] 45 Fed. Reg. 48,620, 48,620 (July 21, 1980).

EPA expressly cited the utility industry's concern that they would now have to obtain an NPDES permit to discharge into existing coal ash dumps that were created by impounding "waters of the United States" as part of its justification for suspending this part of the rule.[158] At that time, EPA claimed that this was a temporary suspension and promised to "promptly [] develop a revised definition and to publish it as a proposed rule for public comment. At the conclusion of that rulemaking, EPA [stated] it w[ould] amend the rule, or terminate the suspension."[159]

EPA never followed through on its promise to address this important issue, allow the public an opportunity to provide comments, and finalize a new regulation or terminate the suspension. EPA, along with the Corps, is now proposing to formally codify the waste treatment system exclusion without providing notice and comment.[160] In the current proposed rule, the agencies state that they are not accepting public comment on the waste treatment exclusion because they maintain they have proposed no changes to the waste treatment system exclusion.[161] Instead of making good on the promise it made over thirty years ago, EPA is now attempting to evade compliance with the CWA and Administrative Procedures Act by bootstrapping the impermissible exclusion onto the "waters of the United States" rule without notice and comment.

B. Coal Ash Surface Impoundments

This exclusion has had and will continue to have serious consequences for our nation's waters if the agencies finalize the proposed waste treatment exemption. For example, it has been a common practice for the utility industry to impound streams and rivers to create waste dumps for coal ash[162] and other wastes

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158 *Id.*

159 *Id.*

160 *See* 79 Fed. Reg. 22,188, 22,189 (Apr. 21, 2014).

161 79 Fed. Reg. at 22,190.

162 Coal combustion waste or coal ash are wastes "from the combustion of coal in power plants and captured by pollution control technologies, like scrubbers." U.S. Envtl. Prot. Agency, Coal

associated with coal-fired power plants. In fact, EPA cited the utility industry's concern about coal ash impoundments as one of the primary reasons EPA suspended the sentence making clear that permits are required for discharges into a waste treatment system created by impounding waters of the United States.[163] Coal-fired power plants generate millions of gallons of wastewater loaded with toxic pollutants like arsenic, boron, cadmium, chromium, lead, mercury, and selenium into our rivers, lakes, and streams each year. This pollution is discharged directly from the power plant; flows from old, unlined surface impoundments or "ponds" that many plants use to store toxic slurries of coal ash and smokestack scrubber sludge; and seeps from unlined ponds and landfills into ground and surface waters. EPA estimates that *at least 5.5 billion pounds* of pollution are released into the environment by coal-burning power plants every year.[164] Coal-burning power plants are responsible for at least 50 to 60 percent of the toxic pollutants discharged into waters of the U.S—more than the other nine top polluting industries *combined*.[165]

Coal combustion wastewaters contain a slew of toxic pollutants that can be harmful to humans and aquatic life in even small doses. Due to the bio-accumulative nature of many of these toxins, this pollution persists in the environment, and even short-term exposure can result in long-term damage to aquatic ecosystems. In short, coal plant water pollution has serious public health consequences and causes lasting harm to the environment. According to EPA, power plant pollution has caused over 160 water bodies not to meet state water quality standards, prompted government agencies to issue fish consumption

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Combustion Residuals – Proposed Rule,
http://www.epa.gov/osw/nonhaz/industrial/special/fossil/ccr-rule/ (last visited Nov. 12, 2014).

[163] 45 Fed. Reg. at 48,620.

[164] EPA, Environmental Assessment for the Proposed Effluent Limitation Guidelines and Standards for the Steam Electric Power Generating Point Source Category 3-14 (Apr. 2013), Docket No. EPA-HQ-OW-2009-0819-2260 [hereinafter EA].

[165] *Id.* at 3-13.

advisories for 185 waters, and degraded 399 water bodies across the country that serve as public drinking water supplies.[166]

Utilities in other states have also created coal ash dumps by impounding or burying a waters of the United States. For example, the FirstEnergy Little Blue Run impoundment in Pennsylvania, the nation's largest coal ash impoundment, was created by damming Little Blue Run stream. The Pennsylvania Department of the Environment took enforcement action for widespread pollution caused by this leaking impoundment and recently ordered a $169 million dollar cleanup and closure of Little Blue Run.[167]

Although EPA claims that the waste treatment exclusion is not a wholesale exemption from compliance with the CWA because they interpret it to apply only to impoundments that had been in existence for many years at the time it first suspended the final sentence of the definition, the plain language of the regulation includes no grandfather provisions or other limiting language related to the age of the impoundment. Further, EPA appears to be backtracking on this interpretation to allow new impoundments to claim the exemption so long as they obtain a § 404 permit. In short, EPA is proposing to codify a regulation that creates a gaping hole in the CWA and authorizes utilities and industrial operators to use our nation's waters as their own private sewers—all while refusing to follow notice and comment requirements of the CWA and the Administrative Procedures Act.

C. EPA is prohibited from codifying the waste treatment exclusion without providing notice and an opportunity for public comment.

EPA may not codify the waste treatment exclusion without following notice and comment requirements. The CWA requires that "[p]ublic participation in the

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[166] http://water.epa.gov/scitech/wastetech/guide/steam-electric/proposed.cfm.

[167] Pa. Dep't of the Env't, DEP Issues Permit Requiring Closure of FirstEnergy's Little Blue Run Impoundment (Apr. 3, 2014), *available at* http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=20442&typeid=1.

development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established by the Administrator any State under this Act *shall be provided for, encouraged, and assisted* by the Administrator and the States.[168] Under the Administrative Procedures Act, EPA must provide for public participation for agency actions that create law (i.e. legislative rules or substantive rules).[169] Courts at all levels have stressed the importance of public participation in rulemaking, and the D.C. Circuit has determined that notice and comment works "(1) to ensure that agency regulations are tested via exposure to diverse public comment, (2) to ensure fairness to affected parties, and (3) to give affected parties an opportunity to develop evidence in the record to support their objections to the rule and thereby enhance the quality of judicial review."[170] Yet thirty-four years after promising to promptly publish a proposed rule setting forth a revised definition of "waste treatment system," EPA and the Corps are attempting to circumvent the Administrative Procedures Act and CWA Act by codifying the illegal waste treatment system exclusion without notice and comment rulemaking.

1. EPA's proposed waste treatment system exclusion and codification of the suspension is a legislative rule.

There can be no doubt that the proposed waste treatment system exclusion and codification of the suspension is a legislative rule subject to notice and comment under the CWA and the Administrative Procedures Act. "To determine whether a regulatory action constitutes promulgation of a regulation, [courts] look to three factors: (1) the Agency's own characterization of the action; (2) whether the action was published in the Federal Register . . . .; and (3) whether the action has binding effects on private parties or on the agency."[171]

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[168] 33 U.S.C. § 1251(e).

[169] *See, e.g.*, *Gibson Wine Co. v. Snyder*, 194 F.2d 329, 331 (D.C. Cir. 1952).

[170] *International Union, United Mine Workers of Am. V. Mine Safety & Health Admin.*, 407 F.3d 1250, 1259 (D.C. Cir. 2005).

[171] *Iowa League of Cities v.* EPA, 711 F.3d 844, 862 (8th Cir. 2013) (citing *Molycorp, Inc. v. EPA*, 197 F.3d 543, 545 (D.C. Cir. 1999)).

In the proposed rule, EPA expressly identified the action as a regulation (as opposed to an interpretive rule or general statement of policy).[172] The action was published in the Federal Register.[173] Finally, the action has had and will continue to have a binding effect on both dischargers and the EPA. Industrial operators will arguably have a right to discharge into waste treatment impoundments created by impounding waters of the United States without a NPDES permit so long as the impoundments are "designed to meet the requirements of the Clean Water Act."[174] Accordingly, the regulation will confer rights or obligations on private parties and the agency. Thus, the waste treatment system exclusion is subject to public review and comment.

Notably, EPA must follow public notice and comment procedures under the Administrative Procedures Act not only when it enacts a rule, but when it repeals a rule as well.[175] As discussed previously, in spite of its promise, EPA has never provided notice and comment on the suspension even though the suspension of the last sentence alters the definition and is akin to an actual repeal of a portion of the final rule.[176] Thus, EPA must follow public participation requirements for the waste treatment system exclusion.

2. The waste treatment system exclusion is not an interpretative rule or general statement of policy exempt from notice and comment requirements.

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[172] 79 Fed. Reg. at 22,217 ("The agencies' longstanding regulations exclude waste treatment systems designed to meet the requirements of the CWA . . . .").

[173] *Id.*at 22,188.

[174] *Id.* at 22,268.

[175] *Nat'l Parks Conservation Ass'n v. Salazar*, 660 F. Supp. 2d 3, 5 (D.D.C. 2009).

[176] *See* 45 Fed. Reg. at 48,620.

The proposed regulation is not an interpretative rule or general statement of policy exempt from notice and comment requirements.[177] First, the regulation is not an interpretative rule because it grants substantive rights to private parties.[178] As discussed, the exclusion arguably works to allow persons to discharge into waters of the United States without a permit so long as it is a waste treatment system designed to meet the requirements of the CWA. [179]

Further, the mere fact that an agency action amends an existing legislative rule may disqualify it from qualification as an interpretative rule.[180] EPA's suspension of the limits to the waste treatment system exception, whether "temporarily" on July 21, 1980 or again on April 21, 2014, amends the legislative rule finalized on July 18, 1980. Thus, because it amends an existing legislative rule, the waste treatment system exclusion cannot be an interpretative rule.

EPA knows how to classify an action as an interpretative rule when it intends to do so. For example, in the current proposed rule, EPA included a section on "discharges of dredged or fill material associated with certain agricultural conservation practices . . ." and identified it as an interpretative rule.[181] EPA is unequivocal that it intends this latter section to be an interpretive rule rather than a substantive rule—mentioning "interpretive rule" five times over the course of a single paragraph. EPA never suggests the waste treatment system exemption is an interpretative rule in the proposal.

Second, the proposed regulation is not a general statement of policy. General statements of policy are "statements issued by an agency to advise the public

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[177] *See* 5 U.S.C. § 553(b)(3)(A) (stating that notice and comment is not required for interpretative rules or a general statement of policy).

[178] *See, e.g.*, *Brown Exp., Inc. v. U.S.*, 607 F.2d 695,700 (5th Cir. 1979) (noting that rules that grant substantive rights are not interpretative rules).

[179] 79 Fed. Reg. at 22,268.

[180] *Gunderson v. Hood*, 268 F.3d 1149, 1154 (9th Cir. 2001) ("If a rule is inconsistent with or amends an existing legislative rule, then it cannot be interpretive.").

[181] 79 Fed. Reg. at 22,194.

prospectively of the manner in which the agency proposes to exercise a discretionary power.[182] In this case, it is clear the definition of the waste treatment system definition is not a general statement of policy. In conclusion, the waste treatment system exclusion is not an interpretative rule or general statement of policy.

For all of these reasons, EPA must follow the public participation requirements set forth in the CWA and Administrative Procedures Act. EPA cannot bootstrap a procedurally deficient regulation into the current rulemaking and evade public participation requirements.

D. EPA does not have the authority to exempt waters of the United States from coverage under the Clean Water Act.

The waste treatment system exemption is in direct conflict with the CWA and fails Step One and Step Two of the *Chevron* test. The plain language of the proposed waste treatment system exclusion is that a waste treatment system designed to meet the requirements of the Clean Water Act is not a water of the United States even if it is created by impounding waters of the United States.[183] The proposed regulation states that "notwithstanding whether they meet the terms of paragraphs (a)(1) through (a)(3) of this definition," "[w]aste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act."[184] Without the second part of the waste treatment system definition—"This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as a disposal area in wetlands) nor resulted from the impoundment of waters of the United States." – the broad exclusion for waste treatment systems from CWA jurisdiction is directly contrary to the CWA and decades of law holding that once a body of water is a waters of the United States, it is always a waters of the United States.

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[182] *Brown*, 607 F.2d at 701 (citing U.S. Department of Justice, Attorney General's Manual on the Administrative Procedure Act 30 n. 3 (1947)).

[183] *See* 79 Fed. Reg. at 22,268.

[184] *Id.*

1. It is unambiguous that EPA lacks the authority to exclude "waters of the United States" from coverage under the Clean Water Act.

While "waters of the United States" itself may be an ambiguous term that EPA is charged with promulgating regulations to define, it is clear from legislative history and decades of case law that Congress did not intend for EPA to allow our nation's rivers, streams, and lakes to be used as private sewers for the utility industry and other polluters. Under *Chevron v. Natural Res. Def. Council,* courts examine "the intent of Congress" in creating the statue.[185] If the intent is clear, a court "gives effect to the unambiguously expressed intent of Congress." [186] If, however, the statute is ambiguous, a court will defer to an agency's interpretation of the statute if it is a "permissible construction."[187]

Here, senate reports speak directly to this issue and the general common law rule prior to the enactment of the CWA was that a body of water forever remains a waters of the United States once it has been identified as a waters of the United States.[188] Thus, the waste treatment system exclusion fails Step One.

2. The waste treatment system exclusion is directly contrary to the statute.

There is no doubt that Congress intended the broadest possible reach of the CWA. The original conferees stated that "the term 'navigable waters' be given the broadest possible constitutional interpretation unencumbered by agency determinations which have been made or may be made for administrative

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[185] 467 U.S. 837, 842 (1984).

[186] *Id.* at 842-43.

[187] *Id.* at 843.

[188] *See, e.g.*, *United States v. Appalachian Elec. Power Co.*, 311 U.S. 377, 408 (1940) ("When once found to be navigable, a waterway remains so.").

purposes."[189] The Senate Committee on Public Works, in approving the Federal Water Pollution Control Act Amendments of 1971 explicitly found that "[t]he use of any river, lake, stream or ocean as a waste treatment system is unacceptable."[190]Several years later, another Senate Report stated that the CWA "stipulated that the Nation's fresh and marine waters would not be an element of the waste treatment process. That continues to be national policy."[191] There appear to be no contrary statements in the legislative history.

3. The waste treatment system exclusion is directly contrary to decades of judicial decisions reviewing the scope of "waters of the United States."

In addition to legislative history that makes clear that the waste treatment system exclusion is contrary to Congressional intent, it is settled law that once a body of water is found to be waters of the United States, it always remains waters of the United States.[192]

While some of these decisions examined the term "navigable waters" as opposed to "waters of the United States," the Clean Water Act defines "navigable waters" as "the waters of the United States . . . ."[193] "'[W]here Congress borrows terms of art in which are accumulated the legal tradition and meaning of centuries of practice, it presumably knows and adopts the cluster of ideas that were attached to each borrowed word in the body of learning from which it was taken and the meaning its use will convey to the judicial mind unless otherwise instructed. In

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[189] S. Rep. No. 92-1236, at 45 (1972) (Conf. Rep.), *reprinted in* 1972 U.S.C.C.A.N. 3776, 3822.

[190] S. Rep. No. 92-414, at 7 (1972), *reprinted in* 1972 U.S.C.C.A.N. 3668, 3674.

[191] S. Rep. No. 95-370, at 4 (1977) *reprinted in* 1977 U.S.C.C.A.N. 4326, 4330.

[192] *See* Scott Snyder, Note, *The Waste Treatment Exclusion and the Dubious Legal Foundation for the EPA's Definition of "Waters of the United States"*, 21 N.Y.U. Envtl. L.J. 504, 522-23 (2014) (providing overview of federal cases prior to the enactment of the Clean Water Act holding that once a body of water has been classified as a waters of the U.S., it remains a waters of the U.S. forever).

[193] 33 U.S.C. § 1362(7).

such case, absence of contrary direction may be taken as satisfaction with widely accepted definitions, not as a departure from them.'"[194]

In this case, there is no evidence Congress intended to depart from well settled law to allow EPA to remove bodies of water that fall squarely within the definition of "waters of the United States" from the reach of the CWA, especially where those "waters of the United States" are impounded to create a private dump for a utility or other industrial operation.[195] Further, it is difficult to justify a claim that navigable waters retain a protected status forever, while waters of the United States – by definition also "navigable waters" – can be excluded from protection when they are impounded for the purposes of creating a dump.[196]

E. The waste treatment system exclusion is arbitrary, capricious, and directly contrary to the Clean Water Act.

Even if a court did find that the issue is ambiguous, EPA's charge to define "waters of the United States" is not without bounds. EPA's definition of "waters of the United States" is permissible so long as it is not "arbitrary, capricious, or manifestly contrary to the statute."[197] In this case, the broad waste treatment system exclusion is directly contrary to the statute, and is arbitrary and capricious because the legislative history and decades of common law make clear that EPA cannot carve out "waters of the United States" from the scope of the CWA to create waste disposal sites, which is precisely what the waste treatment system exclusion does.[198]

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[194] *Carter v. United States*, 530 U.S. 255, 264 (2000) (*quoting Morissette v. United States*, 342 U.S. 246, 263 (1952); *See also* Scott Snyder, Note, *The Waste Treatment Exclusion and the Dubious Legal Foundation for the EPA's Definition of "Waters of the United States"*, 21 N.Y.U. Envtl. L.J. 504, 523, 523 n. 95 (2014).

[195] *Id.* at 523.

[196] *Id.* at 522-23.

[197] *Chevron v. Natural Res. Def. Council*, 467 U.S. 837, 844 (1984).

[198] *See* discussion *infra.*

F. EPA's interpretation of the proposed waste treatment exclusion does not make it a permissible construction of the Clean Water Act.

EPA has asserted that the waste treatment system exemption is not really as broad as the plain language suggests because it interprets the regulation to exclude only older waste treatment systems constructed from waters of the United States. Generally, an agency's interpretation of its own regulations is subject to judicial deference unless it is "plainly erroneous or inconsistent with the regulation."[199] In this case, the agency's interpretation conflicts with the plain language of the regulation, and EPA has also advanced a second interpretation that does exclude newly created waste treatment systems in some circumstances.

When it first finalized the waste treatment system definition in 1980, EPA stated that Congress did not intend for the CWA to exempt waste treatment systems created by impounding waters of the United States.[200] Specifically, EPA said:

> [b]ecause CWA was not intended to license dischargers to freely use waters of the United States as waste treatment systems, the definition makes clear that treatment systems created in those waters or from their impoundment remain waters of the United States. Manmade waste treatment systems are not waters of the United States, however, solely because they are created by industries engaged in, or affecting interstate or foreign commerce.[201]

Even when the agency suspended the final sentence of the regulation, it reiterated its purposes, noting that "[t]he Agency's purpose in the new last sentence was to ensure that dischargers did not escape treatment requirement by impounding waters of the United States and claiming the impoundment was a waste treatment system, or by discharging wastes into wetlands."[202]

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[199] *Auer v. Robbins*, 519 U.S. 452, 461 (1997).

[200] 45 Fed. Reg. at 33,298.

[201] *Id.*

[202] 45 Fed. Reg. at 48,620.

After promulgating a rule that reflected the intent of Congress that our nation's rivers, lakes, and streams not be used as private dumps and then backtracking, EPA came up with a new spin on how to treat coal ash and other industrial impoundments instead of following through on its promise to revisit the suspension. In a 1986 memorandum, EPA stated that it evaluates what is an exempt waste treatment system on a case-by-case basis, treating "newly created impoundments of waters of the U.S. as 'waters of the U.S.,' not as 'waste treatment systems designed to meet the requirements of the CWA,' whereas impoundments of 'waters of the U.S.' that have existed for many years and had been issued NPDES permits for discharges from such impoundments as 'wastewater treatment systems designed to meet the requirements of the CWA' and therefore are not 'waters of the U.S."[203] EPA states that, in fact, it suspended the last sentence of the waste treatment system in order to allow for such case-by-case decisions. [204] EPA has echoed the interpretation articulated in the 1986 memorandum in various scenarios.[205]

The fact of the matter is that the proposed waste treatment exemption does not include any language limiting the exclusion to treatment systems created by impounding waters of the United States. that have been in existence "for many years" or for any other time period. Further, it is illogical—and courts have held as much—to suggest that a waste impoundment created prior to the CWA has

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[203] Memo from Marcia Williams, EPA Office of Solid Waste Director, to James H. Scarborough, EPA Region IV Residuals Management Branch Chief, at 7 (Apr. 2, 1986).

[204] *Id.* (noting that EPA suspended the sentence in order to "restor[e] the ambiguity of the earlier regulations, so that each case must be decided on its own facts"). This is, of course, contrary to the purpose EPA provided when it suspended the sentence. 45 Fed. Reg. at 48,620 (noting that EPA would re-examine the waste treatment system definition and "promptly . . . develop a revised definition and to publish it as a proposed rule for public comment").

[205] Jon Devine et al., *The Intended Scope of Clean Water Act Jurisdiction*, 41 Envtl. L. Rep. News & Analysis 11,118, 11,125 (2011) (citing Letter from Lisa P. Jackson, Administrator, EPA, to Rep. James L. Oberstar at 1 (Apr. 30, 2010)). EPA has taken the same position in litigation. *See W. Va. Coal Ass'n v. Reilly*, 728 F. Supp. 1276, 1289-90 (S.D. W. Va. 1989), *aff'd*, 932 F.2d 964 (4th Cir. 1991).

been designed to meet the requirements of the CWA.[206] In any event, the plain language of the proposed regulation arguably exempts all waste treatment systems designed to meet the requirements of the CWA created by impounding waters of the United States regardless of when the treatment systems are constructed.[207]

In fact, EPA and the Corps have attempted to reverse this interpretation in recent years to exclude *newly* created waste treatment systems from "waters of the United States." *See, e.g.*, Jon Devine et al., *The Intended Scope of the Clean Water Act*, 41 Envtl. L. Rep. News & Analysis 11,118, 11,125 (2011) (noting that the agencies have advanced this broader interpretation in a 1998 Federal Register notice, a 2000 guidance document, and by the Corps in recent litigation. "Under the agencies' revised interpretation, a new impoundment of waters of the United States is able to qualify for the waste treatment system exclusion if it is covered by a § 404 permit; that way, the system is 'designed to meet the requirements of the Act,' as required by the regulation."[208]

EPA's interpretation of the regulation does not make the proposed waste treatment system exemption a permissible construction of the CWA. EPA's interpretation is inconsistent with the language of the regulation itself, and EPA has advanced a broader interpretation that does exclude newly created impoundments. For all these reasons, the waste treatment system exclusion is illegal and fails Step One and Step Two of the *Chevron* test.

For all of the reasons set forth above, Commenters strongly urge EPA and the Corps to eliminate the exclusion or publish a revised definition of waste treatment system that complies with the CWA. At a minimum, EPA must provide full notice and comment rulemaking for the proposed waste treatment system exclusion.

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[206] *See, e.g.*, *California Sportfishing Prot. Alliance v. Cal. Ammonia Co.*, 2007 WL 273847, *6 (E.D. Cal 2007) (noting that the fact that a waste treatment impoundment is created prior to the Clean Water Act is evidence that it is not "designed to meet the requirements of the Clean Water Act").

[207] 79 Fed. Reg. at 22,268.

[208] *Id.*

Thank you for the opportunity to comment on this important proposal.

Sincerely,

Kelly Hunter Foster, Senior Attorney
Waterkeeper Alliance

Brady J. Wilkins, Baykeeper
Peconic Baykeeper
Quogue, New York

Sara Aminzadeh, Executive Director
California Coastkeeper Alliance
San Francisco, California

Gary Wockner, Executive Director
Save the Poudre: Poudre Waterkeeper
Fort Collins, Colorado

Sejal Choksi-Chugh, Program Director
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Krissy Kasserman, Youghiogheny Riverkeeper
Mountain Watershed Association
Melcroft, Pennsylvania

Jerry O'Connell, Riverkeeper
Big Blackfoot Riverkeeper
Greenough, Montana

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Washington, North Carolina

Nelson Brook, Riverkeeper
Black Warrior Riverkeeper
Birmingham, Alabama

Paul Orr, Riverkeeper
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Travis Graves, Lower Neuse Riverkeeper
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Kevin P. Ward, Waterkeeper
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Snowmass, Colorado

John Nelson, Grand Traverse Baykeeper
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Traverse City, Michigan

Michael R. Helfrich, Riverkeeper
Lower Susquehanna Riverkeeper
York, Pennsylvania

Matthew Starr, Upper Neuse Riverkeeper
Neuse Riverkeeper Foundation
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Kathy Phillips, Assateague Coastkeeper
Assateague Coastal Trust
Berlin, Maryland

John L. Wathen, Hurricane Creekkeeper
Friends of Hurricane Creek
Tuscaloosa, Alabama

Rae Schnapp, Riverkeeper
Wabash Riverkeeper
Lafayette, Indiana

Tracy Kuhns, Louisiana Bayoukeeper
Save Our Gulf
Barataria, Louisiana

Guy Alsentzer, Waterkeeper/Executive Director
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Bozeman, Montana

Matt O'Malley, Waterkeeper

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Laura Calwell, Kansas Riverkeeper
Friends of the Kaw
Lawrence, Kansas

Wendy Steffensen, North Sound Baykeeper
RESources
Bellingham, Washington

Joe Cook, Advocacy & Communication Coordinator
Coosa River Basin Initiative
Rome, Georgia

Lee Willbanks, Upper St. Lawrence Riverkeeper
Save The River
Clayton, New York

Miles Johnson
Clean Water Attorney
Columbia Riverkeeper

Capt. Emmett Duke, Riverkeeper
Sassafras River Association

November 13, 2014

Gina McCarthy, Administrator
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Ave, NW
Washington, DC 20460

Attention: Docket ID No. EPA-HQ-OW-2011-0880

Dear Administrator McCarthy:

We are writing as foundations that have contributed hundreds of millions of dollars to the protection and restoration of critical water resources and aquatic habitats in the United States to urge adoption of a definition of waters of the United States that assures Clean Water Act protections for streams and wetlands essential to fish and wildlife, flood protection, and the health of the more than 117 million Americans who get their drinking water from public supplies fed in whole or in part by streams vulnerable to pollution.

We urge that the final rule specifically assure protection of isolated wetlands, intermittent and ephemeral streams, and the variety of water bodies that may not constantly have surface water connections to traditional navigable waters, but which serve important ecological functions. We note, in this regard, that U.S. EPAs Science Advisory Board found the proposed rules coverage of tributaries and adjacent waters and wetlands to be well supported by available science and, in fact, recommended that the final rule go further in protecting other waters such as Carolina and Delmarva Bays, Texas coastal prairie wetlands, prairie potholes, pocosins, western vernal pools and Great Plains playa lakes. It is critically important that the final rule assure protection for all categories of other waters that may influence the physical, chemical and biological integrity of downstream waters.

Coupled with a strong Clean Water Act, our philanthropic work has supported and inspired millions of Americans to rediscover and recommit themselves to the importance of clean water. The effectiveness of this work in the future depends on expeditious completion of this rulemaking based on the compelling science concerning the ecological significance of the full range of water bodies and types with which our nation is blessed.

Sincerely yours,

Agua Fund
Cecily C. Kihn, Executive Director.

Baltimore Community Foundation
Thomas E. Wilcox, President and CEO

Chino Cienega Foundation
Rob Wolcott, Vice President & Trustee

Christopher Reynolds Foundation
Stephen Viederman, Chair
Finance Committee

Compton Foundation
Ellen Friedman, Executive Director

Garfield Foundation
Jennie Curtis, Executive Director

The Campbell Foundation
Verna Harrison, Executive Director

The McKnight Foundation
Kate Wolford, President

Park Foundation
Jon Jensen, President

Prince Charitable Trusts
Kristin Pauly, Managing Director DC
Charles Twichell, Managing Director Chicago

Singing Field Foundation
Jonathan A. Scott, President & Director

Turner Foundation
Mike Finley, President

Wege Foundation
Ellen Satterlee, CEO

Weissman Family Foundation

CC:Jo-Ellen Darcy, Assistant Secretary of the Army (Civil Works)
Shaun Donovan, OMB Director
Michael Boots, CEQ Chair

November 14, 2014

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue NW.
Washington, DC 20460

Attention: Docket ID No. EPA-HQ-OW-2011-0880

To whom it may concern:

On behalf of our members, we submit these comments in support of the proposed rule defining the scope of waters protected under the Clean Water Act.

Our members rely on clean water for their livelihoods and enjoyment. Our groups represent Americans that enjoy hiking, swimming, paddling, diving, fishing, camping, biking, skiing, bird and other wildlife watching; visiting our national parks, refuges, forests, and other public lands; and the myriad other ways of enjoying the great outdoors. Access to clean water is imperative for their safety, happiness, and economic well-being.

The outdoor recreation economy is huge and it's growing, expanding about 5 percent annually between 2005 and 2011, even with the economic downturn. Consumers spend $646 billion annually on outdoor recreation; more than many other parts of the U.S. economy including pharmaceuticals, motor vehicles, and household utilities. It fuels many other major American economic sectors including manufacturing, hotels and restaurants, and retail trade. Consumers visit their local retailers to buy canoes, backpacks, hiking boots, coolers, bikes, fishing poles, binoculars, and trail maps. U.S. and international families pay for river guides and outfitters, lift tickets and ski lessons, entrance fees, fishing licenses, and more. They rent cars, book hotel rooms, buy plane tickets, and stock up on groceries and souvenirs. Our national parks generate $31 billion from tourism and recreation alone.

The economic engine of outdoor recreation also results in 6.1 million jobs. The job benefits are felt in each state. For example, 173,400 jobs have been created by travelers to Ohio in 2013 representing 4 percent of the state's total non-farm employment. Over 148,700 jobs were created by travelers to Colorado (7 percent of total non-farm employment), nearly 202,000 jobs in North Carolina (6 percent of total non-farm employment), and 811,300 jobs in Florida (13 percent of total non-farm employment).

Travel and tourism generated $2.1 trillion in economic impact in 2013. One out of every nine U.S. jobs is created directly or indirectly by travel, some of which to America's outdoor places.

What fuels this economy – in part – is safe, clean water.

Millions of swimmers visit beaches across the nation, renting umbrellas and chairs, eating at local restaurants and visiting souvenir carts. Anglers also look forward to their fishing trips and expect trout, bass, or northern pike to be in the rivers and lakes where they drop their lines. And hikers, bikers, paddlers, and visitors to national parks and other public lands want to fill their water bottles for their outdoor excursions with clean, quality drinking water.

These experiences are being threatened by ongoing threats to the quality of our nation's water. The last thing a beach goer and the small businesses that rely on them want is to find a posted 'do not swim' sign because the water is polluted and could make swimmers sick. Yet, EPA estimates that polluted beach water makes up to 3.5 million people ill each year as a result of sanitary sewer overflows and other beach pollution sources. The fish that anglers are after need good habitat found in streams and wetlands for their entire life cycles. According to the Fish and Wildlife Service, however, the rate of wetland loss increased by 140 percent nationwide between 2004 and 2009, the first documented acceleration of wetland loss since the Clean Water Act was enacted more than 40 years ago. Even in national parks, which Americans often view as pristine places, over half of park waters are impaired.

What is the cause of these ongoing problems? Aging water infrastructure and polluted runoff play important roles in contaminating near shore areas along the nation's coasts. Agricultural runoff also leads to water quality problems as the nutrients and fertilizers that help farmers grow our food also feed some of the most significant water quality challenges we face – algal blooms. Industrial and commercial development also destroys wetlands and other small streams leading to the loss of important habitat.

For years the Clean Water Act protected all wetlands and streams that our members and businesses rely on. Congress recognized the interconnectedness of U.S. waters when it passed the act in 1972. It clearly articulated its intent that the tributaries of navigable waters be protected when it stated in a January 1973 report: "Water moves in hydrologic cycles and it is essential that discharge of pollutants be controlled at the source."

Now the waters on which paddlers, kayakers, hikers, bird watchers, and businesses rely on are at increased risk and have been for nearly a decade-and-a-half. Supreme Court decisions in 2001 (SWANCC) and 2006 (Rapanos) and subsequent agency actions have created a confusing, time-consuming, and frustrating process for determining what waters are protected under the Clean Water Act and state laws. This threat leaves streams open to pollution and wetlands open to be filled and destroyed.

The irony is that the very waters now at risk because they lack clean water protections are the very ones that scientists say are important to protecting water quality and wildlife habitat. Small headwater and ephemeral streams feed rivers and lakes with the water that one-third of Americans (117 million) drink. Wetlands stop flooding by soaking up excess water and prevent algal blooms by filtering pollutants like nitrogen and phosphorus and provide homes for fish, birds, and other wildlife. By keeping these upriver waters clean and clear, downriver waters are protected from the pollution that doesn't aggregate upstream.

The Environmental Protection Agency and the Army Corps of Engineers have proposed a rule that seeks to clarify the scope of the Clean Water Act, which will provide clearer, more predictable protections for many streams, wetlands, and other waters. It will also give greater certainty to the regulated community by providing better guidance to federal and state regulators, which helps streamline the permitting process. The proposed rule only covers water bodies that the Clean Water Act has traditionally covered, such as intermittent headwater streams that have a defined bed and bank and flow to water already covered by the Act. It reiterates existing exemptions for farming, forestry, mining and other land use activities, and very explicitly for the first time excludes many ditches, ponds, and other upland water features important for farming and forestry. The proposal also relies on the best scientific understanding of stream and wetland science to clarify the scope of the Clean Water Act and enhance protection for streams, wetlands, and other waters nationwide.

Equally as important is what the proposed rule does not do. It does not cover any new types of waters that have not historically been covered under the Clean Water Act, such as groundwater. The proposed rule actually applies to fewer waters than were historically covered under the Nixon, Ford, Carter, Reagan, Bush, and Clinton administrations. It doesn't expand coverage to any new ditches or cover any artificial lakes, ponds, and artificial ornamental waters in upland areas or water-filled depressions created as a result of construction activity. It also doesn't cover agricultural practices exempt under current law.

Clean water benefits us all. All of us rely on it for drinking and many of us rely on it for recreational activities. Some of us also build businesses around it and earn a living from it. The EPA and Army Corps' proposed rule will help protect this precious resource by clarifying what waters of the United States are protected under law. This proposed clarification seeks balance between all users of our water resources so the costs of pollution from some sectors of the U.S. economy don't get pushed downriver to the detriment of others.

While each of us individually may have specific clarifications and changes to what has been proposed, we write today in general support of the proposal and hope EPA and Army Corps finalize it for the benefit of all of us.

Sincerely,

Rebecca Turner
American Forests

Peter Olsen
American Hiking Society

Ralph Heimlich
Chesapeake Paddlers Association, Inc.

Patrick Rakes
Conservation Fisheries, Inc.

Owhnn
Everglades International Hostel, Inc.

Stephanie Clement
Friends of Acadia

Courtney Lyons-Garcia
Friends of Big Bend National Park

Glenda Booth
Friends of Dyke Marsh

Whitney Clark
Friends of the Mississippi River

John Eckman
Friends of the North Fork of the Shenandoah River

Vivian Todd
Garden Club of America, Conservation, National Affairs and Legislation Committees

Abigail Johnson
Great Basin Water Network

Dennis Chestnut
Groundwork Anacostia

Les Burke
Jr. Scientists in the Sea

Byron Begley
Little River Outfitters, Inc.

Kim Raia
Little River Watershed Association

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Midshore Riverkeeper Conservancy

Katie Nyberg
Mississippi River Fund

Charles Connor
Nantahala Outdoor Center

Paul L. Washington, Jr.
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Melinda Huges-Wert
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Katherine Schinasi
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November 14, 2014
Water Docket
U.S. Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Ave. NW
Washington, DC 20460

Attn: Docket ID No. EPA-HQ-OW-2011-0880

The American Society of Civil Engineers (ASCE) is pleased to offer the following comments on the proposed definition of "Waters of the U.S." under the Clean Water Act. The proposed rule, released jointly by the U.S. Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers (USACE) was published in the Federal Register on Monday April, 21, 2014. Please consider these public comments as part of the official record, which closes on Friday, November 14, 2014.

Introduction

ASCE was founded in 1852 and is the country's oldest national civil engineering organization. It represents more than 145,000 civil engineers in private practice, government, industry and academia who are dedicated to the advancement of the science and profession of civil engineering.

The Society's diverse members are directly and materially affected by the proposed changes to federal water jurisdiction under the Clean Water Act in their professional practice areas, particularly in the fields of environmental engineering, water resources engineering and water resources planning and management. While ASCE supports a rulemaking by the agencies, we cannot support the proposed rule in its current form. In our comments, we urge review on four major issues; 1) significantly clarify several proposed definitions critical to the rulemaking, 2) exclude or provide guidance on the effect of the proposed rule on municipal separate storm sewer systems, 3) reexamine the rule with a particular eye towards circumstances in the arid West, and 4) consider the impact of the proposed rule on green infrastructure development.

ASCE staff carefully reviewed the rule, met with engaged members and attended multiple stakeholder outreach events conducted by the agencies. We are especially

thankful for the stakeholder outreach conducted by the EPA and USACE with ASCE on August 19, 2014. Over 200 members registered for the special webinar and phone conference hosted by ASCE joined by officials from EPA and USACE. Following the call we solicited feedback from our members, which helped inform these comments.

Legislative, Regulatory and Legal Background

The Federal Water Pollution Control Act or Clean Water Act (CWA) is the principal law governing pollution in the nation's stream, lakes, and estuaries. The key water quality provisions of the CWA fall in to three main categories. The federal government is required to set industrywide, technology-based effluent standards for dischargers. All dischargers must obtain a permit issued by the federal government or authorized states that specifies discharge limits under the National Pollutant Discharge Elimination System (NPDES). Finally, the Act requires states to develop plans for the regulation of nonpoint pollution. The CWA also contains a number of other regulatory provisions, the most important of these to civil engineers being section 404, which restricts the dredging and filling of wetlands absent a permit.

Critical to the proposed rule, the CWA applies only to "navigable waters," which is defined expansively by the Act as "the waters of the United States, including the navigable seas".[1] For most of the nation's history, Congress believed that its commerce power, as defined in the Commerce Clause of the United States Constitution, extended only to navigable waterways. For this reason, the nation's first laws governing water, for example, Section 10 of the Rivers and Harbors Act and most other Congressional water legislation assert authority only over "navigable waters." It's generally agreed this definition means the water must be navigable-in-fact. When Congress created section 404 of the Clean Water Act it used the same terminology, but in an effort to broaden the stretch of CWA jurisdiction defined the term "navigable waters" to mean "waters of the United States." The result has led to series of complex and confusing court cases, even from the Supreme Court.

A series of Supreme Court decisions beginning with *United States v. Riverside Bayview Homes, Inc* in 1985, followed by *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers ("SWANCC")* in 2001, and ending with *Rapanos v. United States* in 2006 muddled the jurisdiction of the federal governments under the Clean Water Act. The decisions of these three cases resulted in the regulating agencies (EPA and USACE) "evaluating the jurisdiction of water on a case-specific basis far more frequently than is best for the clear and efficient implementation of the CWA." [2] Therefore, the agencies are proposing a rule to clarify "whether individual water bodies

[1] CWA § 502(7), 33 U.S.C. § 1362(7).
[2] Definition of "Waters of the United States" Under the Clean Water Act; Proposed Rule, 79 Fed. Reg. 22, 188.

are jurisdictional and discharges are subject to permitting, and whether individual water bodies that are not jurisdictional and discharges are not subject to permitting."[3]

The Proposed Rule

EPA and USACE define "waters of the United Sates" in section (a) of the proposed rule, applying to all sections of the CWA. Section (a) defines "waters of the United States" as:

> (1) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
> (2) All interstate waters, including interstate wetlands;
> (3) The territorial seas;
> (4) All impoundments of waters identified in paragraphs (s)(1) through (3) and (5) of this section;
> (5) All tributaries of waters identified in paragraphs (s)(1) through (4) of this section;
> (6) All waters, including wetlands, adjacent to a water identified in paragraphs (s)(1) through (5) of this section; and
> (7) On a case-specific basis, other waters, including wetlands, provided that those waters alone, or in combination with other similarly situated waters, including wetlands, located in the same region, have a significant nexus to a water identified in paragraphs (s)(1) through (3) of this section.

Section (b) provides a list of water bodies not regulated under the proposed rule:

> (1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act.
> (2) Prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act the final authority regarding Clean Water Act jurisdiction remains with EPA.
> (3) Ditches that are excavated wholly in uplands, drain only uplands, and have less than perennial flow.
> (4) Ditches that do not contribute flow, either directly or through another water, to a water identified in paragraphs (s)(1) through (4) of this section.
> (5) The following features:
>> (i) Artificially irrigated areas that would revert to upland should application of irrigation water to that area cease;
>> (ii) Artificial lakes or ponds created by excavating and/or diking dry land and used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;

[3] Id.

(iii) Artificial reflecting pools or swimming pools created by excavating and/or diking dry land;
(iv) Small ornamental waters created by excavating and/or diking dry land for primarily aesthetic reasons;
(v) Water-filled depressions created incidental to construction activity;
(vi) Groundwater, including groundwater drained through subsurface drainage systems; and
(vii) Gullies and rills and non-wetland swales.

Finally, the proposed rule provides definitions of critical terms used in section (a):

(1) *Adjacent*. The term adjacent means bordering, contiguous or neighboring. Waters, including wetlands, separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes and the like are "adjacent waters."
(2) *Neighboring*. The term neighboring, for purposes of the term "adjacent" in this section, includes waters located within the riparian area or floodplain of a water identified in paragraphs (s)(1) through (5) of this section, or waters with a shallow subsurface hydrologic connection or confined surface hydrologic connection to such a jurisdictional water.
(3) *Riparian area*. The term riparian area means an area bordering a water where surface or subsurface hydrology directly influence the ecological processes and plant and animal community structure in that area. Riparian areas are transitional areas between aquatic and terrestrial ecosystems that influence the exchange of energy and materials between those ecosystems.
(4) *Floodplain*. The term floodplain means an area bordering inland or coastal waters that was formed by sediment deposition from such water under present climatic conditions and is inundated during periods of moderate to high water flows.
(5) *Tributary*. The term tributary means a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (s)(1) through (4) of this section. In addition, wetlands, lakes, and ponds are tributaries (even if they lack a bed and banks or ordinary high water mark) if they contribute flow, either directly or through another water to a water identified in paragraphs (s)(1) through (3) of this section. A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head of or along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break. A tributary, including wetlands, can be a natural, man-altered, or man-made water

and includes waters such as rivers, streams, lakes, ponds, impoundments, canals, and ditches not excluded in paragraph (t)(3) or (4) of this section.
(6) *Wetlands*. The term wetlands means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.
(7) *Significant nexus*. The term significant nexus means that a water, including wetlands, either alone or in combination with other similarly situated waters in the region (i.e., the watershed that drains to the nearest water identified in paragraphs (s)(1) through (3) of this section), significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (s)(1) through (3) of this section. For an effect to be significant, it must be more than speculative or insubstantial. Other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a "water of the United States" so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a water identified in paragraphs (s)(1) through (3) of this section.

ASCE Comments on EPA and USACE Rulemaking

Policy at the American Society of Civil Engineers is developed and driven by subject matter expert committees and approved by the ASCE Public Policy Committee and Board of Direction. Nearly fifteen years ago, the ASCE Committee on Environment, Energy and Water Policy (EEWPC) recognized the need to clarify federal jurisdiction over waters of the United States. The EEWPC developed a policy that urges Congress to revisit the Clean Water Act and clarify what has become a complex and confusing area of law and fact. In 2012 EEWPC revised and readopted a policy to clarify jurisdiction over wetlands and in 2013 revised and readopted a policy on clarifying programs administered under the Clean Water Act.

In light of Congress not addressing this difficult task and decisions handed down by the Supreme Court, ASCE believes that the Environmental Protection Agency and Army Corps of Engineers have both the subject matter expertise and legal authority to carry out a rule making. ASCE supports the need of the rule to add clarify to a complex and confusing area of law, but does not consider the proposed rule acceptable in its current form. ASCE also supports the recommendations and findings of the Science Advisory Board (SAB), namely, that "the available science supports the conclusion that the types of water bodies identified as waters of the United States in the proposed rule exert strong influence on the physical, biological, and chemical integrity of downstream

waters."[4] While we accept the science that all water is connected, the Society does not believe it was Congress's intent - nor is the federal government's prerogative - to exert jurisdiction over the nation's water to the extent postured in the proposed rule.

ASCE urges the agencies to go back to the drawing board to clarify many of the proposed definitions, delineate jurisdiction over municipal separate storm sewer systems, dedicate particular attention in the rule to special circumstances in arid regions of the country, and finally, consider the potential impacts to green infrastructure development and recycled water infrastructure.

ASCE National Wetlands Regulatory Policy 378

Policy

The American Society of Civil Engineers (ASCE) believes Congress must amend the Clean Water Act to clarify jurisdiction over wetlands, establish clearly where states must assume responsibility, and provide appropriate federal oversight. ASCE recommends legislation that would:

- Maintain federal jurisdiction over all interstate and navigable waters, their tributaries, and all adjacent wetlands under the pre-2001 U. S. Army Corps of Engineers' (USACE) regulatory program under the Commerce Clause in the U.S. Constitution using an unambiguous test for significant nexus to navigable-in-fact waters;
- Clarify state jurisdiction under section 404 of the Clean Water Act over isolated, non-navigable intrastate waters and their adjacent wetlands, including vernal pools, playas, and prairie potholes, considering recent Supreme Court decisions and other jurisdiction based on environmental and wildlife considerations under regulations promulgated by the Department of the Interior or the Environmental Protection Agency (EPA); and
- Amend the Clean Water Act to clarify purely environmental federal jurisdiction over intermittent and ephemeral streams and their adjacent wetlands under section 404 to the USACE, in coordination with the EPA.

[4] *See* Letter to Administrator McCarthy re: Science Advisory Board (SAB) Consideration of the Adequacy of the Scientific and Technical Basis of the EPA's proposed rule titled Definition of Waters of the United States Under the clean Water Act. (09/17/14).

ASCE Policy on Clean Water Act Reauthorization 420

Policy

The American Society of Civil Engineers (ASCE) encourages Congress to reauthorize the Clean Water Act to protect our nation's waters and the beneficial use of those waters. The reauthorized Clean Water Act should:

- Aggressively address non-point sources of pollution from watersheds and point-source pollution from sanitary sewer overflows, combined sewer overflows, and storm sewer discharges.
- Address regulatory and best-practices guidelines to ensure a sustainable, comprehensive, cross media, and holistic approach to the protection of the nation's waters.
- Allow sustainable watershed management approaches that integrate water quantity and quality.
- Utilize the latest tools to develop regulations that are scientifically grounded, cost-effective, site appropriate, and flexible in providing for the use of innovative practices in protecting the beneficial uses of the nation's water, and flexible enough to allow innovative practices and means to achieve these goals.

- Provide meaningful information to the public about water quality in their communities.
- Include sunset provisions in regulations to ensure that existing regulations are reviewed and revised periodically.

ASCE Comments on Definitions in the Proposed Rule

EPA and USACE propose definitions for a number of critical terms used in the proposed rule. We provide the following examples and comments of definitions that are too broad in scope, ambiguous or may require additional revisions.

Tributary: The proposed definition of tributary is too broadly defined. In the proposed rule a tributary is characterized by a bed, bank and ordinary high water mark which contributes flow directly or through other water bodies to a "water of the U.S."[5] The proposed rule states that a tributary does not lose its status if there are man-made breaks (such as bridges, culverts, pipes, dams) so long as a bed, bank and ordinary high water mark can be identified up and downstream of the break. Importantly, a tributary can be a natural, man-altered, or man-made and includes rivers, streams, lakes, impoundment, canals and ditches (unless excluded). Our members have expressed

[5] *See* Definition of "Waters of the United States" Under the Clean Water Act; Proposed Rule, 79 Fed. Reg. 22, 201.

particular concern that, broadly read, the rule may significantly impact municipalities who manage local streets that could be considered jurisdictional under proposed definition. Taken to the extreme, the question has been posed: are rain gutters subject to jurisdiction? ASCE urges EPA and USACE to consider adding exemptions and clarifications to this definition.

Adjacent: The proposed rule replaces the existing definition "adjacent wetlands" with "adjacent waters." ASCE's primary concern with the proposed rule is that adjacent waters may be connected through "surface or shallow subsurface connections."[6] ASCE represents members from across the country who expressed concern that "shallow subsurface connections" can have vastly different meanings in state with varying topography For example, karst formations in Florida may have very different shallow subsurface connections than a state with much less permeable subsurface hydrologic features. We encourage EPA and USACE to consider clarifying the definition of "shallow subsurface connections".

Riparian Areas and Floodplains: Civil engineers are responsible for constructing many features found in riparian areas and floodplains. Many of those larger features, such as dams and levees understandably require a §404 permit. Civil engineers are also responsible for flood plain mapping, levee design, stream restoration and a multitude of other engineering activities found in floodplains. We received feedback from engineers who work in these sectors who questioned the reach of floodplains in the proposed definition. The proposed rule defines floodplains as: "an area bordering inland or coastal waters that was formed by sediment deposition from such water under present climatic conditions and is inundated during periods of moderate to high water flows."[7] We received feedback indicating this definition could extend to far reaches in the Mississippi River Basin and concerns that the term "floodplain" is not tied to generally understood floodplain boundaries, such as those identified by the Federal Emergency Management Agency (FEMA) in the National Flood Insurance Program (NFIP). The rule states that jurisdictional determinations over the extent of floodplains will decided by the "best professional judgment and experience" of agency staff. Our members urge consistency and transparency in this regard.

Uplands: One of our members presented a situation where an uplands conveyance ditch was constructed - wholly uplands - to remove treated effluent from a wastewater treatment facility, pursuant to a NPDES permit. The effluent creates a perennial flow. Is this ditch excluded from jurisdiction under the wastewater treatment exemption found at (b)(1)? ASCE believes these types of perennial flows should not by jurisdictional.

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[6] Id. at 210.
[7] *See* Definition of "Waters of the United States" Under the Clean Water Act; Proposed Rule, 79 Fed. Reg. 22, 199.

Perennial Flow: Our members expressed concern that the definition of "perennial flow" may apply to ditches in the arid West. Specifically, there is concern of jurisdictional reach to ditches dug wholly uplands with perennial standing water (but not perennially flowing) due to groundwater intersection/seepage, but which ***only*** flow into a jurisdictional tributary during rain events. Put another way there is a question about the jurisdiction of standing water, not perennially flowing, but only flowing after a storm event.

Another member inquired about dry weather urban runoff, such as excessive residential irrigation. Is this type of runoff considered perennial flow?

Ordinary High Water Mark: While the definition of OHWM is relativity established in the proposed rule for naturalized streams we believe the definition is less clear for OHWM's found on concrete conveyances that may be considered jurisdictional. As we understand, staining is the primarily indicator to determine the OHWM in concrete channels, however, our members provided examples of concrete conveyances that flow a few times a year, carrying only sheetflow, which does not leaving stain lines. We urge EPA and USACE to revise the definition of OHWM as it relates to concrete conveyances and sheetflow.

Clarify Potential Jurisdiction Over Municipal Separate Storm Sewer Systems (MS4)

Nearly a third of the ASCE members surveyed on the proposed rule expressed significant concern about the potential impacts of the rule on managing Municipal Separate Storm Sewer Systems (MS4s). Nowhere in the proposed rule is the term "MS4" mentioned, yet the rule applies to all sections of the Clean Water Act including the NPDES program. The agencies must address the relationship between MS4 stormwater programs and jurisdiction over ditches. We recommend that the final rule either expressly exclude MS4s from jurisdiction under §(t) or provide additional guidance on their potential jurisdiction. Broadly read, the proposed rule MS4s could qualify as "waste treatment systems" under §(t)(1).

Many of our members manage MS4 systems. There is concern that if a MS4 becomes jurisdictional in addition to the current regulation under 402(p) that locations of outfalls, and therefore the point of regulation could change. MS4 permit holders would then not only be regulated at the point of discharge into a water of the U.S., but also when a pollutant initially enters the stormwater conveyance system. MS4 systems should continue to be regulated as point sources and not considered "waters of the U.S." since they cannot be both.

Clarify Potential Jurisdiction Over Man-Made Recycled Water Conveyance And Storage Features

Similarly, there are other man-made water conveyance and storage features, such as those used for recycled water management and use, which should be expressly excluded from CWA jurisdiction. There are instances of recycled water conveyance or storage occurring in natural or previously natural waterbodies that understandably may not warrant exemption. Therefore, the use of "dedicated" and "man-made" in an exemption could provide distinction and clarification. There are instances where recycled water is impounded or conveyed in dedicated man-made facilities that have a bed, bank, and OHWM and contribute flow to waters of the U.S. or meet the proposed rule's definition of "adjacent" to jurisdictional waters. However, these features these should be expressly exempted from the definition of "waters of the U.S." Otherwise, the intended uses of these features for which they were built would be severely hindered or possibly abandoned.

Potential Impacts of the Rule on Encouraging Green Infrastructure

Civil engineers build both traditional hard or "grey" infrastructure such as dams and levees, but also actively work to incorporate natural systems into designs. Often times, nature is the best engineer. For the reason, the Society supports the development of "green infrastructure". Many municipalities are now looking to manage stormwater with the use of bioswales, artificial wetlands, low impact development stormwater treatment systems, green alleys and streets and rain gardens. Green infrastructure uses vegetation, soils and natural processes to manage water and create healthier urban environments. Often these systems are often designed to hold water as it permeates into the soil. There are significant concerns that this holding function could trigger jurisdiction under the proposed rule. It's also unclear whether a §404 permit will be required for maintenance activities on green infrastructure projects.

ASCE Recommends Improvement to the Economic Analysis

Simply stated, the Economic Analysis provided by EPA and USACE does not sufficiently address the potential economic impacts on MS4's. In fact the Economic Analysis explicitly states that the agencies do not know what the economic impact is: "It is unclear specifically how a broader assertion of CWA jurisdiction under this proposed rule would affect MS4 permits."[8]

[8] *Economic Analysis of the Proposed Revised Definition of Waters of the United States.* U.S Environmental Protection Agency, March 2014, pg. 26.

Considering the proposed rule affects all sections of the Clean Water Act, and the potential impact on municipalities operating MS4's is significant, we urge EPA and USACE to revise the Economic Analysis and take a hard look at the costs on MS4 operators.

ASCE Supports Protecting Wetlands

Wetlands provide multiple benefits to the public including flood protection, water filtration and supporting biodiversity. As civil engineers, our goal is to enhance infrastructure and environmental stewardship to protect the public health and safety and improve the quality of life. Water affected by the proposed rule provides benefits by storing water and slowing down its movement across the landscape. When natural hydrologic systems no longer perform these functions, potential losses from flooding increase.

Conclusion

ASCE recognizes regulating water is not easy. The engineers we represent work daily to ensure our nation's infrastructure is safe and reliable, while also serving as stewards of the environment. We applaud EPA and USACE for the time, expertise and effort dedicated to this rule making. However, we encourage the agencies to take a hard look at the proposed rule and associated definitions and provide further clarity. Further, we the agencies must address the absence of MS4 impacts in the proposed rule and consider the unintended consequences of the rule on promoting green infrastructure.

The Association of State Wetland Managers, Inc.
"Dedicated to the Protection and Restoration of the Nation's Wetlands"

November 12, 2014

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Via email to: ow-docket@epa.gov

Re: Definition of "Waters of the United States" Under the Clean Water Act Proposed Rule: Docket ID No. EPA–HQ–OW–2011–0880

Dear Deputy Assistant Administrator Kopocis and Assistant Secretary Darcy:

A clear and comprehensive definition of waters regulated by the United States is needed to maintain a firm foundation for §404 and other provisions of the Clean Water Act (CWA). The Association of State Wetland Managers (ASWM) has reviewed the rule proposed by the Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (Corps) to clarify existing definitions and procedures for application of those definitions. This letter provides our comments in response to their proposal: – *Definition of "Waters of the United states" Under the Clean Water Act* – as published in the *Federal Register* on April 21, 2014 including supporting information contained in the preamble and appendices.

ASWM is a national nonprofit organization that supports state and tribal wetland programs through collaboration and technical assistance, and encourages the effective integration of wetland science, law, and policy. As such, our comments are directed primarily at the impacts of the proposed rule on the §404 permit program as well as its consistency with state wetland programs. We address issues associated with related CWA programs to a very limited extent. We refer the agencies to the comments of the Association of Clean Water Administrators and Environmental Council of States for comments on the rule with respect to other CWA programs. During our review of the proposed rule, we participated in multiple discussions with federal agencies and other state associations to clarify aspects of the rule, and also organized a series of four conference calls with interested state wetland program staff. While our comments reflect the general concerns of ASWM as developed by participating states and others in the course of this review, they cannot be said to represent the exact position of all member states given the diversity of concerns nationally. As such, they do not in any way supersede or alter comments of any individual states.

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ASWM SUPPORTS PROVISIONS OF THE PROPOSED RULE FOR THE FOLLOWING REASONS.

1. **The proposed rule provides much needed clarity regarding the scope of federal jurisdiction over waters of the United States in the wake of U.S. Supreme Court decisions including *SWANCC v. U.S. Army Corps of Engineers*, and *Rapanos v. United States*.**

   These two decisions altered the previous understanding of Clean Water Act jurisdiction, but did not provide a clear and comprehensive definition to replace the existing rule and guidance on the waters protected under the Clean Water Act. The plurality decision in *Rapanos* in particular has resulted in uncertainty regarding the correct scope of federal regulation, especially for wetlands. Many states operate under state rather than federal law. This has resulted in delays where both state and federal review are required, and engendered a lack of trust in the ability of state and federal agencies to appropriately apply water regulations.

2. **The proposed rule was developed concurrently with a thorough review of current scientific literature by the EPA and subsequent development of EPA's Scientific Report, *Connectivity of Streams and Wetlands to Downstream Waters: A Review and synthesis of the Scientific Evidence*** (Science Report)**.**

   The Science Report is important in that it documents the scientific basis for the proposed rule, clearly linking the protection of waters to the need for protection as defined in the Clean Water Act. ASWM has also reviewed the current version of the Science Advisory Board panel/committee review of the Science Report, as well as the draft recommendations of the Science Advisory Board panel/committee (SAB Report). In our opinion, this report, combined with the Science Advisory Board panel/committee review and recommendations, provides an adequate scientific demonstration of the importance of waters defined by the proposed rule as Waters of the United States, and the need for their protection.

3. **The proposed rule recognizes the importance of adjacent waters and wetlands, and supports consistent protection of these waters under the CWA.**

   Definition of all adjacent waters and wetlands as jurisdictional will increase regulatory predictability, and eliminate the need for more cumbersome case-by-case decisions regarding jurisdiction. The proposed rule and associated documentation cite key ecological services provided by adjacent waters, and provide a clear nexus with navigable waters of the United States. In an era of more extreme and unpredictable climate conditions, these critical resources that buffer against flood and drought, and maintenance of habitat connectivity, are more critical than ever.

   We would note that while we support the definition of adjacent waters and wetlands on the basis of shallow subsurface connections, it is our understanding that the proposed rule does not regulate groundwater per se, and our support is predicated on this understanding.

4. **The proposed rule provides for regulation of certain categories of "other waters" (paragraph a(7) of the proposed definition of Waters of the United States) as a category, and without the need for case-by-case documentation of a significant nexus.**

   Jurisdiction over appropriate categories of "other waters" has been supported legally by the *Rapanos* decision and scientifically by the EPA Science Report. This approach relies on a one time analysis of the nexus between the "other water" category and navigable waters, and greatly improves the

predictability and efficiency of the permit process. We will not reiterate all of the reasons discussed in the Science Report and the SAB report and underlying literature for which "other waters" should be protected, but emphasize that on a broad basis, "other waters" can play a primary role in protecting water quality and managing water quantity, as well as providing critical fish and wildlife habitat.

ASWM strongly supports the definition of appropriate categories of wetlands or waters as jurisdictional by rule, where supported by existing science and consistent with the requirements of the CWA. We believe that the literature reviewed by the Science Report includes sufficient scientific documentation to designate some categories of wetlands as jurisdictional by rule, and recommend that such designations be considered as part of developing a final rule.

We also encourage development of a process to expedite documentation of additional categories of other waters as jurisdictional by rule on a regional basis, as discussed under recommendation '3.' on page 5 below.

5. The proposed rule provides for jurisdiction over certain "other waters" based on case-by-case documentation of a significant nexus, providing for protection of additional critically important waters and wetlands under the CWA.

Both the *Rapanos* decision and the Science Report recognize that there may be a significant nexus between specific "other waters" and downstream navigable waters. This is true even where the strength of the connection and its significance varies greatly within a class or category of such waters – that is, jurisdiction may not extend to the entire category. In spite of the legal and scientific acceptance of the concept of protecting waters having a significant nexus, there has not been an established process to protect these individually important waters since the *Rapanos* decision. Therefore, ASWM strongly supports this provision in the proposed rule.

Protection of these waters may be of critical regional or local importance to provide flood storage and attenuation, filter pollutants from both urban and rural runoff prior to reaching navigable waters and drinking water supplies, and in protection of essential fish and wildlife habitat. We recognize that a regulation that is national in scope cannot reasonably define all instances in which other waters have a significant nexus with waters of the U.S., and in these instances, a case-by-case decision is appropriate.

6. The proposed rule recognizes the importance of protecting and managing stream networks in totality – including tributaries – to maintain the physical, chemical, and biological integrity of navigable waters.

All components of the stream continuum function together to protect physical (e.g. water supply), chemical (e.g. drinking water) and biological (e.g. habitat and migration) ecological services. These services are interrelated and cannot be maintained by protection of only limited reaches of a stream. ASWM supports the fundamental definition of streams and their tributaries in the proposed rule, based on the presence of physical structure (a bed, banks, and evidence of flow). This approach is consistent with most state legal definitions. It may, however, be helpful to discuss in more detail what the agencies are describing when they use the term "ephemeral" as it is used in the preamble to the proposed rule (or in future guidance), given that this term is defined differently by various states from both a legal and a scientific perspective. In addition, some discussion of how the methodology

used to identify streams takes into consideration their contribution to the physical, chemical, and/or biological integrity of navigable waters is recommended.[1]

We recognize the complexity of drawing a line between regulated tributaries and unregulated man-made upland ditches, especially since many ditches were formed by modification of natural streams. However, this is a long standing problem that is not exacerbated by the proposed rule.

A number of states have developed criteria that provide straight forward solutions to addressing these distinctions in a regulatory program, and we suggest that the federal agencies consult with the states to develop consistent criteria to distinguish between highly altered streams, regulated ditches and unregulated ditches. We also recommend that the federal agencies consult with the states to develop or revise field procedures for identifying streams on a regional basis.

ASWM ALSO HAS CONCERNS REGARDING CERTAIN ASPECTS OF THE RULE, AND MAKES THE FOLLOWING RECOMMENDATIONS TO ADDRESS OUR CONCERNS. IN SPITE OF OUR OVERALL SUPPORT OF THE RULE, WE ARE HIGHLIGHTING THE FOLLOWING ISSUES WHICH WE BELIEVE MAY BE IMPROVED IN THE FINAL RULE.

1. **We strongly urge that the federal agencies emphasize and increase coordination with state and tribal co-regulators in development of the final rule and associated guidance, and in implementation.**

   Numerous states and tribes have developed effective and proven technical and field methods to document many of the connections and types of waters defined in the rule. We believe that where such procedures are consistent with the overall requirements of the rule, they should be readily accepted.

   Numerous states and tribes also have existing agreements with Corps Districts and other agencies regarding regulatory procedures that are addressed by or may be affected by the proposed rule. To the extent that such agreements can be maintained (recognizing the need for consistency with the overall rule), regulatory delays will be minimized.

2. **We urge the federal agencies to continue attention to distinguishing between the jurisdictional definition of Waters of the United States and the waters that are assumable by states under §404(g) of the CWA.**

   The preamble to the proposed rule includes the statement:

   > *"Today's proposal does not affect the scope of waters subject to state assumption of the section 404 regulatory program under Section 404(g) of the CWA. ... The scope of waters that are subject to state and tribal permitting is a separate inquiry and must be based on the statutory language of the CWA. ..."*

   We concur with this statement, but are also of the opinion that a more definitive clarification of the scope of assumable waters is needed to facilitate ongoing development of state-federal coordination.

[1] ASWM recently compiled a *Report on State Definitions, Jurisdiction and Mitigation Requirements in State Programs for Ephemeral, Intermittent and Perennial Streams in the United States* (April, 2014), with financial support from EPA. This report may be downloaded at http://aswm.org/stream_mitigation/streams_in_the_us.pdf.

It has become apparent that there is not a clear understanding between states interested in assumption and the federal agencies regarding the means by which assumable waters are to be identified. Therefore, ASWM requests that EPA and the Corps consult with the states and tribes to revise the existing assumption regulations to clarify this issue, preferably through formation of a FACA subcommittee to develop consensus and provide transparency.

3. **ASWM recommends development of implementation procedures and any necessary supporting rule language to allow for designation of categories of "other waters" found to have a significant nexus with downstream navigable waters as jurisdictional by rule on a state or regional basis.**

   As noted above, we support protection of "other waters" on a categorical basis where it is supported by science, but believe that designation of additional categories of protected "other waters" through a future national rulemaking will be cumbersome and is likely to overlook locally important types of wetlands. Therefore, we recommend that the proposed rule, along with implementing guidance, allow for a process that includes the following attributes:

   - The process should provide for designation of categories of "other waters" having a significant nexus with navigable waters within a defined geographic region, in accordance with the provisions of the proposed rule regarding Waters of the United States, following gathering of appropriate documentation, public notice, and review. Such a list could be updated every fifth year, or at some other suitable interval. This would allow for identification, study, and designation or removal of categories of waters over time.

   - The process for designating categories of other waters that are jurisdictional by rule should be a collaborative one, involving one or more states or tribes and Corps Districts, and the EPA, along with other stakeholders.

   - The process should provide for public review and comment of any proposed designations, and define a process for timely approval of the designated categories by the federal agencies.

4. **ASWM recommends that the federal agencies adopt a definition of "floodplain" similar to that proposed by the Association of State Floodplain Managers (ASFPM) – one that takes into account biological and hydrological as well as physical (hydraulic and geomorphological) considerations.**

   Questions have been raised regarding the proposed definition of a floodplain for purposes of identifying waters that are "adjacent" and therefore Waters of the United States by rule. While many organizations have suggested options to provide greater certainty – e.g. by specifying use of a specific flood interval or use of existing FEMA maps - ASWM recognizes the shortcomings of both of these approaches.

   The default minimum FEMA standard 1% chance floodplain has no correlation to the interconnected waters of the United States from a biological, ecological or geomorphological standpoint. Rather, the primary basis for identifying FEMA floodplains has been the identification of those areas that are at highest risk for property damage and human injury. That is why only one third of the 3.5 million miles of streams, rivers and coasts have flood hazards identified, and only half of those stream miles have detailed engineering studies. Further identification of floodplains for purposes of FEMA flood

studies have continued to be prioiritized based on a high degree of risk to humans and budgetary considerations.

In order to maintain the flexibility needed to accommodate a wide range of conditions based on the size and landscape position of the stream in question, we support the following definition proposed by ASFPM[2] because it recognizes biological and hydrological functions, and also acknowledges and allows for alignment with long established definitions used in established state floodplain programs.

> ***"The term floodplain means areas recognized by the federal government, states, local governments, or tribes that have been or may be inundated or are susceptible to being inundated by waters from any source when flows or water levels exceed normal levels. , including the bed and banks of the stream, river, ocean, or other body of water. It also includes areas subject to fluvial dynamics, channel migration, and other erosion or physical changes under flood conditions."***

We believe that there are sufficient methods available or under development (e.g. GIS and associated remote sensing data) to develop regional methods for identifying floodplains using this definition. The ability to align §404 and other CWA programs with existing state and tribal floodplain regulations by developing regional approaches will avoid a great deal of confusion that would occur with the use of two differing technical designations of the term "floodplain" in related regulatory programs. We recognize that this approach may reduce state to state consistency, but we believe that factor is outweighed by benefits of providing a clear and consistent regulatory framework within a state, as long as reasonable consistency with federal law is maintained.[3]

5. ASWM member states have reported widespread concern and uncertainty regarding the distinctions among unregulated or "upland" ditches, regulated tributaries, and activities that are (currently) exempted in ditches or tributaries. We strongly recommend additional clarification of these distinctions in the final rule and associated implementing guidance.

Primary concerns reported to ASWM include the following, many of which have been expressed by transportation and other public works agencies:

- On the ground interpretation of "upland areas" and "perennial flow" are critical, but will likely be problematic; seasonal and meteorological conditions will affect the determinations made by reviewers. The review of soils and hydrologic conditions on a given date may not be definitive. Following publication of the final rule, additional indicators will need to be developed on a regional basis, taking into account the structure, appearance, and landscape position of a "ditch".

- Roadside ditches are often constructed to promptly remove water from the road surface. Where such ditches are not a natural part of a stream system, there is concern that they may be regulated if water routinely flows in the ditch following storm events. However roads are linear features that cut across wetlands, streams and other aquatic resources and sometimes

[2] See comments from ASFPM to EPA and the Corps of Engineers dated February 21, 2014 regarding The Connectivity of Streams and Wetlands to Downstream Waters

[3] ASWM is an active supporter of the Natural Floodplain Function Alliance. In addition to providing a forum for discussion, this group has sponsored a series of pertinent webinars on floodplain issues including remote sensing methods for mapping floodplains. Recorded webinars may be accessed at http://www.aswm.org/watersheds/natural-floodplain-function-alliance/1790-webinars.

roadside ditches become part of the overall stream system either through design or by accident. Guidance is needed to clarify how to evaluate roadside ditches following publication of a final rule.

- The phrase, "Ditches that do not contribute flow..." in the list of non-jurisdictional waters has raised the concern that channels that convey ***any*** amount of flow following storm events will be considered regulated. During final rulemaking, some exclusion for insignificant or *de minimis* flow should be considered.

- Terms such as "gullies," "rills" and "arroyos" that are used in the list of non-jurisdictional waters lack a precise scientific definition. These terms may have variable meanings locally and regionally; therefore, it is suggested that such terms be removed from the preamble to the final rule.

- ASWM encourages adoption of technical and field methods developed by states and tribes, where consistent with CWA definitions and requirements. Methods that have already been proven to be efficient and accurate in a given region – e.g. use of regional soil attributes, geometry and configuration, types of available mapping, etc. should be used to support both state and federal jurisdictional decisions to avoid duplication of effort and added cost.

We generally concur with the comments made by the Association of Clean Water Administrators (ACWA) regarding this issue.

6. In order to minimize regulatory delays associated with a significant nexus determination, or with distinguishing between regulated tributaries and unregulated ditches where such a distinction is unclear, we recommended continued use of preliminary jurisdictional determinations (JD's). This process allows a landowner to assume that jurisdictional waters "may be" present on a site, and to move directly to a permitting process and avoid the delays involved with obtaining a formal JD, especially where general permits are applicable.

We also recommend continuation of this option to "opt out" of a full approved JD in this manner in headwater areas where the upstream limits of "tributaries" may be uncertain and a permitting decision is more expeditious for the landowner.

While the definition of "significant nexus" in the proposed rule is consistent with the decisions of the U.S. Supreme Court and is also scientifically defensible, it may continue to be extremely time consuming and impractical to evaluate and document the presence of a significant nexus in numerous individual regulatory decisions on a case-by-case basis particularly for aquatic resources that fall under the "other waters" category. Documentation of a significant nexus in many ways parallels fact finding under the 404(b)(1) guidelines; that is, the documentation of ecological services that have a significant impact on the chemical, physical and biological integrity of downstream waters may guide a permit decision. Therefore, it may be simpler to move directly to a permitting decision. In that decision, the scope of the project impact on the wetland (or water) in question will also be taken into account, and if that impact is minimal, then a permit (or authorization under a general permit) may be approved. In short, the permit process may be more expeditious than documentation of a significant nexus.

Also, numerous dredge and fill activities in small tributaries – such as routine stream crossings, culvert placement, bank stabilization and maintenance – may be covered by existing or future

general permits. In these instances, detailed jurisdictional documentation may be unnecessarily time consuming. In headwater areas, it may be more practical to focus the regulatory process more on acceptable activities, and best management practices that should be associated with such activities, than on defining a line between regulated and unregulated channels where such a line is not easily identifiable on the landscape.

7. **The proposed rule includes language reiterating current exemptions for waste treatment systems. However, the status of regulation of natural or artificial waters that are used to convey or treat stormwater is not clear. This is a long standing issue that is further complicated by the proposed rule.**

   Regulations and exemptions for waters conveying stormwater should be clarified in the final rule and in implementing guidance. In additions, any distinctions between §404 dredge and fill requirements, and the regulatory scheme under §402 – including stormwater treatment – should be clarified.

   - The basic underlying question of whether stormwater collection and treatment systems are considered to be wastewater treatment systems must be clarified. In some circumstances, artificial stormwater treatment ponds have reportedly been identified by federal agency staff as wastewater systems, but in other cases they have been treated as waters of the United States. Situations where natural waters are used to collect, store, convey, or filter stormwater become even more complicated.

     It should be noted that a regulatory system that works for dredge and fill activities may not be efficient for §402 permitting, and vice versa. Therefore it is likely that other regulatory tools – including exemptions (e.g. for maintenance), general permits, and so on - may be needed to effectively accommodate both program areas.

   - Urban agencies are concerned with MS4 stormwater collection systems and the extent to which these systems may become subject to §404 permitting.

   - It is sometimes unclear whether cooling ponds are "waste treatment systems" or treated as such, particularly when a cooling pond is located in the jurisdictional water (i.e. mangroves).

   - A number of questions have been raised regarding jurisdiction over natural waters used to convey and filter stormwater. In some instances, these waters were used to convey stormwater prior to regulation under the CWA. Some of these waters are and should remain jurisdictional particularly when they are part of the natural stream and waterbody system that existed historically.

   - The distinction between wetlands or other waters that store or convey stormwater, and those wetlands used specifically to treat or filter stormwater, also raises questions regarding the scope of the wastewater system exemption.

Finally, ASWM recognizes that the §402 and §404 programs have distinctly different goals and requirements as applied to stormwater management. Therefore, we urge that EPA recognize these distinctions in the final rule and in subsequent guidance.

8. **ASWM recommends that the final rule include a clear schedule for implementation including provisions for grandfathering of actions approved by federal agencies under the existing jurisdictional regulations.**

   Although EPA has stressed that the proposed regulation does not increase the scope of jurisdiction compared to the pre-Rapanos requirements, it seems clear that in some instances jurisdiction may expand in comparison to the post-Rapanos guidance that is currently in place. We assume that approved jurisdictional determinations will be effective until their normal expiration date, and that an activity previously permitted under the CWA will also be grandfathered. However, confirmation of these positions should be included in the final rule.

   We also suggest that review of permit applications that have already been public noticed be completed without the necessity for a new jurisdictional determination out of fairness to the applicant, given that requiring a new JD and potentially new design could be exceptionally costly for the applicant.

Where permit applications have been submitted but not yet public noticed, we suggest that the federal agencies or state co-regulators be given discretion to continue without a new JD where such an action could result in significant cost to the applicant (e.g. where winter field conditions make it impractical to complete a new JD for several months), and where impacts of proceeding under the existing rule is not expected to result in major adverse impacts.

ASWM SUGGESTS THAT THE FEDERAL AGENCIES COORDINATE WITH THE STATES AND TRIBES IN DEVELOPMENT OF GUIDANCE REGARDING IMPLEMENTATION OF THE FINAL RULE. WE RECOGNIZE THAT DETAILS OF ON-THE-GROUND IMPLEMENTATION CANNOT BE FULLY ADDRESSED IN A RULE, BUT THESE ISSUES WILL BE RIPE FOR COLLABORATIVE EFFORTS UPON PUBLICATION OF THE FINAL RULE.

Development of guidance materials on the following topics by the federal agencies and state co-regulators would benefit the states, permit applicants, and the general public.

- **Criteria and field/remote procedures[4] for identifying streams - particularly ephemeral streams.** This should be a joint effort by EPA/Corps/States. Criteria should include not only bed and bank and OHWM, but also methods to determine that flow and biological or chemical processes are occurring that are important to downstream navigable waters.

- **Criteria and field/remote procedures for the identification of ditches - jurisdictional and non-jurisdictional.**

- **Criteria and field/remote procedures for identifying wastewater treatment systems exempt from the CWA and those waters regulated under the CWA** particularly within MS4 boundaries and for the variety of stormwater treatment practices including structures that have are being installed in urban and urbanizing areas.

[4] The appropriate use of GIS and other remote information where possible is recommended and then a field visit only if needed

- **Clarification of the expectations of EPA with respect to the development of any new water quality standards for ephemeral streams that are not, because they are dry the great majority of the time, easily addressed by conventional standards for stream and rivers that run for sustained periods (intermittent) or continuously (perennial) throughout the year.**

- **Guidance on how to develop a proposal as well as the review and decision-making process for a category of "other waters" that could be identified as jurisdictional (not requiring the significant nexus tests) on a regional basis.** This will be needed if the recommendation discussed previously to develop a process for identifying categories of "other waters" is adopted.

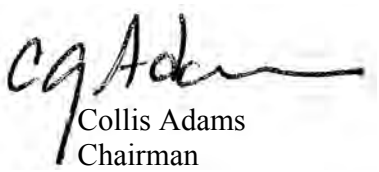
Finally, ASWM reminds the federal agencies of its recommendation that the Interpretive Rule, issued simultaneously with publication of the proposed rule, be withdrawn (please see our formal comment letter on the Interpretive Rule of July 7, 2014). Our support for the proposed rule on definition of Waters of the United States does not extend to the Interpretive Rule which, although intended to streamline processes under the proposed rule, has instead already resulted in significant confusion and opposition.

*****

ASWM appreciates the complexity of developing a proposed rule given the complexities of the *SWANCC* and particularly the *Rapanos* Supreme Court decisions. As noted in this letter, we endorse the comments of the Environmental Council of the States, the Association of Clean Water Administrators, and the Association of State Floodplain Managers regarding the proposed rule, and acknowledge their expertise in resolving these complex issues. We would welcome the opportunity to work with the federal agencies, the states and tribes, and other state nonprofit organizations in resolving concerns in the proposed rule, and/or in anticipated guidance. In spite of the concerns expressed above, we believe that the rule is necessary, and that overall it will improve the regulatory processes of the Clean Water Act, and we reiterate our support.

Should you have questions regarding these comments, please contact ASWM Executive Director Jeanne Christie (jeanne.christie@aswm.org, or 207-892-3399). Thank you for the opportunity to comment. We look forward to working with you in the future.

Sincerely,



Collis Adams
Chairman

Sincerely,



Jeanne Christie
Executive Director

Cc: ASWM Board
Alex Dunn, Executive Director ECOS
Julia Anastasio, Executive Director, ACWA
Chad Berginnis, Executive Director, ASFPM

RESOLUTION NO. 20140807-108

WHEREAS, the waters of the United States provide an extraordinary value for the protection of public health, recreational resources, economic livelihood related to clean water, and are a treasured resource; and

WHEREAS, the Clean Water Act is the fundamental federal law protecting the waters of the United States from pollution, degradation and destruction; and

WHEREAS, critical streams and wetlands which supply drinking water protect against floods and filter pollution previously were protected under the Clean Water Act but federal policy changes over the last decade have left these streams and wetlands vulnerable to degradation or destruction; and

WHEREAS, these vulnerable waters of the United States impact sources of drinking water for over 117 million Americans; and

WHEREAS, strong federal standards are needed because water does not respect political boundaries and flows from one state to another; and

WHEREAS, the overwhelming weight of scientific evidence has confirmed that headwater streams and wetlands significantly affect the quantity and quality of water in larger bodies of water downstream and provide a wide variety of beneficial ecosystem services; and

WHEREAS, the U.S. Environmental Protection Agency and Army Corps of Engineers have proposed a clarifying rulemaking to restore protection for streams and wetlands previously protected under the Clean Water Act, safeguarding water quality in the nation's waters, protecting jobs in businesses

that depend on clean water and safeguarding drinking water for one in three Americans; and

WHEREAS, the proposal leaves in place all agricultural exemptions and creates new exemptions for agricultural practices related to conservation; and

WHEREAS, the City of Austin Water Utility and Watershed Protection have a vested interest in protecting the quality and quantity of our headwater streams in the Austin area; **NOW, THEREFORE,**

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF AUSTIN:

The City of Austin supports the proposed *Definition of "Waters of the U.S." Under the Clean Water Act* and urges the Environmental Protection Agency and Army Corps of Engineers to finalize these important protections for our nation's water resources.

BE IT FURTHER RESOLVED:

The City Manager is directed to provide written comments on the proposed rule to the U.S. Environmental Protection Agency.

ADOPTED: August 7, 2014 **ATTEST:** _____
Jannette S. Goodall
City Clerk

Officers:

Terry Welsh,M.D.
President
Suzanne Forster
Vice-President
Deborah Koken
Secretary
Jennifer Frutig, Ph.D.
Treasurer

Steve Ray
Executive Director

Board Members:

Mark Tabbert
Diane Silvers Ed. D

Jan Vandersloot, M.D.
In Memoriam



November 13, 2014

To the EPA and ACOE:

The Banning Ranch Conservancy urges you to move forward to finalize the rulemaking proposed by the U.S. Environmental Protection Agency and the Army Corps of Engineers to clarify the scope of the Clean Water Act. The Banning Ranch Conservancy and The Sierra Club Angeles Chapter's Banning Ranch Park and Preserve Task Force aim to preserve and conserve Banning Ranch, which at 401 acres, is the last large parcel of unprotected coastal open space in Orange County, California. In addition, Banning Ranch includes wetlands and rare vernal pools.

This rulemaking effort is critical to restoring protections for the vernal pools that make up sensitive habitat and enable biological diversity. It also serves the purpose of the Clean Water Act to maintain the chemical, physical, and biological integrity of the nation's waters.

Despite thirty years of historically comprehensive protections under the Act, small streams, wetlands, and vernal pools are not guaranteed to be covered by the Clean Water Act. These waters may now be vulnerable to pollution and degradation following two Supreme Court decisions in 2001 and 2006. For example, after the *SWANCC* decision, the EPA concluded the following:

"*SWANCC* squarely eliminates CWA jurisdiction over isolated waters that are intrastate and non-navigable, where the sole basis for asserting CWA jurisdiction is the actual or potential use of the waters as habitat for migratory birds that cross state lines in their migrations.... The EPA and the Corps are now precluded from asserting CWA jurisdiction in such situations, including over waters such as isolated, non-navigable, intrastate vernal pools, playa lakes and pocosins." (68 FR 1995 (2003)).

Currently, the reviewing agencies and Courts may be significantly burdened to repeatedly prove what we already know scientifically – that small streams, wetlands, and vernal pools are integrally linked to the health of downstream waters and biological integrity. The protection of vernal pools serves the purpose of the Act. For instance, the EPA itself states, "Vernal pools are a valuable and increasingly threatened ecosystem, often smaller than the bulldozer that threatens to destroy them. More than 90% of California's vernal pools have already been lost." (*See* http://water.epa.gov/type/wetlands/vernal.cfm). The remaining 10% of California vernal pools are at risk. This is exemplified by the case of the vernal pool complex at Banning Ranch.

P. O. Box 16071
Newport Beach,
CA 92659-6071

(310) 961-7610

Officers:

Terry Welsh,M.D.
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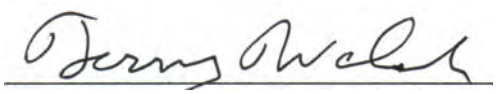
Jan Vandersloot, M.D.
In Memoriam

Banning Ranch Conservancy

This vernal pool complex, which is one of only two coastal vernal pool complexes in Orange County recognized by the USFWS, and the only vernal pool complex containing critical habitat for the endangered San Diego Fairy Shrimp *(Branchinecta sandiegonensis),* contains up to 50 separate vernal pools. Over 35 of these pools have been documented to contain either listed or non-listed branchiopods. During overflow periods, these vernal pools drain into arroyos on the property, which, in turn, drain into immediately adjacent coastal tidal marsh wetlands. Coveted by developers for its flat terrain and ocean views, the Banning Ranch vernal pool complex is under the very real threat of development. Clarification of rules on vernal pools is therefore urgently needed.

The agencies have specifically requested comment on expanding the list of waters that are jurisdictional by rule. It is my position that said list of waters should be expanded to include vernal pools that are established to be reservoirs of biodiversity, connected genetically to other locations, and aquatic habitats through wind and animal mediated dispersal. Such vernal pools include those found in Banning Ranch. By establishing that such vernal pools are waters jurisdictional by rule, protection of vernal pools will be more feasible and clear under the law.

We strongly support efforts to better protect small streams and wetlands. The proposed rule is an important step forward to restoring protections for streams, ponds, wetlands, and other waters. As part of this effort, I urge you to strengthen the proposed rule by more fully restoring protections to other waters, such vernal pools.



Terry Welsh, M.D.
President, Banning Ranch Conservancy

P. O. Box 16071
Newport Beach,
CA 92659-6071

(310) 961-7610

Friday, November 14, 2014

The Honorable Gina McCarthy
Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Water Docket, Environmental Protection Agency
Mail Code 2822T1200, Pennsylvania Avenue
Washington, DC 20460

Email to: ow-docket@epa.gov

Re: Clean Water Rule Docket ID # EPA-HQ-OW-2011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy,

We, the undersigned former governors and current federal, state and county elected officials from New Jersey, support the US Environmental Protection Agency and US Army Corps of Engineers proposed *Definition of "Waters of the United States Under the Clean Water Act*" (Docket ID # EPA-HQ-OW-20011-0880) to clarify which streams, wetlands and other waters are covered by Clean Water Act protections, Wetlands and small streams, including those that flow only seasonally, have a direct impact on the health and quality of larger streams and rivers downstream. These resources are critical drinking water sources, and they protect communities from flooding and filter pollutants.

For its first thirty years, the Clean Water Act safeguarded nearly all of our nation's waters. These protections are necessary to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," as intended by Congress when it passed the Clean Water Act in 1972.

Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction.

These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's streams miles and at least 20 percent of the 110 million acres of wetlands in the continental United States. This confusion has put the drinking water for 117 million Americans at risk, including 4.3 million New Jerseyans. Countless small streams and wetlands provide most of the flow to our most treasured rivers from the Delaware, Millstone, Raritan, Passaic and Hackensack in North Jersey to the Metedeconk, Manasquan, Toms, Great Egg and Rancocas along the Jersey Shore and Delaware Bayshore. If we do not protect these networks of small streams, we cannot protect and restore the lakes, rivers and bays that our economy and way of life depend on. We will also jeopardize jobs and revenue in businesses that depend on clean water, including outdoor activities like angling and water-based recreation.

As local and state decision makers, we believe broad federal protections and permitting additional non-federal protections are critical to protecting our local waters. Water flows downhill, and each of the lower 48 states have water bodies that are downstream of one or more

other states. Maintaining consistency among water pollution programs throughout these states is essential. Since the passage of the Clean Water Act, states have come to rely on the Act's core provisions and have structured our own water pollution programs accordingly.

We support the draft rule's proposal to restore Clean Water Act protection to all tributaries of navigable waterways. Failure to do so would jeopardize water quality in our larger river sheds and estuaries. It would also put at risk the millions of dollars and thousands of jobs generated by water related tourism activities and other businesses that are dependent on clean water supplies.

This commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade and better protection for critical water resources on which our communities depends. We strongly support adopting the *Definition of "Waters of the US Under the Clean Water Act.*"

Sincerely,

NJ Governors:
Richard Codey (D: 2004 to 2006) and current State Senator (D-27)
James Florio (D: 1990 to 1994)
Tom Kean, Sr. (R: 1982 to 1990)

US Congress:
Represenative-elect Bonnie Watson Coleman and current NJ Assemblywoman (D-15)

NJ Senate:
Peter Barnes III (D-18)
Christopher Bateman (R-16)
Jennifer Beck (R-11)
Robert Gordon (D-38)
Linda Greenstein (D-14)
Paul Sarlo (D-36)
Joseph Vitale (D-19)
Loretta Weinberg (D-37)

NJ Assembly:
Daniel Benson (D-14)
Ralph Caputo (D-28)
Marlene Caride (D-36)
Herb Conaway (D-7)
Joseph Cryan (D-20) and **Union County Sheriff-elect**
Patrick Diegnan (D-18)
Timothy Eustace (D-38)
Carmelo Garcia (D-33)
Thomas Giblin (D-34)
Reed Gusciora (D-15)
Mila Jasey (D-27)
Gordon Johnson (D-37)
Sean T. Kean (R-30)
John McKeon (D-27)
Sheila Oliver (D-34)
Raj Mukherji (D-33)
Nancy Pinkin (D-38)
Eliana Pintor Marin (D-29)
Gary Schaer (D-36)
Grace Spencer (D-29)
Linda Stender (D-22)
Valerie Vainieri Huttle (D-37)
Annette Quijano (D-20)

November 11, 2014

Water Docket, Environmental Protection Agency
Mail Code 2822T, 1200 Pennsylvania Avenue NW.
Washington, D.C. 20460

Attention: Docket ID No. EPA-HQ-OW-2011-0880

To whom it may concern:

The Blue Water Business Consortium would like to express its support for EPA's science-based effort to revise the definition of Waters of the US. The Blue Water Business Consortium is a partnership between Wisconsin small businesses that rely on clean and plentiful water and the non-profit conservation organization River Alliance of Wisconsin. We are beer-makers and potato farmers, realtors, outfitters and retailers from across the state. We solidified this partnership to demonstrate that clean water is profitable, renewable and an enduring economic asset in Wisconsin. We also formed to counter the misconception that environmental regulation kills jobs.

As entrepreneurs and business owners we recognize the need for clarity, simplicity and predictability in the regulations that guide our activities in and around water. But we recognize, too, that water resources are not infinite. Responsible regulation of water ensures that water stays clean and plentiful for the long run and that there is a level playing field for all.

Recent court decisions have created a confusing and time-consuming process for determining what waters are included under the federal Clean Water Act and state laws. As it stands, many of our small tributary and intermittent streams and wetlands are vulnerable to degradation which ultimately results in polluted rivers and lakes. This affects not only human health, but also the economic bottom line for businesses. Resorts cannot attract tourists to a lake choked with smelly algae in July; decreasing water clarity due to pollution directly impacts property values of the surrounding waterfront lots; breweries reliant on high quality groundwater are

vulnerable when there is not adequate protection for the surrounding springs and streams that recharge the groundwater.

Enormous efforts and funds have been channeled towards cleanup of our waters in Wisconsin (and much remains to be done). The federal government has spent over $1.5 billion to restore the Great Lakes alone under the Great Lakes Restoration Initiative. Clarifying which waters are federally protected is a sensible way to maintain this investment into the future. For Wisconsin, clarifying the WOTUS rule protects our state's bottom line as well. For example:

- a water-dependent tourism industry that contributed $16 billion to the state's economy in 2013;
- the more than $1.5 billion worth of water-related real estate transactions in 2013; and
- the more than $850 million injected into the economy by the growing craft beer industry

Thank you for the opportunity to share our comments.

Sincerely,

Bo Belanger, owner
South Shore Brewery, Ashland, WI

Darren Bush, owner
Rutabaga Paddlesports, Madison, WI

Rick Carlson, owner
Carlson's Rustic Ridge Supper Club, Castle Rock Lake, WI

Mike Coke, owner
Terra Firma Management Wisconsin, De Forest, WI

Paul Graham, owner
Central Waters Brewery, Amherst, WI

Beth Handle, owner
Milwaukee Kayak Company, Milwaukee, WI

Lynn Isherwood, owner
Isherwood Farm, Plover, WI

Tom Koren, owner
The Lure Bar and Grill, Lake Petenwell, Adams Co, WI

Ryan Schmudlach, owner
Wisconsin Canoe Company, Spring Green, WI

Cahaba River Society

November 5, 2014

Via www.regulations.gov and email to ow-docket@epa.gov

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Attention: Docket ID No. EPA—HQ—OW—2011—0880

Re: Comments On "Definition of 'Waters of the United States' Under the Clean Water Act, Proposed Rule," 79 Fed. Reg. 22188-22271.

Dear Administrator McCarthy and Assistant Secretary Darcy:

We appreciate the Army Corps, the EPA, and the many others who worked to clarify the definition of "waters of the United States" (WOTUS). We generally endorse the proposed rule with recommended revisions that we will describe below.

Also, we have carefully reviewed the comments submitted by Mr. William Sapp with the Southern Environmental Law Center (SELC). Please note that our organization signed-on to that comment letter as a partner group. We found SELC's comments to be especially thoughtful, thorough, and well-supported. As a partner group with SELC, we express our vigorous support of the SELC comments.

The EPA website, www.epa.gov/uswaters , indicates the proposed rule *"...does not protect any new types of waters that have not historically been covered under the Clean Water Act."* We urge the Army Corps and EPA to adopt a rule that maintains their current ability to categorically include additional water resources that have been shown to have a significant hydrological or ecological connection to WOTUS but which are not currently so designated. An ability to establish categorical waters as jurisdictional is essential for efficient administration of the responsibilities these agencies have. Likewise, we ask that the proposed rule not be weakened regarding the agencies' ability to designate "other waters" as being jurisdictional.

The EPA's Connectivity Report and many other scientific investigations of the hydrology and ecology of our landscape have improved our understanding of factors influencing the physical, chemical, or biological integrity of our nation's waters. It is clear to us that a more expansive, inclusive definition of

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Randall Haddock, PhD *Field Director*
Monica Carmichael *Director of Development*
Gordon Black *Education Director*
Kim Adams *Office Manager*

WOTUS is appropriate and that some waters that are not currently included should be included. As scientific understanding of these interconnections improve, we hope this rule will not discourage thoughtful adoption of those waters as WOTUS.

Both the economic and environmental health of our nation are best served by adoption of a rule that promotes a sound scientific basis in its protection of WOTUS. A healthy economy is essential for maintaining a healthy environment. Likewise, a healthy environment is essential for maintaining a healthy economy.

Aspects of the Meaning of "a significant nexus"

For purposes of defining which water features should be jurisdictional, the proposed rule would require demonstration of significant nexus with a traditional navigable water. However, some readers interpret the proposed rule to require demonstration that there be a physical, chemical, AND a biological nexus for consideration to proceed to an affirmative designation. That is, some commenters assert the proposed rule requires that all three factors be demonstrably connected to a traditionally navigable water. We disagree with that interpretation. We urge the agencies to make an affirmative jurisdictional determination when one or more of these qualities has been established as having a significant nexus with a traditional navigable water.

The Clean Water Act calls for protection of the physical, chemical, and biological quality of our nation's waters. We understand this to mean that each of these factors or qualities are individually subject to regulation under the Clean Water Act. Usually there are fairly obvious interconnections and interactions among these factors whereby one or both of the other two of these three qualities of the receiving water are altered by a change in any one quality. But we do not currently require demonstration that altering one quality will necessarily alter the other two qualities in order to allow its regulation. There is an appropriate and reasonable assumption that physical, chemical, and biological qualities may each have impacts on the others. It is reasonable to regulate each of these factors separately and it is reasonable to make a positive jurisdictional determination when only one of these qualities have a significant impact on traditional navigable waters.

For example, regulators limit temperature alterations to receiving waters caused by a discharge. We understand temperature has associated impacts on chemical and biological qualities of the receiving waters. Such interactions almost invariably occur, even when we may not understand the full range and nature of those interactions. So, we try to manage overall impacts to WOTUS by placing limitations individually on important parameters.

In similar fashion, when defining which waters have a significant nexus with traditional navigable waters, the test should be whether the feature in question impacts the physical, chemical, or biological integrity of a traditional navigable waters, not whether the feature in question can be demonstrated to impact all three of these. Demanding demonstration of a significant nexus for all three is an attempt to limit the number and types of waters that are designated without regard for their actual impacts on WOTUS.

This "or" not "and" distinction is extremely important in making determinations about the definition of "other waters". Therefore, the language of the proposed rule should reflect the more inclusive form of definition for purposes of determination of a "significant nexus" and for definition of jurisdictional waters or "other waters".

Regarding another aspect of determining which "other waters" will be included as jurisdictional, at §401.11 (1)(1)(vii), the proposed rule reads as follows:

> *On a case-specific basis, other waters, including wetlands, provided that those waters alone, or in combination with other similarly situated waters, including wetlands, located in the same region, have a significant nexus to a water identified in paragraphs (1)(1)(i) through (iii) of this section.*

We understand the proposed rule would allow EPA and the Army Corps to make case-specific determinations about whether a given water is jurisdictional. We agree that the appropriate geographical scale for such assessments is the local watershed. In making a 'significant nexus' determination, we encourage the agencies to consider the potential total cumulative impact if a significant portion of such water features under consideration were actually impacted. If impact to a significant portion of such water features would have a negative impact on paragraph (1)(1)(i) through (iii) waters (navigable waters), then we agree those features should be classified as jurisdictional waters. However, we also would extend the list to include the paragraph (1)(1)(iv) and (v) waters.

Section (b) (3)

Over the past 25 years, our organization has observed that large-scale urban development often alters or replaces streams that would otherwise meet the definition of WOTUS with storm drains or other man-made conveyance features. We are concerned that Section (b)(3) of the proposed rule might be used to re-classify what were formerly jurisdictional waters as exempt once those have been rerouted or significantly altered. While the wording of section (b)(3) appears to avoid this possibility in theory, avoiding this misclassification depends on prior knowledge about the landscape. This in turn requires either a timely site visit by the Army Corps or the existence of adequately detailed and accurate mapping of water resources *vis a vis* their jurisdictional status.

For example, when the Army Corps allows a WOTUS to be altered or destroyed, how will subsequently constructed ditches be classified for the purposes of receiving discharges that otherwise would have been covered under the NPDES system?

We note here that we concur with Mr. Sapp's (SELC) comment regarding ditches in wholly upland areas. If a man-made ditch is sufficiently deep as to maintain intermittent flow, then it should be considered a jurisdictional water.

Current Environmental Management Efforts have been Inadequate

In February of 2013, the EPA released the results of a DRAFT National Rivers and Streams Assessment[1]. The results of this nationwide survey of 1,924 rivers and streams are troubling, especially for those of us in the Southeast. Over half of these rivers and streams were found to be in poor biological condition. In the Southeast, where the Cahaba River is located, only 16-17% of the streams were classified as being in "good" condition. As citizens who value rivers and

[1] National Rivers and Streams Assessment 2008-2009: A Collaborative Survey DRAFT. February 28, 2013. U.S. Environmental Protection Agency, Office of Wetlands, Oceans and Watersheds, Office of Research and Development. EPA/841/D-13/001.

streams, we are not satisfied with this very poor result. It is a result that falls woefully short of the goal of the Clean Water Act.

Summary

While an individual business or a particular stakeholder group might realize financial benefits from limiting the scope of waters that come under the Clean Water Act's modest protections, those benefits could come from externalizing the actual total costs of their activity onto a resource that belongs to the American public. Our national interest is best served by protecting our rivers and streams. We need to improve the health of our rivers and streams to a far greater degree than we have currently achieved.

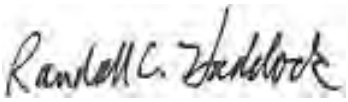
Rather than limit the scope of waters that are classified as jurisdictional, we should, in most all cases where those waters have a significant ecological or hydrological connection to WOTUS, extend Clean Water Act protections.

We support adoption of this rule and encourage the Army Corps and EPA to adopt an inclusive view of which waters are to be covered under Clean Water Act regulations. We support the comments offered by the Southern Environmental Law Center's William Sapp.

Sincerely,



Beth K. Stewart
Executive Director
Cahaba River Society



Randall C. Haddock, PhD
Field Director
Cahaba River Society

November 14, 2014

The Honorable Gina McCarthy, Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Re: Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy,

As local and state decision-makers in California, we strongly support the US Environmental Protection Agency and US Army Corps of Engineers proposed *Definition of "Waters of the United States Under the Clean Water Act*" to clarify which streams, wetlands and other waters are covered by Clean Water Act protections. Wetlands and small streams, including those that flow only seasonally, have a direct impact on the health and quality of larger streams and rivers downstream. These resources are critical drinking water sources, and they protect communities from flooding and filter pollutants.

For its first thirty years, the Clean Water Act safeguarded nearly all of our nation's waters. These protections are necessary to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," as intended by Congress when it passed the Clean Water Act in 1972. Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction. These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's streams miles and at least 20 percent of the 110 million acres of wetlands in the continental United States. This confusion has put the drinking water for 117 million Americans at risk. Hundreds of small streams feed the surface water supplies for 26 million Californians. If we do not protect these networks of small streams, we cannot protect and restore the lakes, rivers and bays that our economy and way of life depend on. We will also be jeopardizing jobs and revenue in businesses that depend on clean water, including outdoor activities like angling and water-based recreation.

As local and state decision makers, we know that broad federal protections are critical to protecting our local waters. Water flows downhill, and each of the lower 48 states have water bodies that are downstream of one or more other states. Maintaining consistency among water pollution programs throughout these states is essential. Since the passage of the Clean Water Act, California has come to rely on the Act's core provisions and have structured our own water pollution programs accordingly. We support the draft rule's proposal to restore Clean Water Act protection to all tributaries of navigable waterways. Failure to do so would jeopardize water quality in our larger riversheds and estuaries. It would also put at risk the millions of dollars and thousands of jobs generated by water related tourism activities and other businesses that are dependent on clean water supplies.

This commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been

absent for over a decade and better protection for critical water resources on which our communities depend. We strongly support finalization of *Definition of "Waters of the United States Under the Clean Water Act.*"

Sincerely,

The Honorable Tom Ammiano
California State Assembly, District 17

The Honorable Rob Bonta
California State Assembly, District 18

The Honorable Nora Campos
California State Assembly, District 27

The Honorable Paul Fong
California State Assembly, District 28

The Honorable Jerry Hill
California State Senate, District 13

The Honorable Hannah-Beth Jackson
California State Senate, District 19

The Honorable Dan Kalb
Oakland City Council

The Honorable Mark Leno
California State Senate, District 11

The Honorable Marc Levine
California State Assembly, District 10

The Honorable Carol Liu
California State Senate, District 25

The Honorable William Monning
California State Senate, District 17

The Honorable Fran Pavley
California State Senate, District 27

The Honorable Anthony Rendon
California State Assembly, District 63

The Honorable Nancy Skinner
California State Assembly, District 15

The Honorable Phil Ting
California State Assembly, District 19

The Honorable Das Williams
California State Assembly, District 37

The Honorable Scott Wiener
San Francisco Board of Supervisors



CLEAN, FLOWING WATERS FOR WASHINGTON

The Center for
Environmental Law & Policy

November 14, 2014 *by electronic mail, U.S. mail, and Federal eRulemaking Portal*

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue NW, Washington, DC 20460

Re: Proposed Definition of "Waters of the United States" Under the Clean Water Act
Docket ID No. EPA-HQ-OW-2011-0880
Comments of the Center for Environmental Law and Policy

To Whom It May Concern:

These comments on the proposed "Definition of the 'Waters of the United States' Under the Clean Water Act" are submitted by the Center for Environmental Law and Policy (CELP). CELP appreciates the opportunity to comment on this important rule shaping the future of protection for the waters of Washington and the nation.

Founded in 1993, CELP's mission is to protect and restore Washington's waters for communities and ecosystems through education, policy reform, agency advocacy, and public interest litigation. CELP serves as a voice for public-interest water resource management and preservation in Washington State and beyond.

National Environmental Policy Act (NEPA) Compliance Concerns

I. THE RELATED ENVIRONMENTAL ASSESSMENT BY THE CORPS OF ENGINEERS IS BEING INAPPROPRIATELY WITHHELD

The EPA references a Corps-prepared environmental assessment in the preamble to the proposed rule, but this document is not posted on either the EPA website or the Corps website. [1] We are informed by the Corps of Engineers that this document is expected to be made available when the final rule is published.[2] We object to this withholding; NEPA-preparatory documents are *not* secret documents. According to the statute itself, the analysis must be undertaken whenever there are "proposals" for "major Federal actions" with significant effects[3], and we are obviously in the presence of a proposal.

[1] 79 Fed. Reg. 22,222 (April 21, 2014).
[2] Personal communication with Cheryl R. Nyberg, Reference Librarian, Gallagher Law Library, University of Washington School of Law (Nov. 10, 2014).
[3] NEPA, Subsection 102(2)(C), 42 U.S.C. § 4332(2)(C)

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This decision to proceed by an unrevealed environmental assessment is a violation of NEPA, and it is a violation of the public participation provisions of the Clean Water Act (CWA).[4]

II. THE EPA SHOULD USE ITS DISCRETION TO SUBJECT THE PROPOSED RULE TO CAA SECTION 309 REVIEW

We understand the Clean Water Act says that "no action of the Administrator" taken pursuant to the Clean Water Act "shall be deemed a major Federal action significantly affecting the quality of the human environment,"[5] and therefore EPA is not required to subject the proposed rule to NEPA analysis.

We nonetheless believe EPA should be especially alert to the avoidance of long-lasting environmental damage not only to its water programs but also to other environmental laws the agency administers.

You will note, in this connection, that Section 309 of the Clean Air Act[6] declares:

> The Administrator [of EPA] shall review and comment in writing on the environmental impact of any matter relating to … the provisions of the authority of the Administrator contained in any … proposed regulations …

This Section 309 comment is understood to be famously substantive, and it invites the Administrator to determine whether any proposed regulation "is unsatisfactory from the standpoint of public health or welfare or environmental quality."[7]

We believe the EPA should evaluate its *own* action here—i.e., consider the impacts of the proposed rule on other programs the agency administers.

We understand entirely that Section 309 traditionally is restricted to occasions of comments by EPA directed at proposals of other agencies. But we believe it to be especially pertinent in the present context because Section 309 invites scrutiny of environmental impacts relating to "the authority" of the agency. We fear that what is happening here (featuring the exclusions of groundwater from the Clean Water Act) will have adverse consequences for other EPA programs, including those under the Safe Drinking Water Act (SDWA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). It is not unreasonable to ask the agency to study, for example, how the EPA's proposed exclusion of groundwater from the waters of the United States might increase the number of slow-moving Superfund sites the agency must respond to five decades hence.

The EPA is of course an expert in subjecting other agencies to Section 309 scrutiny so it should not be difficult for the agency to do this self-scrutiny of its own actions.

Support for the Comments of Earthjustice

CELP would like to express its robust support for the comments provided by Earthjustice regarding this Clean Water Act (CWA) rule. With Earthjustice, we support the EPA's effort to ground the rule in sound science and urge the EPA to strengthen the rule to better accord with the comments from the EPA Science Advisory Board (SAB).

We agree with Earthjustice that the appropriate reading of Supreme Court precedent leaves in place the broad interpretation of CWA jurisdiction found in *Intl. Paper Co. v. Ouelette*[8] and *U.S. v. Riverside Bayview Homes, Inc*.[9] We further agree that no one theory of CWA

[4] Subsection 101(e) of the Clean Water Act, 33 U.S.C. § 1251(e)
[5] CWA, Subsection 511(c)(1), id. § 1371(c)(1)
[6] 42 U.S.C. § 7609(a)
[7] CWA, Subsection 309(b), 42 U.S.C. § 7609(b).
[8] 479 U.S. 481, 492 (1987)
[9] 474 U.S. 121, 136-37 (1985)

jurisdiction emerges from the plurality opinion in *Rapanos v. U.S.*[10], and that the only controlling precedent for limiting the broad application of the CWA is a narrow one – i.e., the specific reversal of the Migratory Bird Rule by Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (*SWANCC*).[11]

We also agree with Earthjustice that categorical exclusions are not dictated by the statute or case law. We share the view that that such exclusions risk pollution to waters that should be protected. We urge the EPA to carefully consider Earthjustice's comments regarding needed changes to the proposed definitions in 40 C.F.R. § 230.3(s), and we share their objections to the numerous exclusions in the proposed language of 40 C.F.R. § 230.3(t).

Original Comments of CELP

In addition to our reiteration of and support for the many important issues raised by Earthjustice, CELP is especially concerned by the exclusion of all groundwater in the proposed rule. We offer the following four additional comments:

- **Groundwater is a threatened national and local resource.**
- **The CWA provides an essential federal safety net for groundwater resources.**
- **The agency does not adequately explain its rationale for a total groundwater exclusion.**
- **A total groundwater exclusion is not warranted and the EPA should categorize qualified groundwater as a water of the United States.**

I. GROUNDWATER IS A THREATENED NATIONAL AND LOCAL RESOURCE.

A. Groundwater is an essential national resource.

The protection of groundwater specifically implicates the nation's environmental health, economic growth, and national security. To state the obvious, the enormous quantity of water available for all of these essential purposes is of little value if the water is not of sufficient quality to support our needs. Our nation's water supply must be of secure quantity *and* quality to remain a valuable asset.

Unfortunately, the nation's current fragmented approach to groundwater pollution regulation—creating a dizzying array of state and federal standards—is inadequate to keep this essential resource safe for current and future generations. Over a decade ago, the EPA's Ground Water Report to Congress noted that piecemeal regulation is ineffective because "fragmentation of ground water programs impedes effective management."[12] Continued regulatory fragmentation—such as the kind EPA is proposing in this rule—would only increase the ineffectiveness. As Robert Hirsch, the former Chief Hydrologist for the USGS, wrote, "[e]ffective policies and management practices must be built on a foundation that recognizes that surface water and ground water are simply two manifestations of a single integrated resource."[13]

[10] 547 U.S. 715 (2006)
[11] 531 U.S. 159 (2001)
[12] Environmental Protection Agency, Ground Water Report to Congress iii (2001), *available at* http://www.epa.gov/safewater/sourcewater/pubs/rpt-congress_gw_2001.pdf.
[13] Ground Water and Surface Water, A Single Resource, U.S. Geological Survey Circular 1139 at 1 (1998), *available at* http://pubs.usgs.gov/circ/circ1139/#pdf.

1. Americans across the country are dependent on groundwater in large amounts

Americans pump 83 billion gallons of groundwater each day, representing roughly 25 percent of the nation's total water use.[14] Specific use varies by region; California and Texas use the most groundwater by volume, while Hawaii depends on groundwater for fully 95 percent of its water needs.[15] Nationally, groundwater is a key source of potable water: roughly 15 million households get their water from domestic wells, and 800,000 new wells are installed annually.[16] Groundwater is also a pillar of our agricultural industry; irrigation uses account for 65 percent of groundwater use nationwide.[17] Ecologically, groundwater provides essential ecosystem services, the most fundamental of which are water-table recharge and sustaining perennial flows in countless streams and rivers.[18]

2. The national groundwater supply faces additional challenges due to climate change

Although climate change risks to water are most often discussed in the context of surface water, climate change will also impact groundwater.[19] Climate change will impact groundwater both directly (influencing recharge and chemical composition) and indirectly (as impacts on surface water are felt in the water cycle).[20] The IPCC recently reported that "[c]limate change is projected to reduce renewable surface water and groundwater resources in most dry subtropical regions…intensifying competition for water among sectors."[21] Indeed, author Catherine Hughes reports that "[c]limate is the major factor driving temporal variability in groundwater recharge."[22] However, a 2011 report co-authored by the USDA Agricultural Research Service (ARS) cautioned that climate-driven recharge patterns also affect the *quality* of groundwater.[23] For example, saline encroachment driven by rising sea levels may limit the usefulness of groundwater for agricultural, ecosystem, or drinking needs. Thus, even as arid regions experience reduced recharge, rising seas will *increase* recharge of coastal aquifers by up to 15 percent, correspondingly increasing the level of salinity and dissolved solids in coastal groundwater.[24]

3. Groundwater remains susceptible to many forms of pollution

Due to groundwater's status as an essential national resource, studies showing the deteriorating health of our nation's groundwater are cause for alarm. For example, the USGS Quality of Waters in Domestic Wells Survey revealed that more than one in five sampled wells contained one or more contaminants at concentrations greater than EPA human health

[14] Robert Glennon, Unquenchable: America's Water Crisis and What to Do About It 111 (2009).
[15] Dr. Venkatesh Uddameri, *Importance of Groundwater to the US Economy*, National Ground Water Association presentation 2, *available at* http://water.epa.gov/action/importanceofwater/upload/21-Uddameri.pdf .
[16] Glennon at 130.
[17] Uddameri at 3.
[18] Id. at 5.
[19] Timothy R. Green et al., Beneath the Surface of Global Change: Impacts of Climate Change on Groundwater, 405 Journal of Hydrology 532, 533 (2011).
[20] Green et al., at 533.
[21] IPCC, Climate Change 2014: Synthesis Report 10 (2014), *available at* http://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_SPM.pdf.
[22] Catherine E. Hughes et. al, Climate Change and Groundwater 98 (2011) (emphasis added).
[23] Green et al., at 544-5.
[24] Id. at 545; *see also* Priyantha Ranjan, So Kazama and Masaki Sawamoto, Effects of climate change on coastal fresh groundwater resources, 16 Global Environmental Change 388, 395 (2006), *available at* http://espace.library.curtin.edu.au/cgi-bin/espace.pdf?file=/2011/01/25/file_1/135411 (observing that climate change will impact freshwater globally by increasing coastal aquifer salinity and shifting recharge away from inland arid zones).

benchmarks.[25] The most common contaminant from man-made sources was agricultural nitrate,[26] which is associated with both ecological impacts and human health risks (including infant death). In industrial use areas, the most common pollutants were volatile organic compounds (VOCs).[27] Other threats vary across the more than 60 principal aquifers across the country; Floridian agricultural aquifers far exceed permissible levels of dissolved arsenic,[28] for example, while High Plains wells exhibit concerning levels of dissolved atrazine.[29]

4. Groundwater is an engine of national economic growth

While the ecological and health risks to our nation's groundwater independently justify protection, the economic importance of groundwater further recommends its conservation. Benjamin Franklin said, "When the well's dry, we know the worth of water."[30] Discussing groundwater purely as a resource, however, we need not wait: the estimated value of groundwater produced annually exceeds $20 billion, sales of groundwater-related businesses exceed $15 billion, and sales of related manufacturing industries exceed $350 million.[31] Community water systems alone employ more than 200,000 workers; adding in associated industries like drilling, environmental services and remediation roughly doubles this figure.[32]

One popular example of a largely groundwater-dependent industry is the bottled water business. With certain brands selling twenty ounce bottles for more than the price of a gallon of gas—yet spending cents on the dollar to "produce" the water—this industry has seen rapid growth in recent decades. [33] In 2011, American consumers drank 9 billion gallons of bottled water.[34] While the increasing privatization of water traditionally held in trust for future generations raises its own concerns, on an economically pragmatic level it is clear that carefully managing the resource on which these industries rely is a prerequisite for, at a minimum, the continued enjoyment of economic benefits from resource use.

5. Groundwater is essential to national security

"The groundwater is our strategic reserve. It's our backup, and so where do you go when the backup is gone?"[35] – James Famiglietti

The Department of Defense recently released an "Adaptation Roadmap," in which the Pentagon positively identified climate change as a threat to national security.[36] On a global scale,

[25] Leslie A. DeSimone, Pixie A. Hamilton, and Robert J. Gilliom, Quality of Water from Domestic Wells in the United States, United States Geological Society (USGS) National Water-Quality Assessment Program, http://water.usgs.gov/nawqa/studies/domestic_wells/.
[26] Id.
[27] USGS, Southwest Principal Aquifers Regional Ground-Water Quality Assessment 3 (2009), *available at* http://pubs.usgs.gov/fs/2009/3015/pdf/fs2009-3015.pdf.
[28] USGS, Comparison of Dissolved Arsenic Concentrations in Select Principal Aquifers, http://water.usgs.gov/nawqa/studies/praq/images/ComparisonGraphics/arsenic.jpg.
[29] USGS, Comparison of Dissolved Atrazine in Select Principal Aquifers, http://water.usgs.gov/nawqa/studies/praq/images/ComparisonGraphics/atrazine.jpg.
[30] Glennon at 16.
[31] Uddameri at 6-7.
[32] Id. at 10.
[33] James Salzman, Drinking Water: A History 16 (2013).
[34] Salzman at 16.
[35] Suzanne Goldenberg, Why Global Water Shortages Pose Threat of Terror and War, The Guardian, February 8, 2014, *available at* http://www.theguardian.com/environment/2014/feb/09/global-water-shortages-threat-terror-war (quoting hydrologist James Famiglietti of the University of California at Irvine).
[36] Department of Defense, 2014 Climate Change: Adaptation Roadmap 1 (2014) *available at* http://www.acq.osd.mil/ie/download/CCARprint.pdf.

the United Nations estimates that more than half of the world's population will live in water-scarce areas.[37] In a February 2012 "Global Water Security" report, the Director of National Intelligence predicted that water over-use and resulting scarcity will be a contributing factor in armed conflict.[38] America's own water infrastructure is also vulnerable to attack; with 75,000 dams and reservoirs in constant use—serviced by two million miles of piping—it is simply impossible to defend it all.[39] Enemies both foreign and domestic have already sought to exploit infrastructure weaknesses, such as the 2002 terrorist attempt to poison the water of the American embassy in Rome or the Weather Underground's plot in the 1970s to use the military's own biological warfare material to poison domestic waters.[40]

In this context, it is a matter of national security to preserve the nation's groundwater. Most obviously, damage to our groundwater would directly impact national security because one quarter of our drinking water comes from groundwater. Second, in the context of the extreme vulnerability of our (primarily surface) water infrastructure, it would be dangerously irresponsible neglect the strategic reserve that America's groundwater represents. Our government stockpiles food, gasoline, and even nuclear missiles to gird this country against the possibility of attack—yet these resources are ultimately useless without an adequate national reserve of *clean* water.

B. Groundwater is an essential Washington resource

1. Washingtonians use groundwater as a necessity for a variety of uses

Over 60% of Washington State residents get their drinking water from groundwater. It is also used extensively for irrigation, agriculture, and industry.[41] Groundwater is a source of water that maintains streamflow and lake and reservoir levels.[42] During periods of low streamflow or low lake water levels the slow discharge of groundwater often helps maintain minimum water levels.[43] For example, the Duckabush River in Washington receives the majority of its flow amount from groundwater contribution, showing the intrinsic connection between groundwater and surface water.[44]

2. Washington's groundwater supply faces additional challenges due to climate change

Climate change is a threat to the hydrological status quo nationwide and will have a detrimental effect on reserves of water in the Pacific Northwest—reserves that are relied on for ecological, economic, and recreational uses. Global climate models predict an increase in Pacific Northwest temperature of 5.3° F by the 2080s with a modest increase in total regional precipitation of between 1-2% percent in the same time period.[45] The increase in precipitation is expected to be in the context of wetter autumns and winters, but drier summers.[46] These changes

[37] Salzman at 71.
[38] Defense Intelligence Agency, Global Water Security iii (2012) *available at* http://www.dni.gov/files/documents/Newsroom/Press%20Releases/ICA_Global%20Water%20Security.pdf.
[39] Salzman at 144.
[40] Id. at 143-4.
[41] *See* WASHINGTON STATE DEPARTMENT OF ECOLOGY, *Ground Water Quality Information*, http://www.ecy.wa.gov/programs/Wq/grndwtr/index.html.
[42] WASHINGTON STATE DEPARTMENT OF ECOLOGY, *Functions and Values of Wetlands*, http://www.ecy.wa.gov/programs/sea/wetlands/functions.html
[43] *Id*.
[44] *See* U.S. GEOLOGICAL SURVEY ,*Ground Water and Surface Water, A Single Resource*, Circular 1139, Fig. B-2 at 13, *available at*: http://pubs.usgs.gov/circ/circ1139/pdf/circ1139.pdf.
[45] PHILIP MOTE & ERIC SALATHÉ, *Future Climate in the Pacific Northwest* (2009), http://cses.washington.edu/db/pdf/wacciach1scenarios642.pdf
[46] *Id*.

will have a significant effect on the hydrology of Washington and the greater Pacific Northwest, reducing total availability of water in inland areas and shifting the timing of water availability in coastal areas.[47]

While the projected increase in total precipitation might initially warrant optimism about our water future, the increase in annual temperature is expected to shift the timing of annual streamflow in both coastal and inland Washington State by reducing the number of snowfall events, a change that will disrupt current patterns of water use.[48] Projected increases in average annual temperature are expected to shift peak river flow from late spring to winter as more precipitation flows directly to streams during storm events and the amount of water stored as snow in higher elevations declines. April 1 snowpack is projected to decrease by 28% across Washington State by the 2020s, and by 59% by the 2080s.[49] Much of the state's water supplies are dependent on seasonal snowmelt to recharge groundwater and maintain summer and fall streamflow, so these changes may have negative impacts on energy production and agriculture – two significant drivers of Washington's economy.

The reduction in availability of water in summer and fall is predicted to result in shortages of water supply to users in Eastern Washington. The Yakima basin reservoir system that provides groundwater to an area rich in agriculture will be less likely able to supply water to all users. Under the current regime, water shortages in the basin are expected to occur in 32% of the years in the 2020s and 77% of the years in the 2080s, compared to a historic average during 1970-2005 when shortages occurred only 14% of years.[50] This lack of available irrigation water could result in a loss of 16% of the apple and cherry production in the area by the 2080s, valued at $70 million.[51]

Because groundwater contributes significantly to streamflow during times of low precipitation, changes in the timing of Washington's snowmelt will increase the reliance on existing groundwater reserves to maintain streamflow and wildlife habitat. Summer and autumn snowmelt typically reduces the temperature of the region's surface waters, maintaining conditions favorable to freshwater salmon habitat.[52] Climate change will likely increase stream temperatures, reducing the quality and extent of habitat.[53] Researchers project that the duration of thermal stress periods will at least double and potentially quadruple by the 2080s, with the greatest increases in thermal stress being in the Interior Columbia River Basin and the Lake Washington Ship Canal.[54]

It is essential that our groundwater resources be managed carefully–with careful protection of both water quantity and quality–because the predicted changes will pit competing interests in the agriculture, energy, and conservation sectors against each other as demands for a limited resource increase.

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[47] *See* VANO, ET AL., *Climate Change Impacts on Water Management and Irrigated Agriculture in the Yakima River Basin, Washington, USA* (2009), http://cses.washington.edu/db/pdf/wacciach3yakima646.pdf (describing the impact of climate change on water management in the inland Yakima River Basin); *See* VANO, ET AL., *Climate Change Impacts on Water Management in the Puget Sound Region, Washington, USA* (2009), http://cses.washington.edu/db/pdf/wacciach3pswater645.pdf (describing the impact of climate change on water management in the coastal Puget Sound Region).

[48] *See generally* THE CLIMATE IMPACTS GROUP, UNIVERSITY OF WASHINGTON, *The Washington Climate Change Impacts Assessment, Evaluating Washington's Future in a Changing Climate Executive Summary* (2009), http://cses.washington.edu/db/pdf/wacciaexecsummary638.pdf.

[49] ELSNER, ET AL,. *Implications of 21st Century Climate Change for the Hydrology of Washington State* (2009), http://cses.washington.edu/db/pdf/wacciach3hydrology644.pdf.

[50] VANO, ET AL., *Climate Change Impacts on Water Management and Irrigated Agriculture in the Yakima River Basin, Washington, USA* (2009), http://cses.washington.edu/db/pdf/wacciach3yakima646.pdf

[51] *Id.*

[52] MANTUA, ET AL., *Impacts of Climate Change on Key Aspects of Freshwater Salmon Habitat in Washington State* (2009), http://cses.washington.edu/db/pdf/wacciach6salmon649.pdf.

[53] *Id.*

[54] *Id.*

3. Groundwater is essential to Washington's economic growth

The availability of clean groundwater is crucial to the state's economy. Washington's Columbia Plateau region, home to nearly 1.3 million people, generates an estimated $6 billion-per-year through agriculture that relies on reserves of uncontaminated groundwater for irrigation.[55] Reductions in usable groundwater stores can have devastating long-term effects on local farmers dependent on them for irrigation, and the contamination of water sources used for drinking water is a major public health issue. Cleaning up contaminated aquifers is costly and is often paid for by state and federal taxpayers.

4. Groundwater in Washington remains susceptible to many forms of pollution

Washington State has relatively strong regulations of groundwater that exceed federal statutory protections, yet still has a variety of groundwater quality issues.[56] The U.S. Geological Survey issued a report in May 2010 documenting the results of sampling public water wells across the country, including wells in Washington State, that found more than one in five wells sampled contained contaminants at concentrations greater than human health benchmarks.[57] A brief survey of three groundwater contamination problems in Washington demonstrates the breadth of ongoing threats to groundwater quality, even in a strongly regulated state.

(a) Hanford Site

Decades of production of plutonium for nuclear weapons at the Hanford Site between 1943 and 1987 left a legacy of radioactive and chemical contamination across a ~1500 square kilometer site near the Columbia River that approximately 11,000 employees are working to clean up today.[58]

The plutonium producing reactors at the Hanford Site generated hundreds of billions of gallons of liquid waste containing both radioactive and chemical pollutants.[59] These liquid wastes were disposed of by pouring them directly onto the ground or into trenches and holding ponds.[60] So much wastewater was dumped that it raised the water table about 75 feet and created aboveground lakes.[61] Higher-level liquid radioactive waste generated in the process of extracting plutonium from uranium fuel rods was put into underground storage tanks, many of which have since leaked. 177 aging tanks, which contain 56 million gallons of highly toxic and radioactive waste, are of particular concern because at least 67 of the tanks have collectively leaked about

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[55] DANIEL T. SNYDER & JONATHAN V. HAYNES, *Groundwater Conditions During 2009 and Changes in Groundwater Levels from 1984 to 2009, Columbia Plateau Regional Aquifer System, Washington, Oregon, and Idaho* (2010), *available at:* http://pubs.usgs.gov/sir/2010/5040/; A. M. IBEKWE, *Quantification of Survival of Escherichia coliO157:H7 on Plants Affected by Contaminated Irrigation Water* (2006) Engineering in Life Sciences, v6 n6 at 566-572 (December, 2006) (discussing the survival of E. coli bacteria on plants irrigated with contaminated water.); A. SBODIO, ET AL., *Modified Moore Swab Optimization and Validation in Capturing E. Coli O157:H7 and Salmonella Enterica in Large Volume Field Samples of Irrigation Water,* Food Research International, v51 n2 at 654-662 (2013) (describing testing methods for determining whether irrigation water is contaminated with E. coli bacteria.).

[56] *See* WASHINGTON STATE DEPT. OF ECOLOGY, *Growth Management Act Information*, http://www.ecy.wa.gov/programs/Wq/grndwtr/cara/gma.html (providing an overview of Washington's Growth Management Act and its Critical Aquifer Recharge Area designations).

[57] FUTUREWISE, *As Groundwater Issues Increase Across State, Futurewise Wins for Water Quality in Grays Harbor, Walla Walla, and Yakima Counties*, http://futurewise.org/resources/news/groundwaternews

[58] U.S. DEPT. OF ENERGY – HANFORD, *Hanford Cleanup*, http://www.hanford.gov/page.cfm/HanfordCleanup

[59] *Id.*

[60] *Id.*

[61] WASHINGTON STATE DEPT. OF ECOLOGY, *Nuclear Waste Projects Hanford*, http://www.ecy.wa.gov/programs/nwp/groundwater.htm

one million gallons of high-level radioactive waste into the soil and continue to do so.[62] As a result, the site's groundwater is widely contaminated with underground plumes of contaminants covering nearly 200 square kilometers reported in 2013, some have reached the Columbia River nearby.[63] Known contaminants, some at concentrations over 1000 times the drinking water standards, include; carbon-14, carbon tetrachloride, chromium, hexavalent chromium, cyanide, iodine-129, strontium-90, technetium-99, trichloroethene, tritium, and uranium.[64] To prevent any more contamination from reaching the Columbia River several strategies are being used including; various types of underground barriers, "pump and treat" facilities, and "biostimulation." The yearly average cleanup budget for the Hanford Site is two billion dollars. To date, the cleanup has cost about forty billion dollars and the estimated remaining costs are at least one hundred and ten billion dollars more.

(b) Yakima Valley Nitrates

In the lower Yakima Valley, located in eastern Washington State, 12% of the wells that have been tested do not meet drinking water quality standards for nitrates.[65] Approximately 20% of the wells have elevated levels of nitrates, many above the background level for the area.[66] Additionally, elevated levels of arsenic and ammonia have been found in the area's groundwater, as well as contamination with coliform bacteria.[67] Increased awareness of groundwater contamination in private wells prompted the Washington State Department of Ecology to work with the Environmental Protection Agency, the Washington State Department of Agriculture, the Washington State Department of Health, and Yakima County to address the challenges related to regional groundwater contamination.[68] An example of how important groundwater issues are to the state, in November 2011 the Washington State Department of Ecology designated the Lower Yakima Valley as a Groundwater Management Area (GWMA) and put aside approximately $300,000 in start-up funding for the GWMA.[69] As the letter indicates, the state was under tight budgetary constraints and this start-up funding was "a testament to Ecology's commitment to finding solutions to this problem."[70]

In a Consent Order issued by EPA to dairy farmers in response to nitrate contamination of groundwater, the EPA acknowledged a hydrological connection in the Yakima Valley between shallow alluvial aquifers and underlying basalt groundwater aquifers, and that the

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[62] U.S. DEPT. OF ENERGY – HANFORD, *Hanford Cleanup*, http://www.hanford.gov/page.cfm/HanfordCleanup; OREGON DEPT. OF ENERGY, *Frequently Asked Questions (FAQ's) about Hanford* at 5, http://www.oregon.gov/energy/NUCSAF/docs/FAQs_for_Nuclear_Safety-Hanford.pdf.

[63] U.S. DEPT. OF ENERGY, *Hanford Site Groundwater Monitoring Report for 2013*, Figure ES.16 Hanford Sitewide Plume Areas, http://www.hanford.gov/c.cfm/sgrp/GWRep13/html/gw13_Start-PDF.htm

[64] U.S. DEPT. OF ENERGY, *Hanford Site Groundwater Monitoring Report for 2013*, Table ES.1- Overview of the River Corridor Groundwater Interest Areas Contaminant Concentrations, Table ES.2-Overview of Central Plateau Groundwater Interest Areas Contaminant Concentrations, http://www.hanford.gov/c.cfm/sgrp/GWRep13/html/gw13_Start-PDF.htm

[65] WASHINGTON STATE DEPT. OF ECOLOGY, *Growth Management Act Information*, http://www.ecy.wa.gov/programs/Wq/grndwtr/cara/gma.html

[66] *Id*.

[67] *See RON SELL & L. KNUTSON, Quality of Ground Water in Private Wells in the Lower Yakima Valley, 2001-02* (2002), *available at:* https://fortress.wa.gov/ecy/publications/publications/0210074.pdf (reporting the results of water quality tests administered in 249 privately owned wells in the lower Yakima Valley, "one of the most intensely irrigated and diverse agricultural areas in the United States.")

[68] *See* U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 10, *Lower Yakima Valley Groundwater*, http://yosemite.epa.gov/r10/water.nsf/gwpu/lyakimagw (documenting the work of local, state, and federal agencies working with dairies in the area to address sources of nitrate contamination in groundwater).

[69] *See* Letter from Ted Sturdevant, Director, Washington State Dept. of Ecology to Kevin Bouchey, Yakima County.Commissioner (Nov. 15, 2011) *available at*: http://www.ecy.wa.gov/programs/wq/grndwtr/YakimaGWMACvrLtr.pdf.

[70] *Id*.

subsurface flow of water through both levels tend to follow the same routes to the Yakima River streambed.[71]

(c) Puget Sound

The Puget Sound was designated by Congress as an estuary of national significance and given priority status in the 1987 amendments to the Clean Water Act as part of the National Estuary Program.[72] The Puget Sound Partnership is a state agency tasked with finding ways to address the complex and competing issues causing the Puget Sound to be degraded by human activity.[73] The Partnership has identified pollution from failing septic tanks as one of the biggest threats to the health of the Puget Sound.[74]

An estimated 4.5 million residents live in the Puget Sound region and their combined impacts result in an estimated 14 million pounds of toxic chemicals being discharged to the waters annually.[75] This pollution is responsible for destruction of salmon runs, the closure of over 7,000 acres of beaches for shellfish harvest, and diminishing aquatic habitats.[76] The partial annual value of ecosystem services of the Puget Sound Basin has been estimated to be between $9.7 billion and $83 billion.[77] While that value encompasses 23 categories of ecosystem services and goods, not only groundwater, sufficient clean groundwater is essential to ecosystem health.

The cumulative effects of septic systems in introducing pollutants to groundwater and subsequently to the Puget Sound cannot be ignored when 67 percent of Washington State's entire population of nearly 7 million residents lives within the 12 counties bordering the Sound.[78] For example, the area surrounding Olympia, the state capital, consists of three interconnected cities. In the Olympia-Lacey-Tumwater area alone there are an estimated 5,530 properties operating septic systems classified as "high risk" of groundwater pollution due to their age or design.[79]

II. THE CWA PROVIDES AN ESSENTIAL FEDERAL SAFETY NET FOR GROUNDWATER RESOURCES

Three acts provide the most significant regulation of the nation's groundwater outside of the CWA: the Safe Drinking Water Act (SDWA) of 1974, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, and the Resource Conservation and Recovery Act (RCRA) of 1976. Each act has a limited scope; none deals with groundwater comprehensively. Without the crucial gap-filling role of the CWA, these three statutes leave vulnerable many of the nation's important groundwater resources.

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[71] U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 10, *Administrative Order on Consent*, Docket No. SDWA-10-2013-0080, *available at:* http://www.epa.gov/region10/pdf/sites/yakimagw/consent_order_yakima_valley_dairies_march2013.pdf

[72] PUGET SOUND PARTNERSHIP, *About the Puget Sound Partnership*, http://www.psp.wa.gov/aboutthepartnership.php

[73] *Id.*

[74] PUGET SOUND PARTNERSHIP, *Strategic Initiatives*, http://www.psp.wa.gov/action_agenda_strategic_initiatives.php

[75] PEOPLE FOR PUGET SOUND, *The Problem of Polluted Runoff in Puget Sound*, http://pugetsound.org/education/polluted-runoff

[76] *Id*; PUGET SOUND PARTNERSHIP, *Strategic Initiatives*, http://www.psp.wa.gov/action_agenda_strategic_initiatives.php

[77] EARTH ECONOMICS, *Valuing the Puget Sound, Revealing Our Best Investments* at 47*(2010), available at:* http://www.eartheconomics.org/FileLibrary/file/Reports/Puget%20Sound%20and%20Watersheds/Puget%20Sound%20Russell/Valuing%20the%20Puget%20Sound%20Basin%20v1.0.pdf.

[78] WASHINGTON STATE DEPT. OF ECOLOGY, *Threats to Puget Sound*, http://www.ecy.wa.gov/puget_sound/threats.html

[79] ANDY HOBBS, *Septic Systems Threaten Water Quality Throughout Thurston County*, THE OLYMPIAN (Sept. 28, 2014), *available at:* http://www.theolympian.com/2014/09/28/3339776_septic-systems-threaten-water.html?rh=1.

A. CERCLA and RCRA respond to pollution after-the-fact.

CERCLA and RCRA are, as the agency knows well, restorative rather than preventative acts. They focus on remedying groundwater contamination after it occurs, as has been long recognized.[80] CERCLA enables the EPA to act only once there is a release or a substantial threat of release of a hazardous pollutant, which must present an imminent and substantial danger to the public health or welfare.[81] RCRA implements cleanup requirements for the EPA once contamination has occurred.[82]

Taking a reactive approach to the pollution of our groundwater not only permits groundwater to become contaminated, it results in groundwater contamination that may not be possible to restore or restoration may take decades. The difficulty or impossibility of cleaning up groundwater contamination means that many aquifers are permanently lost as useful water sources.

The EPA has long admitted to the public that some sources of groundwater can never be effectively cleaned once contaminated.[83] Often, the most a cleanup effort achieves is containing the contamination and preventing it from dispersing further. And despite many significant advances in groundwater remediation technologies, restoring the entire volume of a contaminated aquifer remains an elusive goal, and few examples of such restoration have been reported.[84]

B. SDWA jurisdiction is limited to public water supplies.

The SDWA gives direct, though narrow, coverage to groundwater: the act only applies to "public water systems," not all groundwater.[85] Public water systems are defined as systems providing water for human consumption to at least fifteen service connections or twenty-five individuals.[86] Under the SDWA, groundwater used by a single household and groundwater utilized for purposes such as agriculture, but not consumption, receives no protection.

C. SDWA jurisdiction is limited to pollution by "injection."

The SDWA regulations of the disposal of wastes into groundwater are very narrow. The SDWA deals strictly with waste that is "injected" into groundwater.[87] So, for example, waste from mines that enters groundwater by seeping through the soil is not regulated under the act. SDWA's regulation of groundwater and drinking water supplies is further narrowed by the statute's lack of protection for residents utilizing private wells.

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[80] See, e.g., Linda A. Malone, The Necessary Interrelationship Between Land Use and Preservation of Groundwater Resources, 9 UCLA J. Envtl. L. Pol'y 1, 16, 26-27, (1990); Mining Contamination of Groundwater: The Need for Legislation and Reform, 2 U. Denv. Water L. Rev. 60, 73 (1998).

[81] CERCLA, 42 U.S.C. § 9604(a)(1)(A)-(B) (2006).

[82] RCRA, 42 U.S.C. § 6973(a) (2011).

[83] see, e.g., Ground Water Cleanup at Superfund Sites, U.S. Environmental Protection Agency, http://www.epa.gov/superfund/health/conmedia/gwdocs/ brochure.htm ("[t]reatment technologies are limited in their ability to clean up an aquifer, even if the location of the contaminants is known.")

[84] United States Army Environmental Center, Guidance to Site Managers at Army Installations: Groundwater Evaluation and Development of Remediation Strategies where Aquifer Restoration may be Technically Impracticable 3-7 (2002).

[85] SDWA, 42 U.S.C. §300f(4)(a) (2012).

[86] *Id.*

[87] SDWA, 42 U.S.C. § 300h(d)(1)-(2) (2012).

D. SDWA jurisdiction is limited by exclusions.

The proposed categorical exclusion of groundwater under the CWA must be assessed in light of other deliberate rollbacks for the protection of groundwater. This proposed rule comes at a moment not of strengthening but of weakening of related programs. Twenty-five years ago there were high expectations that attended our laws to protect drinking water:[88]

> The 1974 Safe Drinking Water Act (U.S. Public Law 93-523) authorized the [U.S. EPA] to establish federal standards to protect the public from harmful contaminants of drinking water. The law also provided for the establishment of a joint national-state system to ensure compliance with the standards and to protect underground water sources from contamination. … Section 1412(c) of the act and its amendments … mandated that the National Research Council (NRC) conduct studies to identify adverse health effects associated with contaminants in drinking water, to identify relevant research needs, and to make recommendations regarding such research. Amendments to the law in 1971 requested revisions of the NRC studies to report "new information which had become available since the NRC's most recent report, and every two years thereafter."

These expectations would be difficult to meet under the best of circumstances. Circumstances are not the best. In *Legal Environmental Assistance Foundation v. U.S. EPA*,[89] the court held that fracking fluids were subject to the regulatory measures for "underground injection" but this case was overruled by the Energy Policy Act of 2005,[90] that excludes —

> (ii) the underground injection of fluids or propping agents (other than diesel fuels) pursuant to hydraulic fracturing operations related to oil, gas, or geothermal production activities.

This is an exception, as the agency well knows, to the underground injection regulatory regime for not one contaminant but several of them largely unidentified. This loophole effectively permits natural gas and chemicals, such as methanol, hydrochloric acid, benzene, and quaternary ammonium chloride, to be injected into areas of groundwater that provide water to twenty-five or more individuals.[91] Many of the chemicals qualifying as exempt under SDWA section 300h(d)(1)(b) are the same listed by the EPA as carcinogens and provided maximum contaminant levels for primary drinking water regulation under the SDWA.[92]

This protective regime was turned over to the mercies of the common law, with consequences predictably perceived by courts that have been called to the rescue[93]:

> By any responsible account, the exploitation of the Marcellus Shale Formation will produce detrimental effects on the environment, on the

[88] Safe Drinking Water Committee, Drinking Water and Health, V. 9: Selected Issues in Risk Assessment ix (1989 National Academy Press).
[89] 276 F.3d 1253 (11th Cir. 2001)
[90] Pub. L. No. 109-58, § 1(a), 119 Stat. 594 (2005) ("underground injection")
[91] What Chemicals are Used, Frac Focus Chemical Disclosure Registry (Nov. 12, 2014, 7:00 PM), https://fracfocus.org/chemical-use/what-chemicals-are-used.
[92] Drinking Water Contaminants, U.S. Environmental Protection Agency (Nov. 12, 2014, 7:00 PM), http://water.epa.gov/drink/contaminants/#List; SDWA, 42 U.S.C. § 300(f)(1)(c)-(d) (2012).
[93] *Robinson Township v. Commonwealth of Pennsylvania*, 83 A.3d 901, 976 (Pa. 2013) (public trust under art. 1, § 27 of the Pa. Constitution)

> people, their children, and future generations, and potentially on the public purse, perhaps rivaling the environmental effects of coal extraction. …

We know that cracks in the legal protective canopy of the SDWA cannot be fixed here. But they cannot be ignored here by the proposals that would add another crack in that protective legal canopy.

E. SDWA high-level protection for "sole source aquifers" applies to a fraction of the nation's groundwater.

The greatest protection SDWA provides to groundwater is the qualification as "sole source aquifers."[94] The designation of sole source aquifer is granted to aquifers that supply at least 50 percent of drinking water consumed in the area overlying the aquifer.[95] The designation is not automatically granted, and a party must submit an application identifying a protection area for consideration. Once designated as a sole source aquifer, the SDWA requires all commitment of federal financial assistance to be considered for possible negative effects to the designated aquifer.[96] Only 77 designated sole source aquifers are designated under the SDWA nationwide.[97] The exclusivity of this program leaves the majority of the nation's groundwater without such protection.

F. SDWA enforcement lacks resources and capacity.

In addition to the insufficient coverage by the SDWA to prevent discharge of pollutants to groundwater, the act has been poorly enforced. Reports by the U.S. Government Accountability Office over the last few years continue to find that the EPA is ineffectively implementing and enforcing its responsibilities under the SDWA. In 2011, the GAO found that the EPA had not effectively implemented the 1996 amendments' requirement to consider, for regulatory determinations, contaminants that present the greatest public health concern.[98] A study by GAO in 2014 determined that the SDWA needed to permit the monitoring of more contaminants and at increased frequencies as part of the EPAs Unregulated Contaminant Monitoring Program.[99] The GAO recently found that the EPA fails to properly enforce the underground injection control (UIC) program of the SDWA.[100]

III. THE AGENCY DOES NOT ADEQUATELY EXPLAIN ITS RATIONALE FOR A TOTAL GROUNDWATER EXCLUSION.

As the EPA and its Scientific Advisory Board are aware, firm distinctions between groundwater and surface water are often empirically false. To take only one prominent example: The U.S. Geological Survey reports that the groundwater contribution to all streamflow in the

[94] SDWA, 42 U.S.C.A. § 300h-3(e).
[95] *Id*.
[96] WILLIAM H. RODGERS, JR., ENVIRONMENTAL LAW § 4.8 (2014).
[97] Sole Source Aquifer Protection Program, U.S. Environmental Protection Agency (Nov. 12, 2014, 7:00 PM), http://water.epa.gov/infrastructure/drinkingwater/sourcewater/protection/solesourceaquifer.cfm.
[98] *See* U.S. Government Accountability Office, Improvements in Implementation are Needed to Better Assure the Public of Safe Drinking Water GAO-11-803T (2011), *available at* http://www.gao.gov/products/GAO-11-803T.
[99] *See* U.S. Government Accountability Office, EPA Has Improved Its Unregulated Contaminant Monitoring Program, but Additional Action Is Needed GAO-14-103 (2014), *available at* http://www.gao.gov/products/GAO-14-103.
[100] *See* U.S. Government Accountability Office, EPA Program to Protect Underground Sources from Injection of Fluids Associated with Oil and Gas Production Needs Improvement GAO-140-555 (2014), *available at* http://www.gao.gov/products/GAO-14-555.

United States may be as large as 40 percent.[101] Despite this, EPA gives scant justification for its groundwater exclusion in the proposed rule, writing simply that the "agencies have never interpreted 'waters of the United States' to include groundwater."[102] The size of this rationale is too small to justify so large an exclusion.

In its one-sentence explanation, the agency does not sufficiently explain its reasoning for creating a CWA permit exemption with the force of law for the entire supply of national groundwater. EPA should explain in substantial detail its understanding of the agency's obligations to protecting groundwater under the CWA.

A. Prior Practice Is Not a Sufficient Rationale for Continued Practice

Groundwater should not be excluded simply because it has never been included in EPA's prior definition of waters of the United States. Prior practice is not a sufficient *prima facie* rationale for continued practice. As Supreme Court stated in *Chevron, U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, "An agency, to engage in informed rulemaking, must consider varying interpretations and the wisdom of its policy on a continuing basis."[103]

1. Since EPA generally champions its use of the scientific literature in fashioning its proposed definition, EPA should explain fully its reasons for excluding deeper groundwater and shallow subsurface flows.

CELP applauds EPA's strong use of science in supporting certain portions of this rule. For example, EPA proposes the wholesale inclusion of "adjacent waters" with a science-based effort. The proposed "adjacent waters" is boxed in by three outer limits. "Adjacent waters" must be within the riparian zone, the floodplain, or have a "shallow subsurface hydrologic connection or confined surface hydrologic connection" to a jurisdictional water. While the limiting factors are not an entirely accurate representation of the scientific understanding, CELP supports EPA's effort to use scientific literature in making these boundaries. EPA also proposes that "other waters " should be examined on a "case-specific basis." In doing so, EPA correctly realizes that certain waters that are not easily encapsulated in rigid definitions and can still significantly affect jurisdictional waters. Again, CELP agrees with EPA's championing of science to make these determinations.

Yet, in examining shallow subsurface flows and deeper groundwater, EPA does not give similar scientific analysis. Indeed, by EPA's own admission, in advancing the "adjacent waters" definition, EPA explicitly states that shallow subsurface flows are not themselves waters of the United States.[104] There is a clear gap between scientific reasoning and EPA's proposed exclusion of shallow subsurface waters.

2. Use of detailed reasoning and science is good practice and required by case law.

EPA should not simply give prior practice as its reason for exclusion of groundwaters (whether they be "shallow subsurface" flows or deeper groundwater) because case law expects more than minimal reasoning, consideration of science, and logical consistency. An agency must

[101] United States Geological Survey, Sustainability of Ground-water Resources: U.S. Geological Survey Circular 1186 7 (1999).
[102] 79 Fed. Reg. 22,218 (April 21, 2014).
[103] 467 U.S. 837, 838 (1984)
[104] 79 Fed. Reg. 22,208 (April 21, 2014) ("While they may provide the connection establishing jurisdiction [between adjacent water and the jurisdictional water], these shallow subsurface flows are not 'waters of the United States.'").

give "*detailed* and *reasoned*" analysis before it excludes groundwater.[105] A rule based on "no scientific judgment" runs the risk of failing to sufficiently meeting its statutory mandate.[106]

EPA has simply provided no detailed analysis of why all groundwater is excluded. Its only reason seems to be that it has never interpreted groundwater as included. This is not a detailed explanation, as required under *Chevron*.

EPA lacks scientific support for groundwater exclusion; indeed, EPA's discussion shows scientific *support* for inclusion, not exclusion. For example, EPA argues "wetlands and other waters in landscape settings that have bidirectional hydrologic exchanges with streams or rivers . . . are chemically, physical, and biological connected with rivers via the . . . temporary storage of local groundwater that supports baseflow in rivers."[107] Elsewhere, EPA states that "[H]eadwater tributaries often depend on groundwater inputs."[108] EPA, in excluding groundwater, fails to provide sufficiently detailed and reasoned scientific judgment.

3. EPA fails to take into consideration the special import of CWA citizen suits that have worked to unsettle what is considered settled agency interpretation.

Under section 505 of the CWA, any citizen may bring suit against those who violate a CWA effluent standard or limitation, or a state or EPA order. Section 505 also allows for suit against the EPA Administrator for failing perform a nondiscretionary duty or act.[109]

The citizen suit provision in the Clean Water Act is far-reaching and works in conjunction with federal regulatory efforts to fully effectuate congressional goals. "[I]f the Federal, State, and local agencies fail to exercise their enforcement responsibility, the public is provided the right to seek vigorous enforcement action [under the CWA]."[110] Thus, the citizen suit provision supplements agency action.[111]

Citizen suits often unsettle what is considered settled agency interpretation. Citizen suits allow outside technical expertise and local knowledge to be integrated into CWA's regulatory structure through citizen suits.[112] As one court held: "The presence of the citizen suit provision [in the CWA] demonstrates that Congress believed courts were competent to make fact-sensitive determinations over whether a particular discharge requires a permit."[113]

It is been largely through citizen suits that have groundwater has been found to fall under the purview of the CWA.[114] EPA should not overlook the successful efforts made by private litigants to advance to inclusion of groundwater in the CWA.

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[105] *Chevron, U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 865 (1984).
[106] *Natural Res. Def. Council, Inc. v. Daley*, 209 F.3d 747, 756 (D.C. Cir. 2000).
[107] 79 Fed. Reg. 22,223 (April 21, 2014).
[108] Id., 22,228.
[109] 33 U.S.C. § 1365(a).
[110] S. Rep. No. 92-414, at 64 (1972).
[111] *Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Found.*, 484 U.S. 49, 60 (1987); *see also Calvert Cliffs' Coordinating Comm. v. Atomic Energy Comm'n*, 449 F.2d 1109, 1111 (D.C. Cir. 1971) (finding that citizen suits ensure the "important legislative purposes, heralded in the halls of Congress, are not lost or misdirected in the vast hallways of the federal bureaucracy.").
[112] *See* Henry N. Bulter & Jonathan R. Macey, Using Federalism to Improve Environmental Policy 27 (1996) ("Federal regulators never have been and never will be able to acquire and assimilate the enormous amount of information necessary to make optimal regulatory judgments that reflect the technical requirements of particular locations and pollution sources.").
[113] *Hawai'i Wildlife Fund v. County of Maui*, CIV. 12-00198 SOM/BM, 2014 WL 2451565, at *8 (D. Haw. May 30, 2014).
[114] *See infra* III.B.2.

B. The Agency fails to consider counterarguments that deserve significant weight.

1. The legislative history of the CWA indicates Congressional intent for jurisdiction under the Act to extend to the constitutional limit of the Commerce Clause.

The legislative history of the CWA indicates that Congress intended jurisdiction under the Act to extend to the maximum extent possible under the Commerce Clause. Two separate references in the legislative history demonstrate this intention. The first reference appears in a Senate Report that recognized a desire to move away from the more restrictive definition of "navigable waters."[115] The Senate Report recognized that "water moves in hydrologic cycles," and in order to control pollution the definition of waters must be extended to include pollutants entering "navigable waters, portions thereof, and their tributaries."[116] The second reference arose in a Conference Report that advocated that the term "navigable waters" be given the "the broadest possible constitutional interpretation unencumbered by agency determinations which have been made or may be made for administrative purposes."[117]

Some federal courts that have considered the legislative history of the CWA have interpreted Congress's rejection of the so-called "Aspin Amendment" to indicate Congressional refusal to bring groundwater within the purview of the Act.[118] However, other Federal Courts considering the issue have disagreed with this interpretation.[119] The proposed amendment would have included the phrase "any pollutant to ground waters, from any point source" within the definition of "discharge of a pollutant."[120] By rejecting the amendment and choosing not to extend CWA protection to all groundwater, including isolated groundwater, it does not follow that Congress intended to exclude all groundwater from CWA jurisdiction. Crucially, the proposed amendment would also have eliminated an exemption for oil and gas related well injections into groundwater.[121] This portion of the amendment was highly divisive and likely led to its rejection.[122] As the Supreme Court has noted, "a bill can be proposed or rejected for any number of reasons."[123] The rejection of the Aspin Amendment does not decisively indicate a Congressional intent to exclude groundwater from the CWA.

The agencies have failed to address this strong argument for a broad reading of the CWA under the Commerce Clause. As the Supreme Court has held that groundwater is an article of commerce and subject to Congressional regulation under the Commerce Clause, the EPA should explain precisely why groundwater is excluded from the intended broad reading of that Constitutional power under the CWA.[124]

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[115] 2 Envtl. L. (West) § 4:12 (*citing* Comm. on Public Works, Federal Water Pollution Control Act Amendments of 1971, S.Rep. No. 414, 92d Cong., 1st Sess. 77 (1971), in 2 Leg. Hist. at 1495).
[116] 2 Envtl. L. (West) § 4:12 (*citing* Comm. on Public Works, Federal Water Pollution Control Act Amendments of 1971, S.Rep. No. 414, 92d Cong., 1st Sess. 77 (1971), in 2 Leg. Hist. at 1495).
[117] *Id.* (*citing* Comm. of Conference, Federal Water Pollution Control Act Amendments of 1972, S.Rep. No. 1236, 92d Cong., 2d Sess. 144 (1972) in 3 Legis. Hist. at 327).
[118] *See Exxon Corp. v. Train*, 554 F.2d 1310, 1327 (5th Cir. 1977); *Vill. of Oconomowoc Lake v. Dayton Hudson Corp.*, 24 F.3d 962, 965 (7th Cir. 1994); *Umatilla Waterquality Protective Ass'n, Inc. v. Smith Frozen Foods, Inc.*, 962 F. Supp. 1312, 1318 (D. Or. 1997); *Patterson Farm, Inc. v. City of Britton, S.D.*, 1998 DSD 34, 22 F. Supp. 2d 1085, 1091 (D.S.D. 1998).
[119] *See infra* III.B.2.
[120] Wood, Mary Christina, *Regulating Discharges into Groundwater: The Crucial Link in Pollution Control Under the Clean Water Act*, 12 Harv. Envtl. L. Rev. 569, 613 (1988) (*citing* Legislative History of the Water Pollution Control Act Amendments of 1972 (Comm. Print. 1973) at 589).
[121] Wood, at 613-14.
[122] Wood, at 613-14.
[123] *SWANCC*, 531 U.S. at 159 (*citations omitted)*.
[124] *Sporhase v. Nebraska, ex rel. Douglas*, 458 U.S. 941, 941 (1982).

2. Some Federal Courts have ruled that groundwater is subject to the CWA

While the EPA states that they have never interpreted "waters of the United States" to include groundwater, the judicial branch has ruled that groundwater *can* be jurisdictional. The Seventh and Tenth Circuits have considered the question, but no circuit court of appeals has definitively answered the question.[125] Several district courts, however, have ruled that groundwater is covered under the CWA, particularly when there is a hydrological connection conveying pollutants from groundwater to jurisdictional waters. Earlier this year in *Hawai'i Wildlife Fund v. County of Maui*[126] the court held that pollutants injected into groundwater and conveyed to the ocean were covered by the CWA and required a NPDES permit. And this is only the most recent addition to a long list of district courts that have interpreted the CWA to include groundwater.[127]

The proposed rule offers no recognition of this substantial body of precedent. That the judicial branch has failed to reach a unified view of the scope of groundwater inclusion under the CWA requires more justification, not less, for a groundwater exclusion by rule.

The agency has not explained how the CWA forbids or restricts groundwater as a water of the United States—an especially important discussion in light of the substantial case law on this point. If the agency interprets the Act to grant EPA discretion in treating groundwater as a water of the United States, then the agency should more clearly explain its rationale for granting an exclusion that is so extraordinary and expansive. The agency has been charged by the CWA with "restor[ing] and maintain[ing] the chemical, physical, and biological integrity of the Nation's waters."[128] If the EPA is using discretion in defining waters of the United States, the

[125] *See Inland Steel Co. v. Envtl. Protection Agency*, 901 F.2d 1419, 1422 (7th Cir. 1990) ("[S]ince the legal concept of navigable waters might include ground waters connected to surface waters… a well that ended in such connected ground waters might be within the scope of the Act"); *Quivera Mining Co. v. US Envtl. Prot. Agency*, 765 F.2d 126, 129 (10th Cir. 1985) (finding CWA jurisdiction for a creek and gully given a surface water connection to 'navigable-in-fact streams' after intense rainfall, and that the discharge of pollutants continues "through underground aquifers fed by the surface flow…into navigable-in-fact streams").

[126] *Hawai'i Wildlife Fund v. County of Maui*, __ F.Supp.2d __ (D.Haw. 2014) 2014 WL 2451565

[127] *See Association Concerned Over Resources and Nature, Inc. v. Tennessee Aluminum Processors, Inc.*, 2011 WL 1357690 at *18 (M.D.Tenn. Apr. 11, 2011) (required the plaintiffs to show only "a link between contaminated ground waters and navigable waters"); *Idaho Rural Council v. Bosma*, 143 F.Supp.2d 1169, 1180-1181 (D. Idaho 2001) (court holds that the CWA extends federal jurisdiction over discharges from defendant's dairy into the groundwater that is hydrologically connected to surface waters that are themselves waters of the United States); *Mutual Life Ins. Co. v. Mobil Corp.*, No. Civ. A. 96–CV1781, 1998 WL 160820, at *3 (N.D.N.Y. 1998) (complaint alleging "a hydrological connection between the contaminated ground water and navigable waters" sufficient to state a claim); *Williams Pipe Line Co. v. Bayer Corp.*, 964 F.Supp. 1300, 1319-20 (S.D.Iowa 1997) ("Because the CWA's goal is to protect the quality of surface waters, the NPDES permit system regulates any pollutants that enter such waters either directly or through groundwater."); *Friends of Santa Fe County v. LAC Minerals, Inc.*, 892 F.Supp. 1333, 1357-58 (D.N.M. 1995) (stating that the CWA applies to waters that travel through groundwater, and that "most courts to have considered the issue have held that hydrologially connected groundwaters are regulated waters of the United States"); *Washington Wilderness Coal. v. Hecla Min. Co.*, 870 F.Supp. 983, 990 (E.D.Wash. 1994) ("[S]ince the goal of the CWA is to protect the quality of surface waters, any pollutant which enters such waters, whether directly or through groundwater, is subject to regulation by NPDES permit"); *Sierra Club v. Colorado Ref. Co.*, 838 F.Supp. 1428, 1434 (D.Colo.1993) (holding "the [CWA's] preclusion of the discharge of any pollutant into 'navigable waters' includes such discharges which reaches 'navigable waters' through groundwater"); *McClellan Ecological Seepage Situation v. Weinberger*, 707 F.Supp. 1182, 1196 (E.D.Cal. 1988), *rev'd on other grounds* (finding that while it is clear that "Congress did not intend to require permits for discharges to isolated groundwater, it is also clear that Congress did mean to limit discharges of pollutants that could affect surface waters of the United States" and that Plaintiff should be given the opportunity to "establish that the groundwater is naturally connected to surface waters that constitute 'navigable waters' under the Clean Water Act"); *State of N.Y. v. U.S.*, 620 F.Supp. 374, 381 (E.D.N.Y 1985) (court declines to dismiss plaintiff's CWA §301 cause of action "as applied to groundwaters, since it is clear that plaintiff has alleged that the pollutants threaten to contaminate… navigable waters").

[128] 33 U.S.C. §1251(a) (2014).

agency should clearly explain how a total groundwater exclusion is a suitable means to achieving that national objective.

It is also clear from the cases cited above that courts have differentiated between types of groundwater when considering CWA jurisdiction. If the agency believes that it has different obligations under the CWA to different types of groundwater, the agency should delineate that clearly.

3. Supreme Court precedent does not require exclusion of groundwater from the CWA.

The Supreme Court has consistently held that Congress intended to define navigable waters broadly under the CWA.[129] Additionally, the Court has recognized that Congress, with the goal of improving and maintaining water quality, intended to exercise the Commerce Clause power to extend the reach of the CWA to regulate waters not encompassed by prior Congressional acts.[130]

The Supreme Court's decision in *Rapanos v. United States* does not require groundwater exclusion.[131] Because the Supreme Court failed to reach a majority decision in *Rapanos*, "the holding of the Court may be viewed as that position taken by those Members who concurred in the judgments on the narrowest grounds."[132] As the Seventh, Ninth and Eleventh circuits have recognized, Justice Kennedy's concurrence and the significant nexus test provide the controlling rule.[133] In his concurrence, Justice Kennedy rejected two limitations imposed by the plurality's test: 1) that waters of the U.S. must be relatively permanent, standing or flowing bodies of water and 2) that they require a continuous surface connection.[134] Thus, Justice Kennedy did not foreclose the possibility of CWA jurisdiction extending to groundwater in instances where a significant nexus exists between groundwater and traditionally defined waters of the U.S. The agencies have failed to explain the necessity of, or rationale for, total groundwater exclusion when Supreme Court precedent does not require it.

The agencies have expressed an intention to comply with the Supreme Court holdings in *Rapanos*, and to implement Justice Kennedy's significant nexus test. However, the complete categorical exclusion of groundwater does not comport with the case-by-case interpretation required under the significant nexus test, nor does it fulfill the purpose of the CWA.[135]

IV. A TOTAL GROUNDWATER EXCLUSION IS NOT WARRANTED AND THE EPA SHOULD CATEGORIZE QUALIFIED GROUNDWATER AS A WATER OF THE UNITED STATES.

A. The groundwater exclusion should be removed from the proposed rule.

CELP urges EPA to remove the categorical groundwater exclusion from the proposed rule.

[129] *See United States v. Riverside Bayview Homes, Inc.*, 474 U.S. 121, 133 (1985); *Solid Waste Agency of N. Cook Cnty. v. U.S. Army Corps of Engineers*, 531 U.S. 159, 175 (2001) (Hereinafter *SWANCC*); *Rapanos v. United States*, 547 U.S. 715, 731 (2006).
[130] *Riverside Bayview*, 474 U.S. at 133.
[131] 547 U.S. 715 (2006)
[132] *Marks v. United States*, 430 U.S. 188, 193 (1977) (*citing Gregg v. Georgia*, 428 U.S. 153 (1976)).
[133] *United States v. Gerke Excavating, Inc.*, 464 F.3d 723, 724 (7th Cir. 2006); *N. California River Watch v. City of Healdsburg*, 496 F.3d 993, 999 (9th Cir. 2007); *United States v. Robison*, 505 F.3d 1208, 1222 (11th Cir. 2007).
[134] *Rapanos*, 547 U.S. at 768-69 (Kenndy, J., concurring).
[135] EPA and Army Corp of Engineers, *Questions and Answers: Waters of the US Proposal*, *available at* http://www2.epa.gov/sites/production/files/2014-09/documents/q_a_wotus.pdf.

1. A categorical exclusion does not fulfill the EPA's broad and aspirational CWA mandate to protect the nation's waters.

"It is the intent of the Clean Water Act to cover, as much as possible, all waters of the United States instead of just some."[136]

The CWA is an aspirational statute, and the Agency's proposed rule fails to meet the CWA's aspirational goals established by Congress in 1972. The declared objective of the CWA is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters" and Congress specifically outlined detailed goals, policies, and deadlines by which to make the CWA's aspirations a reality.[137]

"Hortatory congressional statements" like those in Section 101 of the CWA usually have limited legal force.[138] But statutory goals should be given more weight. Elected officials carefully craft a statute's goals in response to constituents' desires. Statutory goals, therefore, "tend to reflect public values to a greater extent than other statutory provisions."[139] When a statute is "ambiguous or silent… construing the statute to conform to its goals serves democratic values by allowing law to reflect the electorate's desires."[140] The aspirational goals of the CWA reflect the desires of the American public to value, maintain, and restore our nation's waters, and should be given special consideration.

The CWA is unique among environmental statutes. The hortatory statements of other major environmental statutes fail to "articulate affirmative aspirations as clearly, as specifically, and as unambiguously as does the CWA."[141] But Congress included "specific operative provisions designed to implement the major aspirations in the [CWA's] opening statement, making it more difficult to simply ignore those aspirations as the product of lofty legislative pronouncements."[142] Unlike other environmental statutes, "[i]t is clear that Congress adopted specific provisions designed to effectuate the goals articulated in section 101, rather than leaving them as entirely hortatory aspirations."[143]

The EPA should give the aspirational goals of the CWA special consideration when interpreting the CWA and defining the waters of the United States. Given the broad opening language of the CWA and the importance of groundwater to surface water, groundwater should not be wholly excluded from the proposed definition of waters of the United States.

2. The proposed categorical exclusion creates absurd results.

By electing to exclude groundwater from the waters of the United States, the agency appears to give a permit to pollute to anyone with the capacity to dig a decent hole. A discharger need only bury its point source below what the agency considers a "shallow subsurface hydrologic connection" to escape CWA regulation. Since only "shallow" subsurface connections between waters are protected under the proposed definition, in situations where both shallow and deep subsurface connections exist, a party could exploit the deep connections and remain legitimately permit-free. For instance, a Section 402 NPDES permit could be avoided by

[136] *Quivira Min. Co. v. E.P.A.*, 765 F.2d 126, 129 (10th Cir. 1985).
[137] *See* 33 U.S.C. §1251(a) (2014).
[138] Robert W. Adler, *The Decline and (Possible) Renewal of Aspiration in the Clean Water Act*, 88 Wash. L. Rev. 759, 771 (2014). *See also*, David M. Dreisen, *Purposeless Construction*, 48 Wake Forest L. Rev. 97, 98 (2014) (arguing that "the Supreme Court's statutory construction has become increasingly 'purposeless'" and that "the Court should give more weight to statutory goals, properly identified and conceived, than it has in recent years").
[139] David M. Dreisen, *Purposeless Construction*, 48 Wake Forest L. Rev. 97, 98 (2014).
[140] *Id.*
[141] Adler at 771.
[142] Adler at 771.
[143] Adler at 775.

discharging the exact same pollutants into the "deep" part of the subsurface connection rather than the "shallow" part.

Further, by expressly asserting "shallow subsurface flows are not 'waters of the United States'" the agency creates another opening for circumventing the CWA.[144] A plain reading of that explanation is that protection extends only to the waters *connected by* the shallow subsurface connection, and not to the shallow subsurface connection *itself*. Thus, a clever discharger could avoid a 402 permit by carefully pointing the discharge into the shallow subsurface connection itself and never directly into one of the waters it connects. This would have the same physical impact as discharging into the connected waters, and yet it appears that the Agency would have to allow it absolutely. Once the connection itself is expressly written out of the waters of the United States, discharge to it requires no permit.

Such absurd results are woefully inconsistent with any sound reading of the CWA, its legislative history, and many Federal District court decisions.

B. Qualified groundwater should be protected using subsection (s) of the proposed rule

Instead of a categorical exclusion, CELP urges EPA to include groundwater within the list of protected waters in subsection (s) of the proposed rule. Groundwater shares many of the same characteristics as the protected waters listed in subsection (s) and fits more logically in that subsection than in subsection (t).

The intent and letter of the Act could be met—and the absurd results avoided—if the EPA were to simply follow one of two routes.

One route would be to include groundwater in the "other waters" category of subsection (s)(7). This would allow a case-by-case analysis to determine whether any groundwater in particular presented a significant nexus to the traditional waters of the United States described in subsections (s)(1)-(6).

A second route would be to establish a clear definition in subsection (u) for "tributary groundwater" and then include tributary groundwater under subsection (s)(5). Professor Mary Wood explained this concept in substantial detail in 1988 and that analysis remains sound today.[145] All that remains is for the agency to add tributary groundwater to the acceptable list of tributaries in the definitions in subsection (u) of the rule.

By either route, the agency includes as waters of the United States *only* groundwater that flows in some measure to traditional waters of the United States. Beyond that most important step, the agency is left to grapple with smaller but still essential differences.

The "other waters" route presumes, by definition, that the groundwater has a *significant* nexus to the traditional water (emphasis added). This leaves open a possible reading that polluted groundwater, to qualify as a water of the United States, must flow to the traditional water within a specific time frame and have some specific effect on the chemical, physical, or biological integrity of the surface water.

In contrast, the "tributary groundwater" route may require the agency to more strictly apply the standard established in subsection (s)(5): a proven groundwater tributary would be a *per* se tributary like any other; hence, the 402 or 404 requirement to secure a permit would attach to *any* discharge of pollutants from a point source into the subsurface tributary without requiring a threshold of "significance" to the receiving water.[146]

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[144] 79 Fed. Reg. 22,208 (April 21, 2014).

[145] Wood, Mary Christina, *Regulating Discharges into Groundwater: The Crucial Link in Pollution Control Under the Clean Water Act*, 12 Harv. Envtl. L. Rev. 569, 586-619 (1988).

[146] The tributary groundwater approach better comports with the understanding that "[t]he Clean Water Act creates a strict liability scheme that "categorically prohibits any discharge of a pollutant from a point source without a permit," irrespective of whether that discharge affects the receiving water." *Hawai'i Wildlife Fund v. Cnty. of Maui*, __ F. Supp. 2d __, 2014 WL 2451565, at *15 (D. Haw. May 30, 2014).

CELP believes that groundwater is best treated as a water of the United States in the sense of "tributary groundwater," but recognizes that the agency might reasonably categorize groundwater under "other waters."

C. EPA could increase administrative efficiency by developing, under separate rule or guidance, a classification system for subsurface permeability and accompanying general permits.

CELP recognizes the administrative burdens that accompany groundwater point-source regulation. We therefore suggest that the EPA pursue a separate rule or guidance to increase the efficiency of groundwater regulation under the CWA. In this separate action, the agency could assist the conservation and regulated communities alike by setting a default rule that transparently established a presumption either for or against subsurface connectivity in specific areas. The presumption could be rebuttable by evidence presented by the challenging party.

The recent *Hawai'i Wildlife Fund* case illustrates the issues well.[147] In that case, a group seeking to show that waste that a county facility was depositing into the ground traveled into the ocean via groundwater.[148] The plaintiffs conducted a study in which special dye was deposited with the waste, and was spotted in the ocean nearly three months later.[149] This presented prima facie evidence that the chemicals from the waste facility were indeed reaching surface waters, and therefore the discharge should be regulated under the CWA.

EPA should draw on this example to develop specific guidance on where the presumption of hydrological connection lies. The scientific data available in *Hawai'i Wildlife Fund* is not easily obtainable in many other contexts, and involves substantial expense. Moreover, the heterogeneous features of various aquifers and other groundwater systems make evaluating the scientific data in every groundwater case burdensome on citizens and courts alike. Indeed, requiring such expensive data from citizens runs against the spirit of the CWA's citizen-suit provisions.

Therefore, CELP urges EPA to develop a region- or basin-specific classification system that establishes rebuttable presumptions of hydrological connectivity (or non-connectivity). EPA would be able to draw on its technical expertise to determine where the presumption of hydrological connectivity should apply based on a region or basin's groundwater characteristics. Such a classification system could create a degree of certainty for all parties by establishing a shared and transparent baseline assumption of connectivity or non-connectivity.

The agency might find additional efficiencies by combining the region- or basin-wide classification system with a general permit scheme. If a potential permittee sought to discharge into the ground, EPA could consult its basin- or region-specific classification and then, as appropriate, issue a general permit matched to a set of standardized limitations fitting to the permeability of the area at the depth in question. As is the case with existing discharges that use general permit schemes, the agency should realize cost savings over preparing project-specific permits.

* * *

Again, CELP appreciates the opportunity to submit comments to this proposed rule. We are interested in working with the agency to improve the rule further. Please do not hesitate to contact us should you have any questions.

[147] *Id.*
[148] *Id.* at 1.
[149] *Id.*

Sincerely,



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These comments were prepared with the assistance of the Regulatory Environmental Law and Policy Clinic at the University of Washington School of Law.

November 14, 2014

Water Docket, EPA
1200 Pennsylvania Ave NW
Mail code 2822T
Washington DC 20460

Cc: Dave Chamber dchambers@csp2.org

Re: Definition of the Waters of the US, EPA-HQ-OW-2011-0880-0001

To Whom It May Concern:
CSP2 provides technical assistance to grassroots groups on natural resource issues, especially those related to mining. CSP2 seeks to focus the debate on factual issues, as brought to light by its technical analyses, and whenever possible to seek consensus and win-win solutions. CSP2 also performs policy related work with federal, state and tribal regulatory agencies on the implementation of water quality, waste disposal, and mining reclamation regulations.

The EPA proposes a guidance to clarify the definition of the Waters of the US. This is legally necessary and has been requested by many stakeholders in order to reduce confusion arising from somewhat conflicting legal decisions. The EPA has conducted an extensive review of the scientific literature, and convened a Science Advisory Board (SAB) to review the guidance. This is an appropriate method of clarifying policy grounded in science.

Wetlands, ephemeral streams, intermittent streams, and headwaters provide vital ecological functions to downstream rivers. The EPA draft review correctly identifies the roles they play in cycling and transport of sediment, nutrients, and contaminants and in providing habitat for fauna that move between rivers and other water bodies, and the biological connectivity of migratory fauna.

I would encourage EPA to re-examine the definition of a tributary. Currently it is defined as having an ordinary high water mark. This is not always the case for important intermittent and ephemeral streams. The EPA's SAB suggests changing the definition from "ordinary high water mark" to "bed, bank, and other evidence of flow"; I support this recommendation.

In Alaska, we expect earlier spring melt, longer dry periods, and a general increase in temperatures and precipitation (1). Longer dry periods and low snowpack– such as have been observed in Prince William Sound (2) -- could create longer periods during which a stream becomes ephemeral or intermittent. Headwater streams that form in rivulets from snowmelt may be ephemeral, with no ordinary high water mark, but are critical to the physical, biological, and chemical character of downstream waters, particularly those that support a salmon ecosystem. A "high water mark" definition also would not include streams that form on peatlands, which can be important in supplying flow to streams (3), but a "bed and bank" definition might be applicable, although the bed and bank themselves are peat. A "bed and bank" definition should continue to include water bodies – such as off-channel habitat-- that seasonally connect with flowing systems and can be important biological habitat. If off-channel habitat such as gravel quarries are utilized as "mitigation" for the removal of wetland and aquatic habitat, then

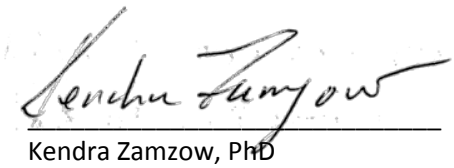
these must also come under the Clean Water Act for the extent of the period they are in use as mitigation.

Further north, as permafrost melts the land sinks, shifts, cracks and forms new wetlands and may form new hydrologic connections to downstream waters. These may not have defined ordinary high water marks with bank and bed characteristics. These new freeze-thaw wetlands along with ephemeral streams and land-locked pockets of water perform biological functions, such as mercury methylation (4) that can be the basis of a significant nexus.

Additionally, ephemeral perched or flow-through ponds, such as those that may form at snowmelt or with new wetlands, may have important connections, particularly for maintaining groundwater resources (5).

I would also encourage EPA to NOT exclude shallow subsurface groundwater, which is entwined in "surface water-groundwater" connected systems, from the definition of waters that fall under the Clean Water Act. In these systems, groundwater mixes with surface water and cannot be considered distinctly separate. Additionally, waters and wetlands that contribute to hyporheic flow, even when there is no evident surface flow or geographical connection, may be vital to biological life, including salmon fry that use hyporheic subsurface flow to move between habitats (6). This habitat is a biologically significant nexus.

Thank you for considering these comments,



Kendra Zamzow, PhD

(1) https://www.snap.uaf.edu/
(2) http://www.thecordovatimes.com/article/1420water-supply-crisis-or-conservation; http://www.cityofcordova.net/residents/services/water-status/490-water-update-may-22; http://nveyak.com/water-shortage-update/
(3) Gracz, M, M Moffett, D Siegel, P Glaser. 2014. End member mixing analysis [in a homogenous watershed] to identify the contribution of peatlands to stream flow. In prep.
(4) Zamzow comment, Docket #EPA-HQ-OA-2013-0582
(5) Rains, M. 2011 Water sources and hydrodynamics of closed-basin depressions, Cook Inlet Region, AK. Wetlands 31: 377-387; Rains, M. 2008. Surface-water and groundwater interactions in small pools on the Pebble property. Powerpoint to federal agencies, Anchorage, AK. November.
(6) Huusko, A, L Greenberg, M Stickler, T Linnansaari, M Nykanen, T Vehanen, S Koljonen, P Louhi, and K Alfredsen. 2007. Life in the Ice Lane: the winter ecology of stream salmonids. *Riv. Res. Applic.* 23: 469-491.

The rule is a good start but needs to cover direct impacts on the groundwater. Since groundwater is the source of much of our drinking water, this key issue should not be overlooked. Ground water provides drinking water for more than one-half of the Nation's population (Solley and others, 1993), and is the sole source of drinking water for many rural communities and some large cities. In 1990, ground water accounted for 39 percent of water withdrawn for public supply for cities and towns and 96 percent of water withdrawn by self-supplied systems for domestic use.The results of research published in the online edition of the Proceedings of the National Academy of Sciences (PNAS, 24 June 2013) lend strong support to the conclusion that toxic chemicals are leaking into ground water. Contrary to the popular impression that at least the waters from our springs and wells are pure, we're uncovering a pattern of pervasive pollution there too. And in these sources, unlike rivers, the pollution is generally irreversible.The rate of groundwater renewal is very slow in comparison with that of surface water. It's true that some aquifers recharge fairly quickly, but the average recycling time for groundwater is 1,400 years, as opposed to only 20 days for river water. Experts and regulators agree that investigating complaints of water-well contamination is particularly difficult, in part because some regions also have natural methane gas pollution or other problems unrelated to drilling. A 2011 Penn State study found that about 40% of water wells tested prior to gas drilling failed at least one federal drinking water standard. According to A National Look at Nitrate Contamination of Ground Water by Bernard T. Nolan, Barbara C. Ruddy, Kerie J. Hitt, and Dennis R. Helsel [Water Conditioning and Purification, January 1998, v. 39, no. 12, pages 76-79.], nitrate pollution generally is a public-health threat for children, ingestion in drinking water by infants can cause low oxygen levels in the blood, a potentially fatal condition (Spalding and Exner, 1993). There are some 126,000 groundwater sites in the United States that have not met pollution standards and the cost of meeting those goals could range from $US110 billion to $US127 billion, according to a report from the National Research Council.Since 1987 the NRC has released at least six reports describing the challenges associated with groundwater contamination. By not addressing a proactive approach to groundwater, the ruling falls short in primarily focussing on surface water. Scott Sklar, Executive Director, Center for Small Business and the Environment, and Adjunct Professor, The George Washington University.

November 14, 2014

Water Docket
Environmental Protection Agency
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Re: Docket ID No. EPA-HQ-OW-2011-0880: Chesapeake Bay Foundation Comments on Proposed Definition of Waters of the United States Under the Clean Water Act.

To Whom It May Concern:

Thank you for the opportunity to comment on the proposed definition of Waters of the United States under the Clean Water Act (CWA). The Chesapeake Bay Foundation (CBF) represents over 210,000 members internationally, many of whom live in the Bay watershed states of Maryland, Virginia, Pennsylvania, Delaware, New York and West Virginia and Washington, DC. Our mission is to Save the Bay and keep it saved. For more than 40 years, CBF has been working to restore the Chesapeake Bay – the largest estuary in the United States -- and the rivers and streams that feed it.

Our scientists and legal staff in our state offices in Harrisburg, Pennsylvania; Annapolis, Maryland; and Richmond, Virginia, monitor the states' administration of the Clean Water Act as it relates to the health of the Chesapeake Bay. In addition, we were also active in the development of the Chesapeake Bay Total Maximum Daily Load (TMDL) and continue to participate in revisions and updates to the Chesapeake Bay Watershed Model that was used to develop the TMDL. Based on this experience, we agree the definition of the Waters of the United States needs to be clarified and offer these technical comments.

1. **Need for regulatory clarity**

The Chesapeake Bay receives half of its water from an intricate network of 111,000 miles of creeks, streams, and rivers and 1.7 million acres of wetlands, most of which are non-navigable tributaries, non-tidal wetlands, and ephemeral and intermittent streams. Despite their hydrologic connection to navigable waters—as affirmed by the Scientific Advisory Board's Review of EPA's Connectivity Report[1] —it is precisely these types of water bodies that are not clearly protected under the current definition of "waters of the United States."

[1] *See* U.S. Envtl. Prot. Agency Science Advisory Board, Review of *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence,* 4–6 (Oct. 17, 2014) [hereinafter Review of Connectivity Report] (supporting the Connectivity Report's conclusion that ephemeral, intermittent and perennial streams, and waters and wetlands in floodplain settings are "physically, chemically, and biologically connected," and advocating for a "more definitive statement" explaining the beneficial connection between wetlands in non-floodplain settings and downstream waters).

This lack of a clear definition has the potential to harm water quality in the Chesapeake Bay, its tributaries, and across the United States.

While CBF has successfully advocated for broad policies that protect the bay and its rivers and streams, implementation of the Clean Water Act at the project scale is accomplished through individual permits. The need to clarify when these permits are required is an outgrowth of two recent Supreme Court decisions pertaining to regulation of activities in wetlands. The main purpose of the proposed rule is to provide greater clarity on which waters are and are not subject to the Clean Water Act.

In 2001, the US Supreme Court limited the Corps of Engineers' Clean Water Act jurisdiction over "isolated" wetlands in *Solid Waste Agency of Northern Cook County (SWANCC) v. US Army Corps of Engineers*[2]. This decision refuted the application of the "Migratory Bird Rule" to establish oversight over wetlands which are not necessarily adjacent to waters of the U.S. After this decision, the EPA and Corps issued a memorandum offering guidance on how to interpret and implement the SWANCC decision.

Five years later, the 2006 U.S. Supreme Court's four-justice plurality decision in *Rapanos v. United States*,[3] caused courts to struggle with which test to apply in order to determine when a non-navigable tributary or non-adjacent wetland is a "water of the United States" within the jurisdiction of the CWA. The confusion led to a split among the federal circuit courts and differing approaches across the country. Of the circuit courts that have directly addressed the definition, the Fourth, Seventh, Ninth, and Eleventh Circuits applied the "significant nexus" test from Justice Kennedy's concurrence.[4] However, the Northern District of Texas applied Justice Scalia's "continuous surface connection" or "relatively permanent" test,[5] and the First, Third, and Eighth Circuits follow Justice Stevens' approach that allows for use of either test.[6] This legal landscape does not provide predictability for government agencies, developers, or citizen groups working to comply with or enforce the CWA. With the proposed rule, the EPA seeks to reduce the number of waterbodies that require a case-by-case determination using any of these approaches and proposes the limited use of a significant nexus test that is more clearly articulated by the regulations.

Recognizing the *Rapanos* decision's importance to the health of the Chesapeake Bay and its tributaries, CBF submitted an *amicus curiae* brief in the *Rapanos* case supporting the U.S. Army Corps of Engineers' (Corps) jurisdiction over non-tidal wetlands and headwater streams. CBF explained that without CWA jurisdiction over non-navigable tributaries and adjacent wetlands, the Bay states could not achieve the stricter water quality standards and waste load

[2] 531 U.S. 159 (2001).
[3] 547 U.S. 715 (2006).
[4] *See No. Cal. River Watch v. City of Healdsburg*, 457 F.3d 1023 (9th Cir. 2006); *United States v. Gerke*, 464 F.3d 723 (7th Cir. 2006); *United States v. Robinson*, 505 F.3d 1208, 1221 (11th Cir. 2007); *Precon Dev. Corp. v. US Army Corps of Engineers,* 633 F.3d 278, 288 (4th Cir. 2011).
[5] *See United States v. Chevron Pipe Line Co*., 437 F. Supp. 2d 605, 613 (N.D. Tex. 2006).
[6] *See United States v. Johnson*, 467 F.3d 56 (1st Cir. 2006); United States v. Donovan, 661 F.3d 174, 176 (3d Cir. 2011); *United States v. Bailey*, 571 F.3d 791, 799 (8th Cir. 2009).

allocations necessary to restore the water quality of the Chesapeake Bay. This remains true today and is even more pressing in light of the upcoming 2017 and 2025 benchmark deadlines for the Chesapeake Bay TMDL for sediment, nitrogen, and phosphorous. In 2007 CBF submitted comments in response to the EPA and Corps' *Rapanos* Guidance urging that the CWA definition of "waters of the United States" be amended to resolve the confusion caused by the *Rapanos* decision. CBF is encouraged by EPA's current rulemaking process and initiative to bring much needed clarification to the definition. The proposed definition of "waters of the United States" explicitly includes waters with a documented[7] hydrologic connection to navigable waters and reduces the number of cases in which a water is subject to the case-by-case analysis of the significant nexus test.

Post-*Rapanos* regulatory confusion leads to a lack of enforcement of the CWA except in clear cases of jurisdiction; these clear cases constitute a minority of the total number of instances of illegal water pollution. Under the current rule, discharges of pollutants continue not because the CWA permits pollution of waterways, but because of the prohibitive cost of litigating the issue of jurisdiction. The resource-constrained Department of Justice (DOJ), EPA, and Corps —the federal agencies jointly responsible for identifying and bringing CWA enforcement cases—are deterred from pursuing cases in which the facts are not entirely clear. Indeed, a 2009 Report from the EPA Inspector General found that overall CWA enforcement "ha[d] decreased since the *Rapanos* ruling. An estimated total of 489 enforcement cases…ha[d] been affected such that formal enforcement was not pursued as a result of jurisdictional uncertainty, case priority was lowered as a result of jurisdictional uncertainty, or lack of jurisdiction was asserted as an affirmative defense to an enforcement action."[8]

Non-navigable tributaries, non-tidal wetlands, and ephemeral and intermittent streams are often subject to the "significant nexus" test and its high burden of scientific evidence, and are often avoided by enforcement agencies. Non-profit organizations like CBF attempt to fill these large and harmful gaps in enforcement by bringing citizen suit actions to protect valuable tributaries and wetlands. CBF has experienced first-hand the financial and environmental cost of proving the hydrologic importance of these waterbodies on an individual basis.

In 2003, prior to *Rapanos*, CBF and others appealed the issuance of a Virginia Water Protection Permit to Tri-City Properties. The permit allowed for the removal of 181 acres of protected, non-tidal wetlands in Chesapeake, Virginia. Conflicting wetland delineations conducted by a private contractor and the Army Corps led to more than a decade of litigation. The private contractor's first estimate delineated 52 acres of wetlands. After the Virginia DEQ requested a re-delineation, the private contractor's estimate increased to 253.5 acres of wetlands.

The Army Corps' subsequent estimate delineated 36.7 acres of wetlands in addition to the 253.5 identified by the private contractor. Ultimately, despite the lack of consensus, the Virginia Court

[7] *See* Review of Connectivity Report, *supra* note 1.
[8] U.S. EPA Office of Inspector General, *Congressionally Requested Report on Comments Related to Effects of Jurisdictional Uncertainty on Clean Water Act Implementation*, Report No. 09-N-0149, at 1 (2009), *available at* http://www.epa.gov/oig/reports/2009/20090430-09-N-0149.pdf.

of Appeals upheld the permit on other grounds and Tri-City Properties was permitted to destroy 181 acres of valuable wetlands.[9] The loss of these wetlands directly contributes to increased pollution in the Bay and its tributaries, loss of natural flood protection, and destruction of critical wildlife habitat.

In 2010, in a case before the Fourth Circuit Court of Appeals, CBF and others submitted an *amicus curiae* brief in support of the Army Corps' denial of a CWA permit for Precon Development to develop 443 acres of wetlands for residential units.[10] The wetlands at issue were not directly adjacent to a navigable water and thus allowed Precon to argue that they did not have a "significant nexus" to the downstream Northwest River and were thus not protected as "waters of the United States." In fact, like the wetlands in Tri-City, the wetlands improved water quality, filtered pollutants in runoff, and protected the integrity of downstream waters and the Bay. In January 2011 the Fourth Circuit vacated the district court's decision to uphold the permit denial and remanded the case back to the district court for reconsideration.[11] On remand, the magistrate found sufficient information in the record to support the Army Corps' "significant nexus" analysis that found a hydrologic connection between the 443 acres and the Northwest River.[12] Despite the magistrate's review of the substantial scientific evidence supporting the Corps' analysis, the decision has again been appealed to the Fourth Circuit.[13]

The wetlands in these cases were connected to the Chesapeake Bay tributaries and the Bay itself through a complex network of underground and surface water flows. The proposed definition includes wetlands like these and provides clarity to developers and regulators. It also explicitly acknowledges the hydrologic connection and importance of these waters and does not require protracted litigation to dispute already-settled scientific determinations regarding their connectivity to navigable waters.

Whether or not depressional wetlands within coastal plains are hydrologically connected to navigable waters and therefore adjacent to navigable waters is a scientific question, not a legal one. Since the *SWANCC* and *Rapanos* decisions, wetlands science has continued to evolve and the connectedness of waters that were once thought to be isolated, especially through groundwater and floodplains, is now better understood.
Much research was elegantly synthesized by EPA in the "Connectivity Report"[14]. In addition, the Southern Environmental Law Center recently presented additional scientific evidence of this

[9] *See* Chesapeake Bay Found. *et al.* v. Commonwealth of Virginia, No. 1897-12-2 (Va. Ct. App. 2014).
[10] Proposed Brief *Amici Curiae* of Nat'l Wildlife Fed'n, Chesapeake Bay Found. and Natural Res. Def. Council in Support of Defendant-Appellee U.S. Army Corps of Eng'rs and Affirmance of District Court Decision, filed in the case of Precon Dev. Corp., Inc. v. U.S. Army Corps of Eng'rs (4th Cir. 2010).
[11] Precon Dev. Corp., Inc. v. U.S. Army Corps of Eng'rs, No. 09-2239, 2:08-cv-00447-RBS-TEM (4th Cir. 2011).
[12] *See* Precon Dev. Corp., Inc. v. U.S. Army Corps of Eng'rs, Civil No. 2:08-cv-00447-RBS-TEM, at 13 (E.D. Va. 2013) (finding that the "Corps' extensive factual findings supporting its significant nexus determination were not arbitrary and capricious, and that the Corps' ultimate determination that the relevant wetlands have a significant nexus to the Northwest River is highly persuasive.").
[13] Precon Dev. Corp., Inc. v. U.S. Army Corps of Eng'rs, Case No. 13-2499 (4th Cir. 2013).
[14] U.S. Environmental Protection Agency, Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence, (Washington, DC: U.S. Environmental Protection Agency, 2013) (Connectivity Report).

connectivity in the portion of the coastal plain on the Delmarva Peninsula, much of which drains to Chesapeake Bay.[15] As such, we believe that the EPA has developed definitions based on a strong scientific foundation.

2. **Comments regarding Definitions**:
    a. **<u>The definition of Tributary</u>:**
        i. **CBF supports the agencies' finding that tributaries have a significant nexus with waters defined in (s) 1-3 of the proposed definition.** This finding is consistent with our experience in the Chesapeake Bay Watershed where there is a clear chemical, physical, and biological interrelationship between a water, the tributary network, shallow groundwater aquifers and traditional navigable waters, interstate waters, and the territorial seas. This interrelationship is central to our efforts to reduce loads of nitrogen, phosphorus and sediment under the Chesapeake Bay TMDL and associated state Watershed Implementation Plans (WIP). For example, a U.S. Geological Survey investigation into the possible causes of the 1997 *Pfisteria* outbreak which killed thousands of fish and sickened residents in the Pocomoke River, MD linked the contribution of nutrient sources from both surface and shallow groundwater as a contributing factor.[16]
        ii. **CBF supports the inclusion of "Lakes, ponds and wetlands with surface connection to waters" in the definition of "Tributary".** CBF has considerable experience within bay states where nutrient pollution from lakes, ponds, canals, and ditches, because of higher residence times than streams or tidal waters, contributes to excessive microalgae populations and in some cases, harmful algal blooms. For example, Higgins Millpond, an artificially impounded tributary of the Transquaking River has experienced several harmful algal blooms which then spread beyond the confines of the impoundment.[17]

            These conditions in turn can contaminate downstream water segments with the bio-toxin or add biochemical oxygen demand to already eutrophic downstream waters. Therefore we support the inclusion of lakes, ponds and wetlands with surface connection to waters in the definition of "Tributary".

[15] Evidence Of Significant Impacts Of Coastal Plain Depressional Wetlands On Navigable Waters, Sam Woolford and Matt Carroll, River Basin Center, Odum School of Ecology, University of Georgia, July 2014
[16] Fish Health, Fungal Infections, and Pfiesteria: The Role of the U.S. Geological Survey, U.S. Geological Survey Fact Sheet 114-98 , By Vicki Blazer, Scott Phillips, and Edward Pendleton
[17] Microcystis Bloom Continues in the Transquaking River, Maryland Department of Natural Resources, Eyes on the Bay, May2, 2008.

b. **The definition of Significant Nexus**:

i. **CBF supports the definition of "Significant Nexus"**
It is clear from our experience throughout the Chesapeake watershed that tributaries, lakes, ponds and wetlands with surface connection to waters have a significant nexus to the receiving water bodies. The Chesapeake Bay Watershed Model assumes all land uses within the watershed have the potential to load nitrogen, phosphorus and sediment pollution to the bay and indeed that potential has been measured repeatedly and assigned loading factors within the model. Local TMDLs and the collective Bay TMDL operate from establishing non-point source load allocations and point source waste load allocations established from comprehensive analyses of watershed assimilative capacity. The tributaries themselves are assumed to receive pollutants from neighboring lands and deliver those pollutants to the bay demonstrating a quantifiable significant nexus.[18]

c. **The definition of the term "Neighboring"**

i. **CBF supports the definition of the term "Neighboring" for purposes of Waters of the U.S. but recognizes operational challenges with one part of that definition.** Under the first part of the definition: *when located in the floodplain or riparian zone of a jurisdictional water* is a reasonable way for agencies to consider adjacency within the Chesapeake Bay watershed as it is directly consistent with the way the Chesapeake Bay Watershed Model works as described above. The other option provided in the rule, "*waters with a shallow subsurface hydrologic connection or confined surface hydrologic connection"* may or may not be consistent with the framework of the Chesapeake Bay Watershed Model on which loads and load reductions are calculated within the Chesapeake Bay TMDL unless considered at fairly coarse resolution such as a major basin. The Chesapeake region continues to gain understanding of the role of groundwater sinks of dissolved nutrients, their lag times for delivery to adjacent waters and their ultimate fate as a pollutant load. However, shallow subsurface hydrologic connections and confined surface hydrologic connections could only be determined through costly and time-consuming groundwater pathway and ditch network analyses at relatively fine resolution.

Coastal plain portions of Delaware, Maryland and Virginia, especially on the Eastern Shore, exhibit flat, broad floodplains with complicated surface and subsurface hydrology, ultimately connected to tidal surface waters. Residence times and hence pollutant loading lag times are highly variable from months to decades. "Isolated wetlands" in these areas no doubt have a significant

[18] USEPA (U.S. Environmental Protection Agency). 2010. Chesapeake Bay Phase 5.3 Community Watershed Model. EPA 903S10002 - CBP/TRS-303-10. U.S. Environmental Protection Agency, Chesapeake Bay Program Office, Annapolis MD. December 2010.

nexus to surface waters through shallow groundwater, ephemeral channels and an extensive roadside ditch network. Dredging or filling in such wetlands could displace water within that system generating flooding concerns and disrupting sensitive species with low tolerance for water level excursions[19] or affect the transport of underwater contaminant plumes[20].

In conclusion, CBF applauds the significant scientific and legal analysis leading to the proposed rule clarification and supports its rapid adoption.

Sincerely,

Kim Coble
Vice President
Environmental Protection and Restoration

[19] Wetland Creation and Restoration: The Status of the Science, Jon A. Kusler and Mary E. Kentula, EPA 600/3-89/038A, October 1989.
[20] Hydrogeology and Simulation of Ground-Water Flow at Dover Air Force Base, Delaware Water-Resources Investigations Report 99-4224

CITY OF BETHLEHEM

10 East Church Street, Bethlehem, Pennsylvania 18018-6025

OFFICES OF CITY COUNCIL

Phone: 610-865-7130
Fax: 610-997-5738
TDD: 610-865-7130

August 5, 2014

The Honorable Gina McCarthy, Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

The Honorable Jo-Ellen Darcy, Assistant Secretary
Department of the Army, Civil Works
108 Army Pentagon
Washington, D.C. 20310-0108

Dear Ms. McCarthy and Ms. Darcy:

The Waters of the United States provide an extraordinary value for the protection of public health, recreational resources, economic livelihood related to clean water, and are a treasured resource. The Clean Water Act is the fundamental federal law protecting the Waters of the United States from pollution, degradation and destruction. Critical streams and wetlands that supply drinking water protect against floods and filter pollution previously were protected under the Clean Water Act. However, Federal policy changes over the last decade have left these streams and wetlands vulnerable to degradation or destruction.

These vulnerable Waters of the United States impact sources of drinking water for over 117 million Americans. Strong federal standards are needed because water does not respect political boundaries and flows from one state to another. More than 1,000 peer reviewed scientific studies have confirmed that headwater intermittent and ephemeral streams and wetlands affect the quantity and quality of water in larger bodies of water downstream.

The U.S. Environmental Protection Agency and Army Corps of Engineers have proposed a clarifying rulemaking to restore protection for streams and wetlands previously protected under the Clean Water Act, safeguarding water quality in the nation's waters, protecting jobs in businesses that depend on clean water and safeguarding drinking water for one in three Americans. The proposal leaves in place all agricultural exemptions and creates new exemptions for agricultural practices related to conservation.

The Members of the City Council of the City of Bethlehem, Pennsylvania support the proposed *Definition of "Waters of the U.S." Under the Clean Water Act* and urge the Environmental Protection Agency and Army Corps of Engineers to finalize these important protections for our nation's water resources.

Sincerely,

Karen Dolan

City of Providence
STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

RESOLUTION OF THE CITY COUNCIL

No. 352
Approved July 24, 2014

WHEREAS, The Waters of the United States provide an extraordinary value for the protection of public health, recreational resources, economic livelihood related to clean water, and are a treasured resource; and

WHEREAS, The Clean Water Act is the fundamental federal law protecting the Waters of the United States from pollution, degradation and destruction; and

WHEREAS, Critical streams and wetlands, which supply drinking water, protect against floods, and filter pollution, were previously protected under the Clean Water Act, but federal policy changes over the last decade have left these streams and wetlands vulnerable to degradation or destruction; and

WHEREAS, These vulnerable Waters of the United States impact sources of drinking water for over 117 million Americans; and

WHEREAS, According to Clean Water Action, 169 miles of headwaters, intermittent and ephemeral streams feed into Rhode Island's drinking water sources which provides a drinking water supply to 54% of the Rhode Island's population; and

WHEREAS, Strong federal standards are needed because water does not respect political boundaries and flows from one state to another; and

WHEREAS, More than 1,000 peer reviewed scientific studies have confirmed that headwater intermittent and ephemeral streams and wetlands affect the quantity and quality of water in larger bodies of water downstream, according to Clean Water Action; and

WHEREAS, The U.S. Environmental Protection Agency and Army Corps of Engineers have proposed a clarifying rulemaking to restore protection for streams and wetlands previously protected under the Clean Water Act, safeguarding water quality in the nation's waters, protecting jobs in businesses that depend on clean water and safeguarding drinking water for one in three Americans; and

WHEREAS, The proposal leaves in place all agricultural exemptions and creates new exemptions for agricultural practices related to conservation.

NOW, THEREFORE, BE IT RESOLVED, That the City Council of the City of Providence supports the proposed *Definition of "Waters of the U.S." Under the Clean Water Act* and urges the Environmental Protection Agency and Army Corps of Engineers to finalize these important protections for our nation's water resources.

IN CITY COUNCIL

JUL 17 2014

READ AND PASSED

PRES.

ACTING CLERK

I HEREBY APPROVE.

Mayor

Date: 7/24/14

PROCLAMATION

***WHEREAS**, the Waters of the United States provide an extraordinary value for the protection of public health, recreational resources, economic livelihood related to clean water, and are a treasured resource; and*

***WHEREAS**, the Clean Water Act is the fundamental federal law protecting the Waters of the United States from pollution, degradation and destruction; and*

***WHEREAS**, critical streams and wetlands which supply drinking water protect against floods and filter pollution previously were protected under the Clean Water Act but federal policy changes over the last decade have left these streams and wetlands vulnerable to degradation or destruction; and*

***WHEREAS**, these vulnerable Waters of the United States impact sources of drinking water for over 117 million Americans; and*

***WHEREAS**, strong federal standards are needed because water does not respect political boundaries and flows from one state to another; and*

***WHEREAS**, more than 1,000 peer reviewed scientific studies have confirmed that headwater intermittent and ephemeral streams and wetlands affect the quantity and quality of water in larger bodies of water downstream; and*

***WHEREAS**, the U.S. Environmental Protection Agency and Army Corps of Engineers have proposed a clarifying rulemaking to restore protection for streams and wetlands previously protected under the Clean Water Act, safeguarding water quality in the nation's waters, protecting jobs in businesses that depend on clean water and safeguarding drinking water for one in three Americans; and*

***WHEREAS**, the proposal leaves in place all agricultural exemptions and creates new exemptions for agricultural practices related to conservation.*

***NOW, THEREFORE, I, WILLIAM D. EUILLE**, Mayor of the City of Alexandria, Virginia, and on behalf of the Alexandria City Council, do hereby support the proposed Definition of "Waters of the U.S." Under the Clean Water Act and urges the Environmental Protection Agency and Army Corps of Engineers to finalize these important protections for our nations water resources.*

***IN WITNESS WHEREOF**, I have hereunto set my hand and caused the Seal of the City of Alexandria to be affixed this 24th day of September, 2014.*

WILLIAM D. EUILLE MAYOR
On behalf of the City Council
of Alexandria, Virginia

ATTEST:

Jacqueline M. Henderson, MMC City Clerk

City of Austin
Founded by Congress, Republic of Texas, 1839
Watershed Protection Department
P.O. Box 1088, Austin, Texas 78767

October 20, 2014

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Ave NW
Washington, DC 20460
Attention: Docket ID No. EPA-HQ-OW-2011-0880

Subject: Definition of "Waters of the United States" Under the Clean Water Act Rulemaking

The City of Austin, Texas, (the "City") has reviewed the proposed rule (Federal Register Docket ID EPA-HQ-OW-2011-0880) defining the scope of waters protected under the Clean Water Act. The proposed rulemaking is necessary to ensure continued protection of aquatic resources and increase the clarity and transparency of implementation of the federal Clean Water Act.

The Waters of the United States provide for the protection of public health, important recreational opportunities, economic livelihood and are treasured national resources. The Clean Water Act is the fundamental federal law protecting the Waters of the United States from pollution, degradation and destruction. These strong federal standards are needed because water does not observe political boundaries and flows between states.

Streams and wetlands supply drinking water, protect against floods, and filter pollution. The overwhelming weight of scientific evidence including research conducted by the City confirm that headwater streams and wetlands significantly affect the quantity and quality of water in larger bodies of water downstream and provide a wide variety of beneficial ecosystem services.

The City has a vested interest in protecting the quality and quantity of headwater streams and wetlands in the Austin area. Thus, the City supports the proposed rulemaking and urges the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers to finalize these important protections for our nations water resources.

Sincerely,

Victoria J. Li, P.E., Director
Watershed Protection Department

The City of Austin is committed to compliance with the Americans with Disabilities Act. Reasonable modifications and equal access to communications will be provided upon request.

Court of Common Council

20

CITY OF HARTFORD
550 MAIN STREET
HARTFORD, CONNECTICUT 06103

Shawn T. Wooden, Council President
Alexander Aponte, Majority Leader
Joel Cruz, Jr., Minority Leader

John V. Bazzano, Town and City Clerk

Kyle K. Anderson, Councilman
Raúl De Jesús, Jr., Councilman
Larry Deutsch, Councilman
Cynthia R. Jennings, Councilwoman
Kenneth H. Kennedy, Jr., Councilman
David MacDonald, Councilman

October 15, 2014

This is to certify that at a meeting of the Court of Common Council, October 14, 2014, the following RESOLUTION was passed.

WHEREAS, The Waters of the United States provide an extraordinary value for the protection of public health, recreational resources, economic livelihood related to clean water, and are a treasured resource; and

WHEREAS, The Clean Water Act is the fundamental federal law protecting the Waters of the United States from pollution, degradation and destruction; and

WHEREAS, Critical streams and wetlands which supply drinking water protect against floods and filter pollution previously were protected under the Clean Water Act but federal policy changes over the last decade have left these streams and wetlands vulnerable to degradation or destruction; and

WHEREAS, These vulnerable Waters of the United States impact sources of drinking water for over 117 million Americans; and

WHEREAS, Strong federal standards are needed because water does not respect political boundaries and flows from one state to another; and

WHEREAS, More than 1,000 peer reviewed scientific studies have confirmed that headwaters, intermittent and ephemeral streams and wetlands affect the quantity and quality of water in larger bodies of water downstream; and

WHEREAS, The Connecticut River is one such body of water and hundreds of streams and wetlands upstream will directly impact the health of the CT River; and

WHEREAS, The continued health of the Connecticut River is vital to the City of Hartford and the City has committed to revitalizing the riverfront for the benefit of all its residents; and

WHEREAS, The U.S. Environmental Protection Agency and Army Corps of Engineers have proposed a clarifying rulemaking to restore protection for streams and wetlands previously protected under the Clean Water Act, safeguarding water quality in the nation's waters, protecting jobs in businesses that depend on clean water and safeguarding drinking water for one in three Americans; and

WHEREAS, The proposal leaves in place all agricultural exemptions and creates new exemptions for agricultural practices related to conservation; now, therefore be it

RESOLVED, That the City of Hartford supports the proposed Definition of "Waters of the U.S. '" Under the Clean Water Act and urges the Environmental Protection Agency and Army Corps of Engineers to finalize these important protections for our nation's water resources.

Attest:

John V. Bazzano,
City Clerk.

Portland, Maine Yes. Life's good here.

Michael J. Bobinsky
Director of Public Services

RECEIVED
OCT 27 2014
EPA DOCKET CENTER

October 20, 2014

Ms. Donna Downing
Office of Water
Water Docket
Environmental Protection Agency
Mail Code 2822T, 1200 Pennsylvania Ave. NW.,
Washington, DC 20460
Attention: Docket ID No. EPA-HQ-OW-2011-0880.

Re: City of Portland Comments on Proposed Waters of the United States

Dear Ms. Downing:

The purpose of this letter is to offer comment on the proposed rule jointly proposed by the Environmental Protection Agency (EPA) and the U. S. Army Corps of Engineers (Corps) to change the definition of "Waters of the US" (WOTUS) under the Clean Water Act (CWA) and help determine whether individual water bodies are jurisdictional under the CWA. It is understood that the goal of this proposed rule is provide clarity to regulated communities as to whether individual water bodies are jurisdictional and discharges into these waters are subject to permitting.

The City of Portland has a population of approximately 65,000 and operates under Mayor/Council/City Manager form of government. The City's sewer and stormsewer programs are managed by the Department of Public Services with annual operating budget of approximately $20 million, and another $20 million in assessments to the Portland Water District for Sewer Plant treatment services and debt services on capital improvements that support Clean Water Act requirements. In addition, the City has a long standing consent decree from EPA , administered by the State of Maine Department of Environmental Protection(MaineDEP), to abate 80% of the combined sewer overflow into Back Cove and other water bodies affected by sewer overflows and has spent approximately $100 million over the past 10 years on CWA related projects to support this requirement and the Portland City Council recently approved another $170 million in Tier III CSO abatement projects to complete the original consent order. Sewer rates are among the highest in the region for a City of our size and projected to increase from its current $8.81 per HCF in FY15 to right at $9.00 per HCF in FY16. To address rate equity issues and further goals of the City's sustainability programs, City staff is now proposing a new stormwater service charge to

POSTMARKED
OCT 20 2014
EPA DOCKET CENTER

55 Portland Street / www.portlandmaine.gov / tel, 207-874-8801 / tty, 207-874-8936 / fax, 207-874-8816

Portland, Maine Yes. Life's good here.

Michael J. Bobinsky
Director of Public Services

account for the developing stormwater programs needs that are growing through policy expectations and state and federal laws. Presently the City's sewer charges also includes stormwater expenses as well. Assessing stormwater based on a property's impervious surface rather than on water used is a more equitable way of charging for sanitary sewer and stormwater charges and provides an opportunity to better manage sewer rate increases.

Even though the City has made a substantial commitment to comply with Clean Water Act compliance requirements, the City of Portland was issued a notice of violation of the CWA in 2012, due to the reporting of several SSO's over a period of time, within the City's sanitary sewer system. The notice led to the City initiating a sanitary sewer CMOM audit of the sanitary sewer infrastructure, looking at a wide range of elements including condition assessment, staffing organization and maintenance needs. The report is informing current funding levels in the sewer fund. We are concerned that this proposed new Rule on Waters of the US, and expanding EPA's regulatory authority will lead to similar violation notices.

In general we support and understand the reasoning behind the development of the rule which seeks to improve clarify recent US Supreme Court Rulings on the determination of jurisdictional WOTUS in an effort to protect the nations water resources from impacts of development and other alterations. The City of Portland shares the belief that protection of critical waters, such as headwater streams and brooks, and waters that serve as drinking water source, not only enhance the water environment but are beneficial to the economic and social well- being of a community, as we have seen in the City of Portland by our City Council endorsing the Tier III CSO abatement master plan which has an estimated cost of $170 million for our City. In addition, the City of Portland appreciates the evaluation and comments developed around this issue by the Maine Municipal Association, who has also evaluated the proposed Rule and possible impacts to Maine Cities and Towns. We are looking to other water quality professional associations including, NACWA, the Water Environment Federation (WEF), and the American Public Works Association (APWA) for their comments and assessments on the proposed Rule as well.

While we support the goals of the proposed rule-making and as we continue to better understand the objectives by EPA with the Waters of the US, we have the following questions and concerns:

- The final rule must clarify that municipal separate storm sewer systems (MS4's) are covered by the waste treatment system exemption and will not be jurisdictional under the CWA above any existing point of permitted discharge, including any ditches that are part of MS4.

-EPA has verbally stated that the proposed rule is not intended to make green infrastructure (GI) installations jurisdictional, indicating that any GI installation or GI practice designed to

55 Portland Street / www.portlandmaine.gov / tel, 207·874·8801 / tty, 207·874·8936 / fax, 207·874·8816

Portland, Maine Yes. Life's good here.

Michael J. Bobinsky
Director of Public Services

meet CWA obligations or achieve water quality goals is not meant to be included. However, EPA and the Army Corp of Engineers need to specifically clarify this in the final rule. The City of Portland is expanding plans for green infrastructure projects as a means to enhance water quality as part of our approved Tier III LTCP for CSO abatement projects, and does not want added regulations under the new proposed Rule as a means to mandate CWA results.

-The rule fails to provide intended level of clarity, certainty and predictability. Appears to increase the EPA's reach in an unpredictable way. Are drainage ditches, catch basins, swales, and other man made Ponds (such as the Deering Oaks Pond) exempt from the Rule?

-Use of the term "neighboring" is unclear. This could make subsurface waters that connect to jurisdictional waters such as flood plains, waters in riparian area and shallow ponding waters, part of the regulated waters of the US.

-Increasing the broad regulatory reach seems counterproductive to integrated planning, which EPA has been promoting as a means for a municipality or utility to combine all of its CWA permits into a single permit and determine priorities that best meets CWA goals for a community. The City of Portland is embarking in an integrated permit planning process and clarification is needed to better understand how these new proposed Rules may or may not apply to such a process. The City of Portland applied for special EPA grant funds this past spring to assist with implementing the integrated planning process and is waiting for word on the status of that grant application as we develop project schedules for this important planning process.

-If the implementation of this new concept of "neighboring "waterbody results in an expansion of EPA/Corps jurisdiction, we are concerned over the financial implications from a local level and to what degree this will limit or slow economic development in our City.

-Waste treatment systems are excluded so clarity is needed if MS4's are covered under "systems" and thus exempt?

-How does the Rule apply in a State with delegated authority like the State of Maine? Would this expand EPA's jurisdiction in a delegated state? Which agency would administer this proposed Rule, Maine DEP, or EPA?

The City of Portland is also working with City Councilor Jill Duson on this, who is a member of EPA's Local Government Advisory Committee (LGAC) and we shared similar comments to that Committee and EPA Staffers who hosted a recent "listening session" on the proposed Rule in Worchester ,Massachusetts.

55 Portland Street / www.portlandmaine.gov / tel, 207•874•8801 / tty, 207•874•8936 / fax, 207•874•8816

Portland, Maine Yes. Life's good here.

Michael J. Bobinsky
Director of Public Services

Thank you advance for the opportunity to solicit comments from a wide group of stakeholders including municipalities that manage stormwater and wastewater utility systems and would be affected by the proposed Rule.

Very Truly Yours,

Michael J. Bobinsky
Director of Public Services

Cc: Jill Duson, City Councilor
Sheila Hill Christian, Acting City Manager
Nancy Gallinaro, Water Resources Manager

55 Portland Street / www.portlandmaine.gov / tel, 207•874•8801 / tty, 207•874•8936 / fax, 207•874•8816

Dear Administrator McCarthy and Assistant Secretary Darcy:

On behalf of the nonprofit Clean Up the River Environment (CURE), I urge you to finalize the Army Corps of Engineers' and Environmental Protection Agency's proposed Clean Water Act Waters of the U.S. proposed rule as soon as possible. The science showing how water bodies are interconnected affirms the need for fully protecting all waterways with important connections to one another. Furthermore, it is critical that there is clarity about what water bodies are and are not covered, to minimize unnecessary agency work and citizen worries.

CURE represents a diverse spectrum of rural residents who see that our world is deeply interconnected. Our constituents include farmers that recognize that a healthy ecosystem and clean water are critical to maintaining productivity on their lands. They include local elected officials that understand that cities and towns benefit when their water supply is protected upstream. And they include watershed scientists who know that downstream water is only clean when the entire water system is protected. The Scientific Advisory Board has only confirmed what the EPA reported and our constituents understand: water bodies are connected, and as such, connected streams and wetlands also need categorical protection under the Clean Water Act.

As one of the many supporters of this critical initiative to protect our waters from pollution, I thank you and urge you to finalize a strong Waters of the U.S. rule that includes full protection for the nation's waters as soon as possible.

Sincerely,
Sarina Otaibi
CURE Director of Communications & Engagement
Resident of Granite Falls, Minnesota



November 14, 2014

The Honorable Gina McCarthy
Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue
Washington, DC 20460

Via www.regulations.gov and email to: ow-docket@epa.gov

Re: Clean Water Rule Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy:

Clean Water Action appreciates the opportunity to comment on the U.S. Environmental Protection Agency (EPA) and US Army Corps of Engineers (Corps) proposed *Definition of "Waters of the United States Under the Clean Water Act*" to clarify which streams, wetlands and other waters are protected under the Clean Water Act. This proposed rule is long overdue. For its first thirty years, the Clean Water Act safeguarded nearly all of our rivers, streams, lakes and wetlands, in order to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and geographically isolated wetlands vulnerable to pollution or destruction. These federal policy changes have called into question CWA protections for nearly 60% of our nation's stream miles and at least 20 million acres of wetlands in the continental United States.

We urge the agencies to swiftly strengthen and finalize a rule to clarify that all waters with a "significant nexus" to downstream waters are clearly protected under the Clean Water Act. Below are specific recommendations on how the agencies should strengthen their proposal.

Specific Comments on Proposed Definition of "Waters of the United States"

Tributaries

Comment request*: The agencies request comment on all aspects of the proposed definition of tributaries and in particular on whether and how this definition can be revised to provide increased clarity as to the distinction between jurisdictional tributaries, as defined, and non-jurisdictional features such as gullies, rills and non-wetland swales"*[1]

We strongly support the Agencies' proposal to categorically include all tributaries, regardless of size or frequency of flow, within the jurisdiction of the Clean Water Act. Tributaries have a direct impact on the physical, chemical and biological integrity of downstream waters, and this decision is grounded in the best available peer-reviewed science, as summarized in EPA's draft *Connectivity of Streams and Wetlands to Downstream Waters,* which is a synthesis of over 1,000 peer-reviewed studies. This determination has also been found to be scientifically sound by the Science Advisory Board (SAB) panel that reviewed the proposed rule.[2]

Headwater streams provide most of the flow to downstream streams and rivers. Intermittent and ephemeral streams may only flow during parts of the year, but they support water quality in downstream waters by filtering pollutants and capturing nutrients. Headwaters and intermittent and ephemeral tributaries make up 60 percent of the stream miles in the continental U.S.[3] Indeed, scientists have discovered that even when streams lack surface flows, they are "critical conduits for water, energy, material, and organisms" and "shallow subsurface flows may often connect dry parts of a stream or river," thus providing critical water supply to downstream perennial streams or rivers.[4]

[1] Proposed Rule, 79 Fed. Reg. at 22204

[2] U.S. EPA Science Advisory Board, Science Advisory Board (SAB) Consideration of the Adequacy of the Scientific and Technical Basis of the EPA's Proposed Rule titled "Definition of Waters of the United States under the Clean Water Act," EPA-SAB-14-007, (Sept. 30, 2014) (hereinafter "SAB Rule Review Letter"), available at http://yosemite.epa.gov/sab/sabproduct.nsf/0/518D4909D94CB6E585257D6300767DD6/$File/EPA-SAB-14-007+unsigned.pdf.

[3] http://water.epa.gov/type/rsl/streams.cfm

[4] Acuna, et al, "Why Should We Care About Temporary Waterways?" *Science* Vol. 343 (March 7, 2014)

Headwater and seasonal streams also feed the drinking water sources of 117 million Americans[5]. Clarifying that all tributary streams, regardless of size or frequency of flow, are covered under the CWA will restore protections to hundreds of thousands of miles of streams that one in three Americans depend on for drinking water.[6]

We recommend that the definition of "tributaries" be broadened to ensure that all tributaries across a range of regional and climatic variations are categorically protected under the CWA. Under the current proposal, a tributary must possess an ordinary high water mark (OHWM) to be considered jurisdictional, even though the agencies acknowledge in the preamble for the rule that in low-gradient and arid regions the presence of an OHWM or even bed and bank may be discontinuous or difficult to observe.[7] Ephemeral streams and even some intermittent streams frequently lack an obvious OHWM because "the climate of the region drastically influences the hydrology, channel-forming processes, and distribution of OHWM indicators such that delineations can be inconsistent and problematic."[8] Even in non-arid regions, Army Corps of Engineers staff have found delineating non-perennial streams relying solely on the presence of an OHWM to be a challenge.[9]

Intermittent and ephemeral streams account for over 60% of the stream miles in the continental United States.[10] In arid and semi-arid states like Arizona, New Mexico, Nevada, Utah, Colorado and California over 81% of streams are classified as ephemeral or intermittent.[11] These seasonal and rain dependent streams feed our nation's public drinking water sources, and not just in states like Arizona where they account for 79% of drinking water sources, but even in non-arid states like Arkansas they account for 65% of the stream miles in Source Water Protection Areas.[12] Nationally, intermittent and ephemeral

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[5] http://water.epa.gov/lawsregs/guidance/wetlands/surface_drinking_water_index.cfm Last accessed November 12, 2014.
[6] *Id.*
[7] Fed. Reg. 79 at 22202 (April 21, 2014)
[8] http://www.spk.usace.army.mil/Portals/12/documents/regulatory/pdf/Ordinary_High_Watermark_Manual_Aug_2008.pdf at 1. Last accessed November 12, 2014.
[9] http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/reg_supp/west_mt_finalsupp_aug2014.pdf Last accessed November 14, 2014.
[10] http://water.epa.gov/type/rsl/streams.cfm
[11] [11] Levick, L., J. Fonseca, D. Goodrich, M. Hernandez, D. Semmens, J. Stromberg, R. Leidy, M. Scianni, D. P. Guertin, M. Tluczek, and W. Kepner. 2008. The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest. U.S. Environmental Protection Agency and USDA/ARS Southwest Watershed Research Center, EPA/600/R-08/134, ARS/233046
[12] http://water.epa.gov/lawsregs/guidance/wetlands/surface_drinking_water_index.cfm Last accessed November 12, 2014.

streams account for 58% of the total stream miles in Source Water Protection Areas.[13] It is imperative that the definition of tributaries be written broadly enough so it is clear that all tributaries in Source Water Protection Areas are protected by the CWA, regardless of whether or not they possess an identifiable OHWM.

Our concern about this narrow legal definition of tributaries is shared both by members of the SAB panel that reviewed the proposed rule and by other experts on stream ecology.[14] The SAB panel suggested that the agencies change the wording of the definition of tributaries to "bed, bank and other evidence of flow" and not have the presence of an order high water mark (OHWM) be a required attribute for a stream to be considered a jurisdictional tributary under the CWA.[15]

Acuna, et al (2014) recommend an even boarder definition that would ensure "temporary waterways" (which include ephemeral streams) are legally defined as "waters of the U.S." - if "(i) they flow at some times and this flow connects them to a river network, or (ii) if they are habitat for obligate aquatic organisms or terrestrial organisms unique to dry river beds."[16]

Broadening the legal definition of tributaries is critical, because as the proposal is currently written, only streams that meet the definition of "tributaries" will be categorically protected under the CWA. As our water resources deal with additional stressors brought on by climate change, it will become even more urgent for all seasonal and rain dependent streams to be afforded strong and clear protections. In certain regions of the country scientists have already observed historically perennially flowing streams shifting to temporarily flowing streams due to climate change or over extraction of water.[17]

We recommend that gullies, rills and non-wetland swales not be categorically excluded from CWA jurisdiction, and suggest the agencies instead classify them as "other waters" and evaluate their jurisdictional status on a case specific basis. In the preamble of the proposed rule, the agencies address the difficultly of distinguishing gullies from ephemeral streams and further note that these water features are often conduits for moving water between streams, wetlands and other adjacent waters that are clearly jurisdictional.[18] We agree with the SAB panel's assessment that water features like

[13] *Id*.
[14] SAB Rule Review Letter at 2; Acuna, et al, "Why Should We Care About Temporary Waterways?" *Science* Vol. 343 (March 7, 2014)
[15] SAB Rule Review Letter at 2.
[16] Acuna, et al, "Why Should We Care About Temporary Waterways?" *Science* Vol. 343 (March 7, 2014)
[17] *Id.*
[18] 79 Fed. Reg. at 22219 (April 21, 2014).

gullies, rills and non-wetland swales can have a significant impact on the physical, biological and chemical integrity of downstream waters, and to automatically exclude all of these features from CWA protections is not scientifically sound. [19]

Such a decision is particularly concerning given that the rule as proposed lacks a recapture provision, so if any of these types of water features were in the future found to have a significant impact on downstream water quality, the agencies would be unable to step in to protect them. We recommend that the agencies take a closer look at the wealth of literature on human-modified stream ecosystems, as described by the SAB in it comments on EPA's Connectivity Report.[20] This literature could help inform the agencies as to which human or naturally altered water features have a significant impact on downgradient water quality, and which do not. As the science of stream connectivity, especially as it relates to impacts caused by human alterations and natural events evolves, it is essential that the agencies continue to have the ability to evaluate the potential impact of these water features on a case specific basis.

Adjacent Waters and Wetlands

Comment request: *While the agencies' best professional judgment has always been a factor in determining whether a particular wetland is "adjacent" under the existing definition, the agencies recognize that this may result in some uncertainty as to whether particular water connected through confined surface or shallow subsurface hydrology is an "adjacent" water. The agencies therefore request comment on whether there are other reasonable options for providing clarity for jurisdiction over waters with these types of connections.*[21]

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[19] Memorandum from Dr. Amanda Rodewald to Dr. David Allen, Comments to the chartered SAB on the Adequacy of the Scientific and Technical Basis of the Proposed Rule Titled "Definition of 'Waters of the United States" Under the Clean Water Act." (September 2, 2014). Available at: http://yosemite.epa.gov/sab/sabproducts.nsf/F6E197AC88A38CCD85257D49EDC/$File/Rodewald_Memorandum_WOUS+Rule_9_2_14.pdf (Hereinafter SAB Review Memo) and SAB Rule Review Letter.

[20] U.S. EPA Science Advisory Board, SAB Review of the Draft EPA Report *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence*, EPA-SAB-15-001, at 46 (Oct 17, 2014) (hereinafter "SAB Connectivity Review"), available at http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/AF1A28537854F8AB85257D74005003D2/$File/EPA-SAB-15-001+unsigned.pdf

[21] 79 Fed. Reg. at 22208 (April 21, 2014)

We strongly support the agencies' decision to categorically include all adjacent waters and wetlands as "waters of the U.S." As summarized in EPA's draft Connectivity Report, waters and wetlands adjacent to streams and rivers clearly have a strong influence on the physical, chemical and biological integrity of those water bodies. Wetlands perform critical functions that support aquatic life, clean drinking water and safeguard communities from floods. Wetlands protect the water quality of entire watersheds by filtering pollutants. They also store floodwaters, reducing flood flows that can threaten property and infrastructure. Wetlands also provide essential fish and wildlife habitat that support robust outdoor recreation and tourism. When wetlands are polluted, dredged or filled, these benefits are lost.

Further, we agree with the SAB panel's assessment that "adjacency" of wetlands and waters not be limited by geographical proximity to a navigable water or by a hydrological surface connection to a navigable water.[22] We also agree with the SAB's recommendation that adjacency determinations should be based on functional relationships, not geographic distance, as distance by itself is not a good indicator of connectivity.[23] The definition of "adjacency" is critically important because how wetlands and waters are determined to be adjacent to categorically jurisdictional waters will delineate where the category of "other waters" begin.

Comment request: *When determining whether a water is located in a floodplain, the agencies will use best professional judgment to determine which flood interval to use (for example, 10 to 20 year flood interval zone). The agencies request comment on whether the rule text should provide greater specificity with regard to how the agencies will determine if a water is located in the floodplain of a jurisdictional water.*[24]

We urge the agencies to consider evidence of biological and chemical connectivity when evaluating adjacency and not to rely solely on whether or not a wetland or water is within a floodplain of a navigable water for it to be considered adjacent. While flooding is one measure that should be considered to determine if a particular water is adjacent to another, it should not be the sole determining factor. If the agencies decide to use a flood plain analysis to determine whether or not a wetland or water is adjacent to a jurisdictional river or stream, they should use a 100-year flood plain metric. The existence of a biological or chemical connectivity between a wetland or water and

[22] SAB Review Memo at 3.
[23] *Id.*
[24] 79 Fed. Reg. at 22209 (April 21, 2014).

jurisdictional stream or river should also be considered when determining adjacency. For instance, certain amphibian species migrate to and from vernal pools or other wetlands to jurisdictional rivers. And certain wetlands function as chemical "sinks," capturing nutrients or other contaminants before these pollutants can be transported to downgradient streams or wetlands.

Other Waters

Comment request: *The agencies solicit comments on identifying subcategories of "other waters" that have a significant nexus to traditional navigable waters, interstate waters, and the territorial seas and could be jurisdictional by rule, and subcategories of "other waters" where a significant nexus or its absence could not be determined as a class and could be subject to a case-specific analysis under the rule. The Report indicates that there is evidence of very strong connections in some subcategories that are not included as jurisdictional by rule. The agencies solicit comment on making such subcategories of waters with very strong connections jurisdictional by rule as well on making subcategories of waters that do not have such connections subject to a case-specific analysis or categorically non-jurisdictional under the rule. Such comment should explain with supporting documentation why a particular subcategory of "other waters" might or might not have a significant nexus to traditional navigable waters interstate waters, or the territorial seas*[25].

We urge the agencies to categorically protect certain "other waters" that have a clear significant nexus to navigable waters, rather than requiring case-by-case determinations for these "other waters." Relying on case-by-case analyses to determine jurisdiction provides less regulatory certainty to polluters and developers and we recommend the agencies categorically include certain classes of "other waters" where the science is clear, as categorically jurisdictional by rule. As the rule is currently proposed , the agencies will need to continue the current tedious case-by-case "significant nexus" analysis for all "other waters, including wetlands" that do not fit the definition of the six other categories of protected waters (paragraphs (a)(1) through (a)(6) in the proposed definition). We believe that many of these "other waters" clearly have an impact on navigable waters. Wetlands and other waters, even so-called isolated ones that are not adjacent to tributaries, provide many of the same natural benefits as adjacent waters located within floodplains. In fact, it is because of their placement

[25] 79 Fed. Reg. at 22198 (April 21, 2014)

outside of floodplains that they function as "sinks" to capture and filter pollutants and store floodwaters, protecting the physical, biological and chemical integrity of downstream waters. In its final review of EPA's draft Connectivity report, the SAB panel disagreed with EPA's conclusion that there is not enough scientific evidence to generalize about the connectivity of wetlands and waters outside of floodplains, stating this "conclusion largely overlooks the effects of deep aquifer connections and non-hydrologic biological connections on downstream waters."[26] In fact, the conclusion reached by EPA is inconsistent with earlier sections in its Report, "which describes numerous scientifically established functions of non-floodplain wetlands that can benefit the physical, chemical, and biological integrity of downstream waters."[27]

The available science described in the draft Connectivity report clearly supports "a determination that certain subcategories and types of "other waters" in particular regions of the United States (e.g. Carolina and Delmarva Bays, Texas coastal prairie wetlands, prairie potholes, pocosins, western vernal pools) are similarly situated (i.e., they have a similar influence on the physical, chemical and biological integrity of downstream waters and are similarly situated on the landscape) and thus could be considered waters of the United States."[28] Two independently commissioned academic reports from the River Basin Center at the University of Georgia, which synthesized additional scientific literature not reviewed in the Connectivity report, also found significant evidence to support protecting certain subcategories of "other waters." Both of these reports have been submitted into the docket for the proposed rule. Together with the Connectivity report, these reports provide ample evidence for the agencies to build a solid scientific case for categorically including certain "other waters" as jurisdictional by rule. In addition to the "other waters" listed above by the SAB panel, the two UGA reports highlight scientific evidence to support categorically protecting "other waters" including northeastern vernal pools, sinkhole wetlands in karst regions, rainwater basin wetlands, sand hills wetlands, playa lakes and interdunal wetlands. We urge the agencies to categorically protect these "other waters" as jurisdictional by rule under the Clean Water Act.

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[26] U.S. EPA Science Advisory Board, SAB Review of the Draft EPA Report *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence*, EPA-SAB-15-001, at 58 (Oct 17, 2014) (hereinafter "SAB Connectivity Review"). Available at: http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/AF1A28537854F8AB85257D74005003D2/$File/EPA-SAB-15-001+unsigned.pdf.

[27] *Id.* at 58.

[28] SAB Review Letter at 3.

"Other waters" not categorically included as jurisdictional in the final rule should continue to be subject to case-specific analyses in order to determine if they have a significant nexus to navigable waters. The scientific literature summarized in both the draft Connectivity report and UGA reports clearly supports protecting "other waters" on a case-by-case basis. Waters and wetlands outside floodplains can have a significant influence on the physical, chemical and biological integrity of downstream waters, particularly when they are considered in aggregate (i.e. in combination with similarly situated waters). The SAB review of the draft proposed rule reached this same conclusion about the need to continue to review "other waters" on a case-by-case basis.[29] The primary goal of the agencies should be to move as many "other waters" into categories that can be defined by rule to be "waters of the United States," as the science evolves to reveal the significant connections between these "other waters" and jurisdictional waters. Doing this will add clarity and consistency for both agency staff and the regulated community.

Comment request: *If waters are categorized as non-jurisdictional because of a lack of science available today, the agencies request comment on how to best accommodate evolving science in the future that could indicate a significant nexus for these "other waters." Specifically, the agencies request comment as to whether this should be done through subsequent rulemaking, or through some other approach, such as through a process established in this rulemaking.*[30]

We urge the agencies to establish a process for "other waters" to be considered for future inclusion as a new class of jurisdictional waters, to accommodate evolving science in the future. Just because there is a lack of scientific evidence today to include every type of other water as categorically protected by rule, further scientific study and investigation could reveal the presence of a significant nexus between additional classes of "other waters" to navigable waters in the future. For this reason, it is imperative that the agencies establish a process by which the public can formally request (i.e., petition) for a certain "other water" to be categorically protected by rule. In the preamble of the final rule the agencies should describe what scientific and/or legal documentation would be required for a member of the public to submit a petition. Additionally, the agencies should establish a process by which they (EPA science staff) periodically review the latest scientific literature to determine whether or not there is evidence to include additional categories of "other waters" as jurisdictional by rule.

[29] SAB Review Letter at 3.
[30] 79 Fed. Reg. at 22217 (April 21, 2014).

Comment request: *The agencies also seek comment on how the science supports retaining the case-specific determination for the remaining "other waters" that are neither specifically included nor excluded from jurisdiction. Retaining the case-specific analysis for these other waters would not enhance clarity of jurisdiction for these other waters, but it would retain the ability for a jurisdictional determination consistent with the objective of the CWA to restore and maintain the chemical, physical, and biological integrity of the nation's waters. In the alternative, the agencies seek comment on whether it would be appropriate to categorize remaining "other waters" as not jurisdictional. The agencies specifically seek comment on how these "other waters" should be considered.*[31]

We are strongly opposed to the agencies categorically excluding <u>any</u> "other waters" from CWA jurisdiction, at any time. The agencies should not declare any "other waters" non-jurisdictional at any time, even if a particular "other water" should fail a significant nexus test. Watersheds are dynamic ecosystems that change over time, both from natural events and human activities. As the climate changes, scientists anticipate more frequent flooding in certain regions and more intense drought in others, so just because a particular water does not meet a significant test once, does not mean it won't meet such a test in the future. Especially with the anticipated impacts of climate change, we can expect more dramatic changes to our watershed ecosystems in the future. This, coupled with increasing demand for clean water in the future, underscore the need for the agencies to continue to do everything within their legal authority to protect our nation's precious water resources as the science evolves and resource needs shift.

Categorically excluding any water would set a dangerous precedent, especially in light of the fact that the proposed rule contains no recapture provision. Given uncertainty about the availability and quality of water resources in the future, it would be shortsighted of the agencies to categorical exclude any waters from protection. Moreover, members of the SAB panel reviewing the proposed rule commented that "the science does not support a determination to exclude any groups of "other waters" (or subcategories thereof, e.g. Great Plains playa lakes) from jurisdictional status."[32]

[31] *Id.*
[32] SAB Review Memo at 5.

Ditches

Comment request: *The agencies request comment on this formulation of the ditch exclusion. The agencies specifically seek comment on the appropriate flow regime for a ditch excavated wholly in uplands and draining only uplands to be covered by the exclusion in paragraph (b)(3). In particular, the agencies seek comment on whether the flow regime in such ditches should be less than intermittent flow or whether the flow regime in such ditches should be less than perennial flow as proposed.*[33]

We oppose the agencies excluding any ditches from CWA jurisdiction without compelling scientific evidence. There is sufficient scientific evidence that ditches commonly function as tributaries, moving water and pollutants downstream. In fact, many ditches are streams that have been channelized or otherwise altered by human activities. Regardless of whether a ditch flows perennially, intermittently or ephemerally, if it functions like a tributary and has an impact on navigable waters, it should be subject to CWA protections. The SAB panel reviewing the rule also expressed concern over the agencies' proposal to exclude certain ditches from CWA protections. Panelists stated that "exclusion of ditches that are excavated wholly in uplands, drain only uplands, and have less than perennial flow may be problematic because many such ditches now drain areas that previously would have been identified as wetlands ….. such ditches now drain uplands and may not experience perennial flow."[34]

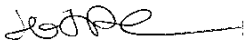
Many of these ditches exist in the Midwestern region of the U.S. where agricultural runoff containing high concentrations of nutrients, pesticides and sediments impact downstream drinking water sources. Excluding these ditches from CWA protections is inconsistent with efforts to protect public sources of drinking water and other downstream uses, such as fishing and recreation. When commenting on how these types of ditches function in the Midwest landscape, one SAB panelist stated, "this situation describes much of the drainage into western Lake Erie, where harmful algal blooms due to excessive nutrient loading have caused beach closings, and in August 2014, a three day ban on drinking water for some 400,000 residents in and near Toledo, OH."[35] For more information on how a strong CWA rule can better protect drinking water sources, please see Clean Water Action's whitepaper, "Putting Drinking Water First: Clarifying the Definition of Waters of the United States Under the Clean Water Act," which was submit to the docket along with this comment letter.

[33] 79 Fed. Reg. at 22217 (April 21, 2014).
[34] SAB Review Memo at 7.
[35] SAB Review Memo at 14.

In closing, we urge the agencies to swiftly finalize a strong rule that will take us back closer to the original intent of the Clean Water Act, by restoring protections to all of our small streams and wetlands. Millions of small streams and wetlands provide most of the flow to our most treasured rivers. If we do not protect these streams and wetlands, we cannot protect and restore the lakes, rivers and bays on which communities and local economies depend. Leaving critical water resources vulnerable jeopardizes jobs and revenue for businesses that depend on clean water, including outdoor activities like angling and water-based recreation. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade, eliminate permit confusion and delay, and better protect the critical water resources on which our communities depend.

Clean Water Action thanks the agencies for their efforts to protect these waters and look forward to working with them to finalize and implement a strong *"Definition of Waters of the United States under the Clean Water Act."*

Sincerely,



Jennifer Peters
National Water Campaigns Coordinator
Clean Water Action
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September 12, 2014

The Honorable Gina McCarthy
Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue
Washington, DC 20460

Email to: ow-docket@epa.gov

Re: Clean Water Rule Docket ID # EPA-HQ-OW-2011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy:

The undersigned forty-five (45) organizations and businesses working in Florida appreciate the opportunity to comment on the US Environmental Protection Agency (EPA) and US Army Corps of Engineers (Corps) proposed *Definition of "Waters of the United States Under the Clean Water Act*" to clarify which streams, wetlands and other waters are protected under the Clean Water Act. This rule is long overdue. Many of our organizations and businesses have spent more than a decade advocating to restore Clean Water Act protections to all wetlands and tributary streams, as Congress originally intended when it passed the landmark Act in 1972.

Our organizations and businesses support the proposed rule for the clear protections it restores to headwaters, intermittent and ephemeral streams, and to wetlands and other waters located near or within the floodplain of these tributaries. We urge the Agencies to strengthen the final rule by further clarifying that important wetlands and other waters located beyond floodplains are also categorically protected under the Clean Water Act.

For its first thirty years, the Clean Water Act safeguarded nearly all of our rivers, streams, lakes and wetlands, in order to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction. These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's stream miles and at least 20 million acres of wetlands in the continental United States.

Millions of small streams, springs, and wetlands provide the flow to our most treasured American rivers, including the Suwanee River and St. Johns River, both of which are important sources of recreation and wildlife habitat. Similarly, streams and wetlands form the Kissimmee Basin and the Kissimmee River, which flow into Lake Okeechobee and are the key source of water for the Everglades ecosystem. Florida's over 900 springs also offer significant recreational opportunities for visitors and residents and several million dollars to the local economy each year. The proposed rule will help clarify that the small streams, springs, and wetlands flowing into these water bodies are covered as long as they meet the definitions under

the rule. This will eliminate the need for a case-specific analysis and room for debate that comes at the cost of our water quality, public health, and economy.

The Florida Department of Environmental Protection has also estimated that over 800,000 acres in the Panhandle region alone are so-called "isolated" waters, which do not have clear Clean Water Act protections. These shallow, depressional wetlands, including cypress domes, need to be protected to support critical wildlife habitat and recreational opportunities for future generations.

If we do not protect these Florida water bodies, we cannot preserve and restore the lakes, rivers and bays on which communities and local economies depend. Leaving critical water resources vulnerable jeopardizes jobs and revenue for businesses that depend on clean water, including outdoor activities like angling and water-based recreation.

We support the Agencies' proposal to define all tributaries as "waters of the United States," including headwaters and small streams that may only flow seasonally. Headwater streams provide most of the flow to downstream streams and rivers, and make up 29 percent of Florida's stream miles. Intermittent and ephemeral streams may only flow during parts of the year, but they support water quality in downstream waters by filtering pollutants and capturing nutrients and make up 12 percent of Florida's stream miles.

These streams are also critical habitat for fish and other aquatic species. Headwater and seasonal streams also feed the drinking water sources of 117 million Americans. Clarifying that all tributary streams, regardless of size or frequency of flow are covered under the Clean Water Act will restore protections to 580 miles of headwater, intermittent and ephemeral streams in Florida that supply drinking water sources.

In addition, we support the Agencies' definition of tributary and strongly agree that ditches should be defined as "waters of the U.S." where they function as tributaries. There is sufficient scientific evidence that some ditches function as tributaries moving water and pollutants downstream. In those cases protection is important.

We support the Agencies' determination that all adjacent wetlands are "Waters of the U.S." Wetlands perform critical functions that support aquatic life, clean drinking water and safeguard communities from floods. Wetlands protect the water quality of entire watersheds by filtering pollutants. They also store floodwaters, reducing flood flows that can threaten property and infrastructure. Wetlands also provide essential fish and wildlife habitat that support robust outdoor recreation and tourism. When wetlands are polluted, dredged or filled, these benefits are lost.

In order to protect wetlands and other resources, we also urge the Agencies to:

1. **Categorically define certain non-adjacent "other waters" as "Waters of the United States" and identify additional subcategories of waters that are jurisdictional, rather than requiring case-by-case determinations.** Wetlands and other waters, even so-called isolated ones that are not adjacent to tributaries, provide many of the same natural benefits as adjacent waters located within floodplains. In fact, it is because of their placement outside of floodplains that they function as "sinks" to capture and filter pollutants and store floodwaters, protecting the physical, biological and chemical integrity of downstream waters.

2. **Provide for new science by not categorically excluding any of the "other waters," and establishing a process by which evolving science can inform jurisdictional decisions in the future.** "Other waters" that cannot be defined as jurisdictional in the final rule should still be assessed on a case-by-case basis and provisions made for categorically including them as "Waters of the United States" if and when evolving science indicates that this is appropriate.

It is particularly critical for Floridians that the Agencies implement a strong rule to protect our economy and environment. With a strong tourism-based economy, Florida depends on healthy streams and wetlands in order to sustain fish and wildlife for its vibrant recreational industry. According to VISIT FLORIDA's 2012-2013 Annual Report, 91.5 million out-of-state and international visitors and 20.3 million in-state travelers participated in tourism in Florida in 2012. Visitors spent a total of $71.8 billion into Florida's economy and over 1 million Floridians were directly employed by tourism in 2012. According to reports by the U.S. Fish and Wildlife Service, Florida residents and nonresidents spent $9 billion on wildlife recreation, including $4.6 billion on fishing, in 2011. More than 6.4 million Floridians participated in wildlife recreation activities in 2011. Floridians depend on streams and wetlands to be clean and desirable for visitors in order to support the thriving recreational tourism industry and economy.

The Agencies' commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade, eliminate permit confusion and delay, and better protect the critical water resources on which our communities depend.

We urge the Agencies to swiftly finalize a rule to clarify that all waters with a "significant nexus" to downstream waters are clearly protected under the Clean Water Act.

We thank the Agencies for their efforts to protect these waters and look forward to working with them to finalize and implement a strong *"Definition of Waters of the United States under the Clean Water Act."*

Sincerely,

Undersigned Organizations and Businesses

Clean Water Action
Sarah de Flesco
Florida Program Coordinator

Camelot Technology Integration
Gayle Ryan
Owner

The Byrd Law Group, P.A.
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Karen Ahlers
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Solutions To Avoid Red Tide (START)
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Surfrider Foundation
Holly Parker
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Conservancy of Southwest Florida
Jennifer Hecker
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1000 Friends of Florida
Charles Pattison
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Florida Coastal and Ocean Coalition
Ray Judah
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The Howard T. Odum Florida Springs Institute, Inc.
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Florida Wildflower Foundation
Vince Lamb
Chairman

Withlacoochee Area Residents, Inc. (W.A.R., Inc.)
Dan Hilliard
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League of Women Voters of Florida
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Cypress Chapter Inc. of the Izaak Walton League of America
Pamela B. Pierce
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Mangrove Chapter of the Izaak Walton League of America
Robert Skinner
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Space Coast Progressive Alliance
Spence Guerin
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Audubon Society of the Everglades
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Tim Keyser
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Reef Relief
Millard McCleary
Executive Program Director

Project Baseline
Todd R. Kincaid, Ph.D.
Program Director

Florida Sportsman Communications Network
Karl Wickstrom
Founder/Editor in Chief

Rivers Coalition Defense Fund
Charles Grande
Chairman

July 11, 2014

The Honorable Gina McCarthy
EPA Administrator
Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Dear Administrator McCarthy:

As communities of faith, we recognize that water is a fundamental component of all life, and that stewardship of water is part of our call to care for God's creation. Because water is such an integral part of our physical and spiritual wellbeing, we are writing to urge the Administration to finalize the Waters of the US rule that clarifies what waterways are protected under the Clean Water Act.

We applaud the Environmental Protection Agency for its leadership in drafting new guidelines under the Clean Water Act—guidelines that will help protect waterways and human health. We also applaud the Environmental Protection Agency (EPA) for conducting a scientific evaluation of how wetlands and headwater streams are linked—physically, chemically, or biologically—to downstream waters as reported in "Connectivity of Streams and Wetlands to Downstream Waters."

Since the Supreme Court's *SWANCC* decision in 2001 and its *Rapanos* decision in 2006, more than 20 million acres of wetlands and tens of thousands of miles of streams have been at risk of losing protections under the Clean Water Act. The confusing nature of these decisions, coupled with weak guidance given to regulators, has allowed the pollution and destruction of seasonal wetlands and intermittent streams throughout the country, with many more at risk.

With the proposed rule, the Administration has an opportunity to rectify this growing problem by establishing criteria for protecting these at-risk waters, which provide critical environmental, economic, public health, and other benefits. With more than 117 million people in the U.S. receiving their drinking water from public systems fed in whole or in part by intermittent, headwater, and ephemeral streams, this proposed rule helps ensure safe drinking water for communities.

As communities of faith across a broad spectrum of traditions, we understand water as a symbol of preservation, cleansing, and renewal. Water is a gift from God. We urge you

to act swiftly to finalize the Waters of the US rule so that we can protect this gift for the health and wellbeing of our people and all creation.

Sincerely,

Coalition on the Environment and Jewish Life
Creation Justice Ministries
Disciples Center for Public Witness (Disciples of Christ)
The Episcopal Church
Evangelical Lutheran Church in America
Franciscan Action Network
Friends Committee on National Legislation
Jewish Council for Public Affairs
Presbyterian Church (U.S.A.)
Sisters of Mercy of the Americas' Institute Justice Team
Union for Reform Judaism
United Church of Christ
The United Methodist Church, General Board of Church and Society

November 14th, 2014

The Honorable Gina McCarthy
Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue
Washington, DC 20460

Email to: ow-docket@epa.gov

Re: Clean Water Rule Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy:

The undersigned 20 ORGANIZATIONS in Virginia appreciate the opportunity to comment on the US Environmental Protection Agency (EPA) and US Army Corps of Engineers (Corps) proposed *Definition of "Waters of the United States Under the Clean Water Act*" to clarify which streams, wetlands and other waters are protected under the Clean Water Act. This rule is long overdue. Many of our organizations have spent more than a decade advocating restoring Clean Water Act protections to all wetlands and tributary streams, as Congress originally intended when it passed the landmark Act in 1972.

For its first thirty years, the Clean Water Act safeguarded nearly all of our rivers, streams, lakes and wetlands, in order to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction. These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's stream miles and at least 20 million acres of wetlands in the continental United States.

Our organizations support the proposed rule for the clear protections it restores to headwaters, intermittent and ephemeral streams, and to wetlands and other waters located near or within the floodplain of these tributaries. We urge the Agencies to strengthen the final rule by further clarifying that important wetlands and other waters located beyond floodplains are also categorically protected under the Clean Water Act. Millions of small streams and wetlands provide most of the flow to our most treasured rivers, including Potomac and Shenandoah. If we do not protect these streams and wetlands, we cannot protect and restore the lakes, rivers and bays on which communities and local economies depend. Leaving critical water resources vulnerable jeopardizes jobs and revenue for businesses that depend on clean water, including outdoor activities like angling and water-based recreation.

Our organizations support the Agencies' proposal to define all tributaries as "waters of the United States," including headwaters and small streams that may only flow seasonally. Headwater streams

provide most of the flow to downstream streams and rivers, and make up 57% of Virginia's stream miles. Intermittent and ephemeral streams may only flow during parts of the year, but they support water quality in downstream waters by filtering pollutants and capturing nutrients and make up 30% of Virginia's stream miles. These streams are also critical habitat for fish and other aquatic species.

Headwater and seasonal streams also feed the drinking water sources of 117 million Americans, including 2.36 million residents in Virginia. Clarifying that all tributary streams, regardless of size or frequency of flow are covered under the Clean Water Act will restore protections to 5,000 miles of streams in VA that 30% of our residents depend on for drinking water.

In addition, we support the Agencies' definition of tributary and strongly agree that ditches should be defined as "waters of the U.S." where they function as tributaries. There is sufficient scientific evidence that some ditches function as tributaries moving water and pollutants downstream. In those cases protection is important.

Our organizations support the Agencies' determination that all adjacent wetlands are "Waters of the U.S." Wetlands perform critical functions that support aquatic life, clean drinking water and community safety and. Wetlands protect the water quality of entire watersheds by filtering pollutants. Wetlands also store floodwaters, reducing flood flows that can threaten property and infrastructure. Wetlands also provide essential fish and wildlife habitat that support robust outdoor recreation and tourism. When wetlands are polluted, dredged or filled, these benefits are lost. In order to protect wetlands and other resources, we also urge the agency to:

- **Categorically define certain non-adjacent "other waters" as "Waters of the United States" and identify additional subcategories of waters that are jurisdictional, rather than requiring case-by-case determinations.** Wetlands and other waters, even so-called isolated ones that are not adjacent to tributaries, provide many of the same natural benefits as adjacent waters located within floodplains. In fact, it is because of their placement outside of floodplains that they function as "sinks" to capture and filter pollutants and store floodwaters, protecting the physical, biological and chemical integrity of downstream waters. Examples of other waters that should be categorically protected by rule include: prairie potholes, Carolina and Delmarva Bays, Texas coastal prairie wetlands and vernal pools.

- **Provide for new science by not categorically excluding any of the "other waters," and establishing a process by which evolving science can inform jurisdictional decisions in the future.** "Other waters" that cannot be defined as jurisdictional in the final rule should still be assessed on a case-by-case basis and provisions made for defining them as "Waters of the United States" if and when evolving science indicates that this is appropriate.

The EPA and Corps commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance

that has been absent for over a decade, eliminate permit confusion and delay and better protect for critical water resources on which our communities depend.

Our organizations urge the Agencies to swiftly finalize a rule to clarify that all waters with a "significant nexus" to downstream waters are clearly protected under the Clean Water Act. We thank the Agencies for their efforts to protect these waters and look forward to working with them to finalize and implement a strong *"Definition of Waters of the United States under the Clean Water Act."*
Sincerely,

Undersigned Organizations

Prince William Conservation Alliance
Environment Virginia
Herndon Environmental Network
Northumberland Association for Progressive Stewardship
Friends of the Rivers of Virginia
Friends of Dyke Marsh
Friends of the Powhatan Creek Watershed
Capitol Region Land Conservancy
Association of Energy Conservation Professionals
Northern Virginia Conservation Trust
Potomac Conservancy
Elizabeth River Project
Chesapeake Climate Action Network
Shenandoah Valley Network
Back Bay Restoration Foundation
Rockridge Area Conservation Council
Virginia League of Conservation Voters
Southern Environmental Law Center - VA Chapter
Dan River Basin Association
Sierra Club - VA Chapter

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

DEVAL L. PATRICK
Governor

MAEVE VALLELY BARTLETT
Secretary

DAVID W. CASH
Commissioner

November 14, 2014

Administrator Gina McCarthy
Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue NW.,
Washington, DC 20460

Jo Ellen Darcy
Assistant Secretary of the Army (Civil Works)
108 Army Pentagon
Washington, DC 20310-1018

Attention: Docket ID No. EPA-HQ-OW-2011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy:

The Commonwealth of Massachusetts through its Department of Environmental Protection hereby submits the following comments on the Proposed Rule for the Definition of 'waters of the United States' under the Clean Water Act. See 79 Fed. Reg. 22188 (April 21, 2014). This comment is provided in addition to the comment letter previously submitted by Maeve Vallely Bartlett, the Secretary of Energy and Environmental Affairs for the Commonwealth of Massachusetts. The stated purpose of the Proposed Rule, in light of Supreme Court cases that resulted in the need for frequent case by case determinations of jurisdiction under the Clean Water Act ("CWA"), is to "enhance protection for the nation's public health and aquatic resources, and increase CWA program predictability and consistency by increasing clarity as to the scope of 'waters of the United States' protected by the Act."

The Massachusetts Department of Environmental Protection ("MassDEP") supports these goals and applauds EPA and the Army Corps of Engineers for seeking to clarify the

This information is available in alternate format. Call Michelle Waters-Ekanem, Diversity Director, at 617-292-5751. TDD# 1-866-539-7622 or 1-617-574-6868
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current state of the law. Maintaining strong legal protection of waters of the United States, including wetlands, is critical, particularly in light of changing climatic patterns, and continuing pressure from development and other alterations to hydrologic systems. The scientific evidence provided by EPA in support the rule is robust and reinforces the need for solid requirements to safeguard our nation's waters and wetlands. The EPA Science Advisory Board review issued October 17, 2014 of the underlying EPA science on connectivity (the "Connectivity Report") supports the essential principles underlying this rulemaking effort. EPA's Draft Connectivity Report was found to be thorough and complete in its literature review. The Science Advisory Board agreed with the conclusion that "streams and floodplain wetlands are physically, chemically, and /or biologically connected to downstream navigable waters"[1], and recommended viewing these connections on a gradient. The scientific literature was found by the Board to provide "strong support for the conclusion that ephemeral, intermittent, and perennial streams exert a strong influence on the character and functioning of downstream waters and that tributary streams are connected to downstream waters."[2] Recognition of the underlying principles of hydrologic connection embodied in the Proposed Rule is an important step towards promulgating a final rule that is based in science and that will clarify application and implementation of the principles in a variety of contexts across the country.

Across the U.S., individual states have implemented varying levels of protection for waters and wetlands and therefore, implementation of the Proposed Rule will ensure that the minimum protection of these important waters will be maintained in all states.

We highlight the following additional points for your consideration.

1. Massachusetts supports the proposed definition of "tributary" and the confirmation that tributary waters have a significant nexus to traditional navigable waters, interstate waters (including interstate wetlands), territorial seas and impoundments of these waters[3] and thus, are waters of the United States. We also strongly support the specification that tributaries are those waters that contribute flow either directly or through another water to *the abovementioned waters* including wetlands lakes and ponds (even if they lack bed and banks or ordinary high water mark) if they contribute flow, either directly or through another water to *the abovementioned waters*. This rule will provide protection to headwater streams, which have been substantially degraded across the nation. Headwater streams and their associated wetlands are small, often intermittent or ephemeral, and less visible systems than rivers, lakes and other large wetlands but they are more vulnerable to degradation and loss because of their size and location. Headwater streams and adjacent wetlands that do not have a permanent surface water connection (e.g. intermittent and ephemeral streams) are particularly vulnerable since they respond quickly to small changes in hydrology and adverse water quality impacts from increased impervious surfaces and impacts of stormwater. They are also frequently crossed by roadways and driveways resulting in fragmentation of aquatic and terrestrial

habitats. Massachusetts has been working for many years to protect headwater streams since in combination they form a crucial network that serves to keep the waters of the US clean and healthy. Thus we support these protective changes to the rule.

2. Massachusetts also supports the proposed definition of "adjacent wetlands" to include adjacent waters such as ponds and oxbow lakes, as well as wetlands. We also strongly support the new definition of "neighboring" to include riparian area and floodplain of *the abovementioned waters* and tributaries, or waters with a shallow subsurface hydrologic connection or confined surface hydrologic connection to such jurisdictional waters. We recommend that the issuing authority be given latitude to determine when waters with shallow subsurface hydrologic connection are present when a site is not within a riparian or floodplain area. We also agree that the definition of confined surface connections should include permanent, intermittent, or ephemeral examples.

   The Massachusetts Wetland Protection Act, M.G.L. c.131, section 40 and its implementing regulations at 310 CMR 10.00 provides regulatory jurisdiction over the "Riverfront Area" of most rivers and streams in Massachusetts, defined as an area of land between a river's mean annual high water line measured horizontally outward from the river and a parallel line located 200 feet away.[4] The Riverfront Area may include or overlap other resource areas such as wetlands or streams, and these Areas are likely to be significant to the protection of private or public water supply; groundwater; providing flood control; preventing storm damage; preventing pollution; protecting land containing shellfish; protecting wildlife habitat; and protecting fisheries.

   The Massachusetts Wetland Protection Act also provides regulatory jurisdiction over Bordering Land Subject to Flooding. These lands are areas with low, flat topography adjacent to and inundated by flood waters rising from creeks, rivers, streams, ponds or lakes, the boundary of which is the estimated maximum lateral extent of flood water which will theoretically result from the statistical 100-year frequency storm.[5] These areas are likely to be significant to flood control, storm damage prevention and the protection of wildlife habitat.

   We consider riparian and floodplain areas to provide crucial connections between resource areas and *the abovementioned waters* and tributaries and support the language in the Proposed Rule.

3. The case by case test for determining which wetlands meet the significant nexus test is very complicated and the information required is too extensive or detailed to be practical in most cases. We urge EPA to develop a state or regional process for defining wetlands that do meet the significant nexus test. In Massachusetts we consider vernal pools to be important waters that should be protected as

jurisdictional "adjacent waters" without a case-specific significant nexus analysis. Vernal pools are small wetland and/or water depressions that are topographically isolated from other surface water bodies, making them inaccessible to predatory aquatic organisms (e.g. fish) dependent on streams. As such, they provide critical habitat for breeding amphibians. Degradation of vernal pools can occur very quickly. It can be caused by changes in pH, dissolved oxygen, temperature, and turbidity or changes in groundwater resulting in decreased base flows. The importance of protecting vernal pools (and even their migration pathways) is widely recognized in the literature.[6] Thus, we support having a regional or state process for evaluation of waters that require a significant nexus finding. We also support the development of criteria that would make the significant nexus finding less onerous than the process currently proposed.

4. Massachusetts seeks additional clarification of the new "Interpretive Rule,". The "Interpretive Rule" defines a number of NRCS Conservation Practices as exempt from §404 permitting requirements. Further, it interprets the §404(f)(1) exemption for normal farming, silviculture, and ranching practices, including "upland soil and water conservation practices." A list of 56 specific NRCS Conservation Practice Standards sets out those initially approved as exempt under the new Interpretive Rule. These exempt practices have the potential to affect waters of the U.S. that extend well beyond the boundaries of the exempt agricultural practice. Additionally, these exemptions may complicate regulatory permitting and compliance at the state level and cause confusion for project proponents (e.g. a project exempt under federal laws could be subject to oversight under state law).

   Practices proposed as exempt that require further clarification, additional description or specific eligibility criteria or standards include, but are not limited to 1) Herbaceous weed control, 2) Fence Installation, 3) Stream Habitat Improvement and Management, 4) Changes to Aquatic Organism Passage, 5) Maintenance of Grassed Waterways, and 6) Obstruction Removal.

We appreciate this opportunity to comment on this very important rule which if implemented, will provide increased predictability for applicants in determining when a project is within a jurisdictional area, and protection for critical wetlands resources.

Sincerely,

Bethany Card, Assistant Commissioner
Bureau of Resource Protection, MassDEP

cc: Commissioner David Cash

[1] Science Advisory Board letter to Gina McCarthy dated October 17, 2014, Re*: Review of the Draft EPA Report Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence.*

[2] Science Advisory Board letter to Gina McCarthy dated October 17, 2014, Re*: Review of the Draft EPA Report Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis af the Scientific Evidence.*

[3] Hereafter referred to as "*the abovementioned waters*" within these comments.

[4] 310 CMR 10.58 (2) (a) 3.http://www.mass.gov/eea/agencies/massdep/water/regulations/310-cmr-10-00-wetlands-protection-act-regulations.html#2

[5] See 310 CMR 10.57(2) for further text on regulatory definition.

[6] McGarigal, K., Compton, B. W., Gamble, L, 2008. *Marbled Salamander (Ambystoma opacum) Conservation Plan for Massachusetts.* September 1, 2008**;** Compton, Bradley, W., Cushman, S., McGarigal, K., 2003. *A Model of Vernal Pool Connectivity for Amphibians in Western Massachusetts,* Landscape Ecology Program, Department of Natural Resources Conservation, UMASS, Amherst. Presented at the 10th Annual Meeting of The Wildlife Society, Burlington, Vermont, USA; September 6-10, 2003; Gibbons J. W., 2003. Terrestrial Habitat: A vital Component for Herpetofauna of Isolated Wetlands. WETLANDS, Vol. 23, No. 3, September 2003, pp. 630–635, University of Georgia, Savannah River Ecology Laboratory Aiken, South Carolina, USA 29802, q 2003, The Society of Wetland Scientists.; Calhoun, A.J.K., Vasconcelos, D., 2004 *Movement Patterns of Adult and Juvenile Rana sylvatica (LeConte) and Ambystoma maculatum (Shaw) in Three Restored Seasonal Pools in Maine.* Department of Plant, Soil, and Environmental Sciences, University of Maine, Orono, Maine 04469, USA. Journal of Herpetology, Vol. 38, No. 4, pp. 551–561, 2004.

October 10, 2014

Honorable Gina McCarthy
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20250-3700

Re: Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy,

Brewers across Massachusetts agree that clean water is critical to our ability to produce great tasting beer. Clean water is essential to the beer making process as well as critical for public health and a strong state economy. We as brewers depend upon responsible regulations to protect their water sources and appreciate the opportunity to comment upon the *Guidance Regarding Identification of Waters protected by the Clean Water Act*.

We support the science-based approach articulated in the Guidance to insure appropriate protection as intended by Congress and understood by decades of administrative activity pursuant to implementation of the Clean Water Act. The U.S. Environmental Protection Agency and Army Corps of Engineers' proposed, clarifying rulemaking to restore protection for streams and wetlands previously protected under the Clean Water Act, will safeguard water quality in the nation's waters, protect jobs in businesses that depend on clean water and safeguard drinking water for one in three Americans.

Massachusetts is a hub for breweries and has a long history of beer production; the very first tavern to open in the United States opened in Boston back in 1634. Current brewers produce a wide variety of beer styles, contributing over $9 million to our state's economy, and providing over 10,000 people with jobs. In order to produce high-quality, safe beer, brewers must have access to an ample amount of clean water. Dirty water produces dirty, undrinkable, unsellable beer.

We, the undersigned breweries of Massachusetts, urge the agency to finalize guidance and institute a formal rulemaking process in order to remedy the current situation in which water supply is inadequately protected.

Sincerely,

Cambridge Brewing Company

Cape Ann Brewing Company

Cape Cod Beer

Newburyport Brewing Company

Spencer Brewery

November 13, 2014

The Honorable Gina McCarthy
Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue
Washington, DC 20460

Email to: ow-docket@epa.gov

Re: Clean Water Rule Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy:

The undersigned seventeen organizations, representing tens of thousands of members in Minnesota, appreciate the opportunity to comment on the US Environmental Protection Agency (EPA) and US Army Corps of Engineers (Corps) proposed *Definition of "Waters of the United States Under the Clean Water Act*" to clarify which streams, wetlands and other waters are protected under the Clean Water Act. This rule is long overdue. Many of our organizations have spent more than a decade advocating to restore Clean Water Act protections to all wetlands and tributary streams, as Congress originally intended when it passed the landmark Act in 1972.

For its first thirty years, the Clean Water Act safeguarded nearly all of our rivers, streams, lakes and wetlands, in order to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction. These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's stream miles and at least 20 million acres of wetlands in the continental United States.

Our organizations support the proposed rule for the clear protections it restores to headwaters, intermittent and ephemeral streams, and to wetlands and other waters located near or within the floodplain of these tributaries. We urge the Agencies to strengthen the final rule by further clarifying that important wetlands and other waters located beyond floodplains are also categorically protected under the Clean Water Act. Millions of small streams and wetlands provide most of the flow to our most treasured rivers, including the Mississippi River, Minnesota River, and St. Croix River. If we do not protect these streams and wetlands, we cannot protect and restore the lakes, rivers and bays on which communities and local economies depend. Leaving critical water resources vulnerable jeopardizes jobs and revenue for businesses that depend on clean water, including outdoor activities like angling and water-based recreation.

Our organizations support the Agencies' proposal to define all tributaries as "waters of the United States," including headwaters and small streams that may only flow seasonally. Headwater streams

provide most of the flow to downstream streams and rivers, and make up 45% of Minnesota's stream miles. Intermittent and ephemeral streams may only flow during parts of the year, but they support water quality in downstream waters by filtering pollutants and capturing nutrients and make up 36% of Minnesota's stream miles. These streams are also critical habitat for fish and other aquatic species.

Headwater and seasonal streams also feed the drinking water sources of 117 million Americans, including 979,000 residents in Minnesota. Clarifying that all tributary streams, regardless of size or frequency of flow are covered under the Clean Water Act will restore protections to 627 miles of streams in Minnesota that 18% of our residents depend on for drinking water.

In addition, we support the Agencies' definition of tributary and strongly agree that ditches should be defined as "waters of the U.S." where they function as tributaries. There is sufficient scientific evidence that some ditches function as tributaries moving water and pollutants downstream. In those cases protection is important.

Our organizations support the Agencies' determination that all adjacent wetlands are "Waters of the U.S." Wetlands perform critical functions that support aquatic life, clean drinking water and community safety. Wetlands protect the water quality of entire watersheds by filtering pollutants. Wetlands also store floodwaters, reducing flood flows that can threaten property and infrastructure. Wetlands also provide essential fish and wildlife habitat that support robust outdoor recreation and tourism. When wetlands are polluted, dredged or filled, these benefits are lost. There are over 10 million acres of wetlands still remaining in Minnesota, comprising about 19% of the state. These wetlands are home to a diverse community of native plants and animals and play a crucial role in protect Minnesota's 10,000 lakes. Wetlands are especially important during the spring when snow melts can lead to major flooding across the state. In order to protect wetlands and other resources, we also urge the agency to:

- **Categorically define certain non-adjacent "other waters" as "Waters of the United States" and identify additional subcategories of waters that are jurisdictional, rather than requiring case-by-case determinations.** Wetlands and other waters, even so-called isolated ones that are not adjacent to tributaries, provide many of the same natural benefits as adjacent waters located within floodplains. In fact, it is because of their placement outside of floodplains that they function as "sinks" to capture and filter pollutants and store floodwaters, protecting the physical, biological and chemical integrity of downstream waters. Examples of other waters that should be categorically protected by rule include: prairie potholes, Carolina and Delmarva Bays, Texas coastal prairie wetlands and vernal pools.

  Provide for new science by not categorically excluding any of the "other waters," and establishing a process by which evolving science can inform jurisdictional decisions in the future. "Other waters" that cannot be defined as jurisdictional in the final rule should still be assessed on a case-by-case basis and provisions made for defining them as "Waters of the United States" if and when evolving science indicates that this is appropriate.

EPA estimates that the proposed rule would provide $388 million to $514 million annually in benefits to the public, including reducing flooding, filtering pollution, providing wildlife habitat, supporting

hunting and fishing, and recharging groundwater. **Protecting small streams and wetlands is vital for fish and wildlife and Minnesota's vibrant recreational industry.** The U.S. Fish and Wildlife Service reports that Minnesota residents and nonresidents spent $3.9 billion on wildlife recreation, including $2.4 billion on fishing, in 2011. More than 2.5 million Minnesotans participated in wildlife recreation activities in 2011. Another benefit of this rule is that it will streamline the permitting process by providing greater certainty to the regulated community and better guidance to regulators, by establishing specific categories of waters which are protected by the Clean Water Act, and specific categories of waters which are not protected by the law.

The EPA and Corps commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade, eliminate permit confusion and delay and better protect for critical water resources on which our communities depend.

Our organizations urge the Agencies to swiftly finalize a rule to clarify that all waters with a "significant nexus" to downstream waters are clearly protected under the Clean Water Act. We thank the Agencies for their efforts to protect these waters and look forward to working with them to finalize and implement a strong *"Definition of Waters of the United States under the Clean Water Act."*

Sincerely,

Clean Water Action Minnesota
Deanna White
State Director

Alliance for Sustainability
Sean Gosiewski
Program Director

Audubon Chapter of Minneapolis
Jerry Bahls
President

Clean Up the River Environment
Duane Ninneman
Executive Director

Environmental Law & Policy Center
Jessica Dexter
Staff Attorney

Environment Minnesota
Cora Elleson-Myers
Campaign Organizer

Friends of the Boundary Waters Wilderness
Paul Danicic
Executive Director

Friends of the Mississippi River
Whitney Clark
Executive Director

Izaak Walton League of America – Minnesota Division
Barry Drazkowski
Division President

Land Stewardship Project
George Boody
Executive Director

League of Women Voters – Minnesota
Susan Sheridan Tucker
Executive Director

Mankato Area Environmentalists
Sister Gladys Schmitz
Board Member

Minnesota Conservation Federation
Gary Botzek
Executive Director

Minnesota Ornithologists' Union
Tom Bell

WaterLegacy
Paula Maccabee
Advocacy Director

Minnesota Environmental Partnership
Steve Morse
Executive Director

Save Our Sky Blue Waters
Elanne Palcich
Director

November 14, 2014

The Honorable Gina McCarthy
Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue
Washington, DC 20460

Email to: ow-docket@epa.gov
Re: Clean Water Rule Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy:

The undersigned nineteen (19) organizations, representing members in Michigan, appreciate the opportunity to comment on the US Environmental Protection Agency (EPA) and US Army Corps of Engineers (Corps) proposed *Definition of "Waters of the United States Under the Clean Water Act*" to clarify which streams, wetlands and other waters are protected under the Clean Water Act. This rule is long overdue. Many of our organizations have spent more than a decade advocating to restore Clean Water Act protections to all wetlands and tributary streams, as Congress originally intended when it passed the landmark Act in 1972.

For its first thirty years, the Clean Water Act safeguarded nearly all of our rivers, streams, lakes and wetlands, in order to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction. These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's stream miles and at least 20 million acres of wetlands in the continental United States.

Our organizations support the proposed rule for the clear protections it restores to headwaters, intermittent and ephemeral streams, and to wetlands and other waters located near or within the floodplain of these tributaries. We urge the Agencies to strengthen the final rule by further clarifying that important wetlands and other waters located beyond floodplains are also categorically protected under the Clean Water Act. Millions of small streams and wetlands provide most of the flow to our most treasured rivers, including the Grand River, St. Clair River, and Kalamazoo River. If we do not protect these

streams and wetlands, we cannot protect and restore the lakes, rivers and bays on which communities and local economies depend. Leaving critical water resources vulnerable jeopardizes jobs and revenue for businesses that depend on clean water, including outdoor activities like angling and water-based recreation.

Our organizations support the Agencies' proposal to define all tributaries as "waters of the United States," including headwaters and small streams that may only flow seasonally. Headwater streams provide most of the flow to downstream streams and rivers, and make up 48% of Michigan's stream miles. Intermittent and ephemeral streams may only flow during parts of the year, but they support water quality in downstream waters by filtering pollutants and capturing nutrients and make up 36% of Michigan's stream miles. These streams are also critical habitat for fish and other aquatic species. The Manistee River serves as one of the finest streams for recreational fishing. It is home to an abundant amount of salmon and trout, and nationally reputed as a top fishing destination.

Headwater and seasonal streams also feed the drinking water sources of 117 million Americans, including 1.4 Million residents in Michigan. Clarifying that all tributary streams, regardless of size or frequency of flow are covered under the Clean Water Act will restore protections to 550 miles of streams in Michigan that 14% of our residents depend on for drinking water.

In addition, we support the Agencies' definition of tributary and strongly agree that ditches should be defined as "waters of the U.S." where they function as tributaries. There is sufficient scientific evidence that some ditches function as tributaries moving water and pollutants downstream. In those cases, protection is important.

Our organizations support the Agencies' determination that all adjacent wetlands are "Waters of the U.S." Wetlands perform critical functions that support aquatic life, clean drinking water and safeguard communities from floods. Wetlands protect the water quality of entire watersheds by filtering pollutants. They also store floodwaters, reducing flood flows that can threaten property and infrastructure. Wetlands also provide essential fish and wildlife habitat that support robust outdoor recreation and tourism. When wetlands are polluted, dredged or filled, these benefits are lost. Michigan has lost 50% of its wetlands since the 1780s. Some southern and coastal Michigan counties have lost as much as 75% of their wetlands. According to the Michigan Department of Environmental Quality, more than 930,000 acres of Michigan wetlands (17% of the state's wetlands) and 26,000 lakes and ponds could be considered "isolated" waters no longer protected under the Clean Water Act. Wetlands destruction continues in Michigan despite the many benefits these wetlands provide – improving water quality, providing wildlife habitat, flood control, groundwater recharge and recreational opportunities.

In order to protect wetlands and other resources, we also urge the agency to:
Categorically define certain non-adjacent "other waters" as "Waters of the United States" and identify additional subcategories of waters that are jurisdictional, rather than

requiring case-by-case determinations. Wetlands and other waters, even so-called isolated ones that are not adjacent to tributaries, provide many of the same natural benefits as adjacent waters located within floodplains. In fact, it is because of their placement outside of floodplains that they function as "sinks" to capture and filter pollutants and store floodwaters, protecting the physical, biological and chemical integrity of downstream waters. Examples of "other waters" where the science supports our recommendation that they should be categorically protected by rule include: prairie potholes, Carolina and Delmarva Bays, Texas coastal prairie wetlands and vernal pools.

Provide for new science by not categorically excluding any of the "other waters," and establishing a process by which evolving science can inform jurisdictional decisions in the future. "Other waters" that cannot be defined as jurisdictional in the final rule should still be assessed on a case-by-case basis and provisions made for categorically including them as "Waters of the United States" if and when evolving science indicates that this is appropriate.

The Agencies' commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade, eliminate permit confusion and delay, and better protect the critical water resources on which our communities depend.

Our organizations urge the Agencies to swiftly finalize a rule to clarify that all waters with a "significant nexus" to downstream waters are clearly protected under the Clean Water Act. We thank the Agencies for their efforts to protect these waters and look forward to working with them to finalize and implement a strong *"Definition of Waters of the United States under the Clean Water Act."*

Sincerely,

Michigan Clean Water Action
Nic Clark
State Director

Clinton River Watershed Council
Anne Vaara
Executive Director

Great Lakes Environmental Law Center
Nick Schroeck
Executive Director

Michigan Environmental Council
James Clift
Policy Director

St. Clair Shores Waterfront Environmental Committee
Joe St. John
Chair

Six Rivers Regional Land Conservancy
Christopher Bunch
Executive Director

Macomb Conservation District
Arianna Welsh
Chair

Michigan Land Use Institute
Hans Voss
Executive Director

St. Clair Shores Yardeners
Laurel Fowler
Member

Au Sable Institute of Environmental Studies
Fred Van Dyke, Ph.D.
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Tip of the Mitt Watershed Council
Jennifer McKay
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Macomb Community College Team Green
Rachel Hakim
President

Engage Michigan
Lonnie Scott
Executive Director

Progress Michigan
Lonnie Scott
Executive Director

River Raisin Institute
Danielle Conroyd
Executive Director

The IHM Justice, Peace and Sustainability Office
IHM Sisters – Monroe, Michigan

Lone Tree Council
Terry Miller
Chair

Mothers Against Childhood Cancer
Danielle Williams
Co-founder

St. Clair Shores Democratic Club
Robert Fetter
Chair

November 14, 2014

The Honorable Gina McCarthy
Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue
Washington, DC 20460

Email to: ow-docket@epa.gov

Re: Clean Water Rule Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy:

The undersigned twenty-five organizations in Texas appreciate the opportunity to comment on the US Environmental Protection Agency (EPA) and US Army Corps of Engineers (Corps) proposed *Definition of "Waters of the United States Under the Clean Water Act"* to clarify which streams, wetlands, and other waters are protected under the Clean Water Act. This rule is long overdue. Many of our organizations have spent more than a decade advocating to restore Clean Water Act protections to all wetlands and tributary streams, as Congress originally intended when it passed the landmark Act in 1972.

For its first thirty years, the Clean Water Act safeguarded nearly all of our rivers, streams, lakes and wetlands, in order to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction. These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's stream miles and at least 20 million acres of wetlands in the continental United States.

Our organizations support the proposed rule for the clear protections it restores to headwaters, intermittent and ephemeral streams, and to wetlands and other waters located near or within the floodplain of these tributaries. We urge the Agencies to strengthen the final rule by further clarifying that important wetlands and other waters located beyond floodplains are also categorically protected under the Clean Water Act. Millions of small streams and wetlands provide most of the flow to our most treasured rivers, including the Trinity, Colorado, Cypress, Neches, Sulphur, and Brazos rivers. If we do not protect these streams and wetlands, we cannot protect and restore the lakes, rivers and bays on which communities and local economies depend. Leaving critical water resources vulnerable jeopardizes jobs and revenue for businesses that depend on clean water, including outdoor activities like angling and water-based recreation.

Our organizations support the Agencies' proposal to define all tributaries as "waters of the United States," including headwaters and small streams that may only flow seasonally. Headwater streams provide most of the flow to downstream streams and rivers, and make up 53% of Texas' stream miles. Intermittent and ephemeral streams may only flow during parts of the year, but they support water quality in downstream waters by filtering pollutants and capturing nutrients

and make up 75% of Texas' stream miles. These streams are also critical habitat for fish and other aquatic species.

Headwater and seasonal streams also feed the drinking water sources of 117 million Americans, including 11.5 million residents in Texas. Clarifying that all tributary streams, regardless of size or frequency of flow are covered under the Clean Water Act will restore protections to 12,570 miles of streams in Texas that 46% of our residents depend on for drinking water.

In addition, we support the Agencies' definition of tributary and strongly agree that ditches should be defined as "waters of the U.S." where they function as tributaries. There is sufficient scientific evidence that some ditches function as tributaries moving water and pollutants downstream. In those cases protection is important.

Our organizations support the Agencies' determination that all adjacent wetlands are "Waters of the U.S." Wetlands perform critical functions that support aquatic life, clean drinking water and safeguard communities from floods. Wetlands protect the water quality of entire watersheds by filtering pollutants. They also store floodwaters, reducing flood flows that can threaten property and infrastructure. Wetlands also provide essential fish and wildlife habitat that support robust outdoor recreation and tourism. When wetlands are polluted, dredged or filled, these benefits are lost .

In order to protect wetlands and other resources, we also urge the agency to:

> **Categorically define certain non-adjacent "other waters" as "Waters of the United States" and identify additional subcategories of waters that are jurisdictional, rather than requiring case-by-case determinations.** Wetlands and other waters, even so-called isolated ones that are not adjacent to tributaries, provide many of the same natural benefits as adjacent waters located within floodplains. In fact, it is because of their placement outside of floodplains that they function as "sinks" to capture and filter pollutants and store floodwaters, protecting the physical, biological and chemical integrity of downstream waters. Examples of "other waters" where the science supports our recommendation that they should be categorically protected by rule include: prairie potholes, Carolina and Delmarva Bays, Texas coastal prairie wetlands and vernal pools.
>
> **Provide for new science by not categorically excluding any of the "other waters," and establishing a process by which evolving science can inform jurisdictional decisions in the future.** "Other waters" that cannot be defined as jurisdictional in the final rule should still be assessed on a case-by-case basis and provisions made for categorically including them as "Waters of the United States" if and when evolving science indicates that this is appropriate.

The Agencies' commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade, eliminate permit confusion and delay, and better protect the critical water resources on which our communities depend.

Our organizations urge the Agencies to swiftly finalize a rule to clarify that all waters with a "significant nexus" to downstream waters are clearly protected under the Clean Water Act.

We thank the Agencies for their efforts to protect these waters and look forward to working with them to finalize and implement a strong *"Definition of Waters of the United States under the Clean Water Act."*

Sincerely,

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Houston, TX 77011

August 25th, 2014

The Honorable Gina McCarthy
Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue
Washington, DC 20460

Email to: ow-docket@epa.gov

Re: Clean Water Rule Docket ID # EPA-HQ-OW-2011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy:

The undersigned organizations in Massachusetts appreciate the opportunity to comment on the US Environmental Protection Agency (EPA) and US Army Corps of Engineers (Corps) proposed *Definition of "Waters of the United States Under the Clean Water Act"* to clarify which streams, wetlands and other waters are protected under the Clean Water Act. This rule is long overdue. Many of our organizations and businesses have spent more than a decade advocating to restore Clean Water Act protections to all wetlands and tributary streams, as Congress originally intended when it passed the landmark Act in 1972.

Our organizations and businesses support the proposed rule for the clear protections it restores to headwaters, intermittent and ephemeral streams, and to wetlands and other waters located near or within the floodplain of these tributaries. We urge the Agencies to strengthen the final rule by further clarifying that important wetlands and other waters located beyond floodplains are also categorically protected under the Clean Water Act.

For its first thirty years, the Clean Water Act safeguarded nearly all of our rivers, streams, lakes and wetlands, in order to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction. These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's stream miles and at least 20 million acres of wetlands in the continental United States.

In the state of Massachusetts alone, 73% of the population receives their drinking water from sources that lack clear and specific protections. Changes over the last decade have obscured the intentions of the original Clean Water Act and water bodies initially meant to be protected are now at risk of pollution and destruction. Especially due to their transient nature; intermittent, ephemeral, and headwater streams that feed directly into drinking water sources such as the Quabbin Reservoir, the drinking water source for over 2.5 million people in over 46 communities, are threatened.

Clean drinking water is important for public health and safety but wetlands and water bodies are sources of recreation that have become integral to the state economy. In 2011, Massachusetts residents and nonresidents spent $626 million on wildlife recreation, including $475 million on fishing. The proposed rule clarifies definitions to determine which waters are protected under the Clean Water Act. This works to achieve consistency and reliability of regulations as well as helping to maintain safe drinking water sources and protect wetlands and rivers for wildlife habitat and recreation.

We support the Agencies' proposal to define all tributaries as "waters of the United States," including headwaters and small streams that may only flow seasonally. These streams are also critical habitat for fish and other aquatic species. Headwater and seasonal streams also feed the drinking water sources of 117 million Americans.

The Agencies' commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade, eliminate permit confusion and delay, and better protect the critical water resources on which our communities depend.

We urge the Agencies to swiftly finalize a rule to clarify that all waters with a "significant nexus" to downstream waters are clearly protected under the Clean Water Act.

We thank the Agencies for their efforts to protect these waters and look forward to working with them to finalize and implement a strong *"Definition of Waters of the United States under the Clean Water Act."*

Sincerely,

Charles River Conservancy

Charles River Watershed Association

Clean Water Action, Massachusetts

Environmental League of Massachusetts

GreenCAPE

HealthLink

Mass Audubon

Massachusetts Land Trust Coalition

Massachusetts League of Environmental Voters

Massachusetts Rivers Alliance

MA Watershed Coalition

Northeast Association for Natural Lake Restoration

Ocean River Institute

Ipswich River Watershed Association

Neponset River Watershed Association

Massachusetts Breast Cancer Coalition

Health Care Without Harm

Conservation Law Foundation

Housatonic Valley Association

Healthy Mothers Healthy Babies Coalition of Massachusetts

Charlestown Waterfront Coalition

OARS: For the Assabet, Sudbury, and Concord Rivers

Millers River Watershed Council

SuAsCo River Stewardship Council

Greater Boston Chapter, Trout Unlimited, Inc.

Merrimack River Watershed Council

Pioneer Valley Chapter, Trout Unlimited, Inc.

AUDUBON CALIFORNIA – AZUL — CALIFORNIA HEALTHY NAIL SALON COLLABORATIVE - CALIFORNIA LEAGUE OF CONSERVATION VOTERS - CALIFORNIA NATIVE PLANT SOCIETY – CALIFORNIA RELEAF – CALIFORNIA RIVER WATCH - CALIFORNIA RURAL LEGAL ASSISTANCE FOUNDATION - CALIFORNIA URBAN STREAMS PARTNERSHIP - CALIFORNIANS FOR ALTERNATIVES TO TOXICS - CATHOLIC CHARITIES, DIOCESE OF STOCKTON – CENTER FOR ENVIRONMENTAL HEALTH – CENTER FOR ENVIRONMENTAL OVERSIGHT -— CITIZEN'S COALITION FOR A SAFE COMMUNITY - CLEAN WATER ACTION - COASTAL ENVIRONMENTAL RIGHTS FOUNDATION – COMITE CIVICO de VALLE – COMMUNITY CLEAN WATER INSTITUTE - COMMUNITY WATER CENTER - DESAL RESPONSE GROUP EARTHWORKS – ENVIRONMENT CALIFORNIA - ENVIRONMENTAL ACTION COMMITTEE OF WEST MARIN - ENVIRONMENTAL DEFENSE CENTER – ENVIRONMENTAL JUSTICE COALITION FOR WATER – ENVIRONMENTAL WATER CAUCUS - ERIN BROCKOVICH – ESCONDIDO NEIGHBORS UNITED - FOOD EMPOWERMENT PROJECT – FRIENDS OF THE RIVER - HEAL THE BAY – INTEGRATED RESOURCE MANAGEMENT, INC. – LEADERSHIP COUNCIL FOR JUSTICE AND ACCOUNTABILITY - LOS PADRES FOREST WATCH – LUTHERAN OFFICE OF PUBLIC POLICY, CALIFORNIA - MONO LAKE COMMITTEE – PACIFIC FOREST TRUST - PLANNING & CONSERVATION LEAGUE – POLICY LINK —- THE RIVER PROJECT - SAN JERARDO COOPERATIVE, INC. - SAVE THE BAY - SAVE THE SESPE – SEVENTH GENERATION ADVISORS - SHARK STEWARDS - SIERRA CLUB CALIFORNIA – SIERRA NEVADA ALLIANCE – SOUTHERN CALIFORNIA WATERSHED ALLIANCE - SURFRIDER FOUNDATION – TUOLUMNE RIVER TRUST – TULEYOME – UNITARIAN UNIVERSALIST JUSTICE MINISTRY OF CALIFORNIA - THE WATERSHED PROJECT - WILD COAST – THE WILDLANDS CONSERVANCY - WORKSAFE

November 13, 2014

The Honorable Gina McCarthy
Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue
Washington, DC 20460

Email to: ow-docket@epa.gov
Re: Clean Water Rule Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy:

The undersigned 56 organizations, representing the diversity of California's environmental, environmental justice, environmental health and faith-based communities, appreciate the opportunity to comment on the US Environmental Protection Agency (EPA) and US Army Corps of Engineers (Corps) proposed *Definition of "Waters of the United States Under the Clean Water Act*" to clarify which streams, wetlands and other waters are protected under the Clean Water Act.

Our organizations support the proposed rule for the clear protections it restores to headwaters, intermittent and ephemeral streams, and to wetlands and other waters located near or within the floodplain of these tributaries. However, we urge the Agencies to strengthen the final rule by further clarifying that important wetlands and other waters located beyond floodplains are also categorically protected under the Clean Water Act.

This rule is long overdue. Federal policy changes over the past decade have halted the dramatic progress of the Act in its first thirty years in safeguarding nearly all of our rivers, streams, lakes and wetlands. Those policy changes have left many small streams and "isolated" wetlands vulnerable to pollution or destruction and have imperiled Clean Water Act protections for nearly 60% of our nation's stream miles and at least 20% of the 110 million acres of wetlands in the continental United States. Many of our organizations have spent more than a decade advocating for restoration of the original Congressional intent of the Clean Water Act, as it was passed in 1972, to protect all wetlands and tributary streams.

The uncertainty of the current regulatory program was brought to prominence for Californians in 2008, when the Army Corps of Engineers determined that only 4 miles of the 51-mile LA River was "navigable" and therefore subject to the automatic protections of the Clean Water Act. While public outcry and action by US EPA eventually reversed that decision, the time and resources spent on this exercise would have been better spent in actually protecting the River.

More recently, a San Francisco Bay Area developer sought a determination from the Corps that its San Francisco Bay salt ponds are not covered by the Clean Water Act, and the Corps was preparing to agree without any public process. When US EPA objected to not even being consulted, the Corps suspended a decision, and the issue is still pending.

These are just two examples of the problems posed by the current interpretation of the Clean Water Act and are prime examples of the reasons why our organizations support the current rule-making to clarify the Act's jurisdiction. Not only is the Clean Water Act failing to protect waters that once clearly fell under its jurisdiction, the uncertainty in understanding which waters are protected and the time and resources needed to make those determinations delays actions to protect and restore waters of the US.

The proposed rule seeks to limit the uncertainty faced by developers, regulators and environmentalists and for that reason we support its adoption. Specifically:

1. **The rule appropriately provides categorical protection to all tributaries, including perennial, intermittent and ephemeral streams.** We cannot emphasize enough the importance of protecting intermittent and ephemeral streams through this rule-making. Nearly two-thirds of California's stream miles do not flow year-round, but they remain critical resources for water supply, water quality, recreation, habitat and aquatic species. The current 3-year drought has caused even more areas to lose stream flow, and increasing temperatures are also affecting the amount of water in our waterways and the seasons in which flow can be found.

A strong example of the impact of tributaries on traditional navigable waters is found in the state's Gold Rush legacy of mercury pollution. California's State Water Resources Control Board identifies 80 reservoirs that are contaminated with mercury. The rivers that drain the watershed below each reservoir are also impaired. Mercury is a neurotoxin, affecting the brain and central nervous system, as well as the immune system, kidneys and heart. Children and pregnant women are most affected, and the state has spent millions developing and posting warning signs in the hundreds of miles of streams where fishing occurs. Clearly the headwaters feeding these reservoirs are affecting the "chemical, physical and biological integrity" of covered waters.

2. **Our organizations support the Agencies' determination that all adjacent waters are "Waters of the U.S."** Wetlands perform critical functions that support aquatic life, clean drinking water and safeguard communities from floods. In California, rivers that once fed wetlands have been channelized by more than 1600 miles of levees. Despite those man-made barriers, the floodplains created by these rivers still exist, and still provide the benefit of seasonal wetlands, which are hydrologically connected to the rivers. The proposal to protect these adjacent waters will help protect water quality of entire watersheds by filtering pollutants. They also store floodwaters, reducing flood flows that can threaten property and infrastructure. Wetlands also provide essential fish and wildlife habitat that support robust outdoor recreation and tourism. When wetlands are polluted, dredged or filled, these benefits are lost.

In order to protect wetlands and other resources, we also urge the agency to improve the proposed rule by adding the following features:

1. **Categorically define certain non-adjacent "other waters" as "Waters of the United States" and identify additional subcategories of waters that are jurisdictional, rather than requiring case-by-case determinations.** Wetlands and other waters, even so-called isolated ones that are not adjacent to tributaries, provide many of the same natural benefits as adjacent waters located within floodplains. In fact, it is because of their placement outside of floodplains that they function as "sinks" to capture and filter pollutants and store floodwaters, protecting the physical, biological and chemical integrity of downstream waters. The seasonal and uncertain nature of California's rainfall mean that seasonal wetlands, vernal pools and other non-adjacent waters perform an important function in cleansing downstream waters, providing habitat and improving water supply. In its review of the rule, the EPA's Science Advisory Board said "There is also adequate scientific evidence to support a determination that certain subcategories and types of "other waters" in particular regions of the United States (e.g., Carolina and Delmarva Bays, Texas coastal prairie wetlands, prairie potholes, pocosins, western vernal pools) are similarly situated (i.e., they have a similar influence on the physical, chemical and biological integrity of downstream waters and are similarly situated on the landscape) and thus could be considered waters of the United States."

2. **Provide for new science by not categorically excluding any of the "other waters." Establish a process that allows evolving science to inform future jurisdictional decisions.** "Other waters"

that cannot be defined with certainty as jurisdictional in the final rule should still be assessed on a case-by-case basis and provisions should made for categorically including them as "Waters of the United States" if and when evolving science indicates that this is appropriate.

The Agencies' commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade, eliminate permit confusion and delay, and better protect the critical water resources on which our communities depend.

Our organizations urge the Agencies to swiftly finalize a rule to clarify that all waters with a "significant nexus" to downstream waters are clearly protected under the Clean Water Act. We thank the Agencies for their efforts to protect these waters and look forward to working with them to finalize and implement a strong *"Definition of Waters of the United States under the Clean Water Act."*

Sincerely,



Michael Lynes
Director of Public Policy
Audubon California



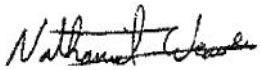
Jennifer Krill
Earthworks Oil and Gas
Accountability Project



Judith Bell, President
PolicyLink



Marce Gutierrez
Founder/Director
AZUL



Nathan Weaver
Clean Water Organizer
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Melanie Winter
Director
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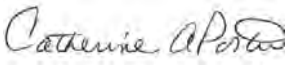

Catherine Porter, Policy Director
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Collaborative



Amy Trainer, JD
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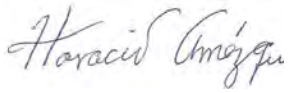

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Maggie Hall
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PATRICK BAND
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Greg Suba
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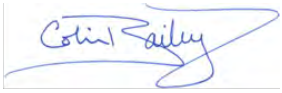

Colin Bailey
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Leif Dautch
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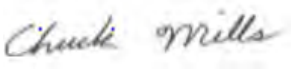
Save the Sespe



Chuck Mills
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Seventh Generation Advisors



Noe Paramo
Legislative Advocate
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Erin Brockovich



David McGuire
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Annie Pham
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LAUREN ORNELAS
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Gavin Feiger
Acting Executive Director
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PATTY CLARY
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ics

ERIC WESSELMAN
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Katelyn Roedner Sutter
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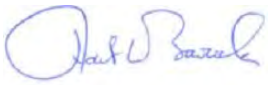
Science and Policy Director,
Water Quality
Health the Bay

Sara Dawn Husby

Executive Director and
Campaign Director
Tuleyome

KATHRYN ALCANTAR
California Policy Director
Center for Environmental Health



Bob Bowcock
Integrated Resource
Management, Inc.



Patrick Koepele
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Tuolumne River Trust

LENNY SIEGEL
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Center for Environmental Oversight



Phoebe Sarah Seaton
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Jeff Kuyper
Executive Director
Los Padres Forestwatch



Linda Hunter
Executive Director
The Watershed Project

HUMBERTO LUGO
Comite Civico de Valle



Jennifer Clary
Program Manager
Clean Water Action



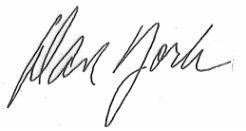
Zachary Plopper
Coastal and Marine Director
WILDCOAST



Conner Everts
Executive Director
Desal Response Group
Southern California Watershed
Alliance



Mark Carlson
Director
Lutheran Office of Public
Policy – California



Dan York
Associate Director
The Wildlands Conservancy



Sara Kent
Coastal Environmental Rights
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Programs Director



Geoff McQuilken
Executive Director
Mono Lake Committee



Executive Director
Worksafe



Omar Carrillo
Policy Analyst
Community Water Center

LARRY HANSON
Board member
Community Clean Water Institute



Paul Mason
Vice-President of Policy and Incentives
Pacific Forest Trust



Rebecca Crebbin- Coates
Policy Director
Planning & Conservation League

CC: CA Senators and Representatives

As a full-time farmer and President of the Community Farm Alliance, I fully support the EPA's "Waters of the US" proposed rule change. The rule change clarifies existing law and does not offer any substantive change or additional regulatory burden for the overwhelming majority of American farmers and ranchers. As a commercial-scale produce grower a consistent supply of clean freshwater for crop production is an absolutely necessity for our farm business to operate. We rely on well water for drinking, washing and handling of produce, and irrigation and we additionally utilize an artificial impoundment (pond) for crop irrigation. The rule change clearly states that these water sources will not be subject to additional scrutiny.

The "Interpretive Rule" change that affects Section 404 is also a welcome clarification by paring acceptable practices with approved NRCS conservation practices. I have utilized NRCS Conservation programs to assist in implementing farming practices that benefit both my bottom line and the environment and I know many farmers who do the same. I would encourage further clarification of this rule change to ensure all NRCS programs being exempted are directly beneficial to both producers and waterways.

Thank you,

Ben Abell
Rootbound Farm
President, Community Farm Alliance

Arbor Brewing Company * Arcadia Brewing Company * Baxter Brewing Company * Blue Mountain Barrel House *
Blue Mountain Brewery * Brewery Ommegang * Brewery Vivant
Central Waters Brewing Company * Dryhop Brewers * Engrained Brewing Company * Finch's Beer Company
Flossmoor Station Restaurant and Brewery * Founders Brewing Company * Great Lakes Brewing Company
Half Acre Beer Company * Hamburger Mary's Chicago * Harmony Brewing Company * Hi-Wire Brewing
Hops & Grain Brewery * Horse & Dragon Brewing * Kelso Beer Company * La Birreria
Lakefront Brewery, Inc. * Maine Beer Company * Odell Brewing Company
Old Bust Head Brewing Company * South Street Brewery * Revolution Brewing * Right Brain Brewery
Rolling Meadows Brewery * Temperance Beer Company * Wild Onion Brewing Company

November 13, 2014

The Honorable Gina McCarthy
Administrator
Environmental Protection Agency
Mail Code 1101A
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Re: Docket ID No. EPA-HQ-OW-2011-0880

Dear Administrator McCarthy:

Please accept these comments in support of the Environmental Protection Agency's (EPA) draft rule, "Definition of 'Waters of the United States' Under the Clean Water Act."

For us, it's simple. Our breweries can't operate without a reliable, clean water supply. EPA's proposed rule will restore protections under the Clean Water Act that will do far more than protect the water sources for our great-tasting beer – it will ensure that the more than 117 million Americans whose drinking water comes from systems drawing supply from such streams are protected as well.

Beer is about 90 percent water, making local water supply quality and its characteristics, such as pH and mineral content, critical to brewing. Changes to our water supply – whether we draw directly from a water source or from a municipal supply – threaten our ability to consistently produce our great-tasting beer and thus, our bottom line. Those changes can also threaten the water supplies for our agricultural partners, who provide us with essential ingredients, such as hops, barley, wheat and other agricultural resources. That said, we understand that some agri-business interests have expressed concerns about the potential impacts of this rule on normal farming operations. We understand that EPA and the Army Corps of Engineers, along with the U.S. Department of Agriculture, have assured farmers that nothing in this rule will change the exemptions that apply to discharges by agricultural producers. We urge the agencies to continue these outreach efforts to the agricultural community and to partner with them as you work to finalize clear rules.

As businesses that depend on clean water, both directly and indirectly, we are pleased to see that the rule clearly protects all tributary streams and waters adjacent to such streams. As the rule makes clear, the science is unequivocal on the biological, chemical or physical connections between these waters and downstream water bodies.

The proposed rule has other benefits, including reducing flooding, filtering pollution, providing wildlife habitat, supporting hunting and fishing, and recharging groundwater. As a result of these benefits, it's not a surprise that the public benefits of implementing this rule significantly outweigh the costs. Your agency's analysis was reviewed by outside experts and estimates benefits would be $388-514 million per year, which compares very well to the estimated costs of $162-279 million per year to mitigate impacts to streams and wetlands.

We hope that you continue to rely on the science as you finalize the rule, especially as you consider how best to protect additional waters, such as prairie potholes, vernal pools and other so-called "isolated" waters. We understand the draft rule doesn't categorically protect these waters, although it would allow for their protection on a case-by-case basis.

We are pleased to be part of the broad base of support for this proposed rule which includes a diverse group of stakeholders. As different as our groups are, we have at least one thing in common – an understanding and appreciation of the critical role these waters play in our communities' economic and environmental health.

We urge you to finalize this rule as quickly as possible. Protecting clean water is central to our businesses and our long-term success. Both the great-tasting beer we brew and the communities in which we operate depend on clean water. Thank you in advance for the opportunity to comment on this rule.

Sincerely,

Rene Greff
Owner
Ann Arbor, MI

Taylor Smack
Blue Mountain Barrel House
Arrington, VA

Tim Suprise
Founder/President
Battle Creek, MI

Kris Spaulding
Sustainability Director/Owner
Grand Rapids, MI

H. Luke Livingston
Founder/President
Lewiston, ME

Larry Bennett
PR and Creative Services Manager
Cooperstown, NY

Taylor Smack
Blue Mountain Brewery
Afton, VA

Paul Graham
Owner
Amherst, WI

Greg Shuff

Owner/Manager
Chicago, IL

Brent Schwoerer
Owner/Founder
Springfield, IL

Ben Finch
Owner
Chicago, IL

Austin Myhran
Brewer
Flossmoor, IL

Dave Engbers
Co-Founder/
Vice President of
Brand and Education
Grand Rapids, MI

Saul Kliorys
Sustainability Manager
Cleveland, OH

Matt Gallagher
Head Brewer
Chicago, IL

Ashley Wright
Owner
Chicago, IL

Heather Van Dyke
Barry Van Dyke
Jackson Van Dyke
Co-Owners/Co-Brewers
Grand Rapids, MI

Chris Frosaker
Co-owner
Asheville, NC

Josh Hare
Owner
Austin, TX

Carol & Tim Cochran
Owners
Fort Collins, CO

Kelly Taylor
Founder/ Brewer
Brooklyn, NY

Fred Avila
Head Brewer
New York, NY

Russ Klisch
President
Founder & Owner
Milwaukee, WI

Maine Beer Company

Daniel Kleban
Owner/Brewer
Freeport, ME

Wild Onion Brewing Co.

Mike Kainz
Owner
Barrington, IL

Odell Brewing Co.

Corey Odell
Sustainability Coordinator
Fort Collins, CO

Old Bust Head Brewing Co.

Julie Broaddus
Owner
Vint Hill, Virginia

South Street Brewery Since 1998

Taylor Smack
South Street Brewery
Charlottesville, VA

Revolution Brewing Chicago Illinois

Josh Deth
Chairman of the Party
Chicago, IL

Right Brain Brewery

Russell Springsteen
Owner
Traverse City, MI

Rolling Meadows Brewery

Chris Trudeau
Owner
Springfield, IL

Josh Gilbert
Owner & Founder
Evanston, IL

National Headquarters
1130 17th Street, N.W. | Washington, D.C. 20036-4604 | tel 202.682.9400 | fax 202.682.1331
www.defenders.org

November 14, 2014

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue NW
Washington, DC 20460

Submitted electronically via the Federal eRulemaking Portal, http://www.regulations.gov

Re: Proposed Definition of "Waters of the United States" Under the Clean Water Act Docket ID No. EPA-HQ-OW-2011-0880

To Whom It May Concern:

Defenders of Wildlife and the Patagonia Area Resource Alliance (collectively, "Defenders") submit the following comments in response to the U.S. Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers' (Corps) publication of the proposed "Definition of 'Waters of the United States' Under the Clean Water Act," and request for public comment. 79 Fed. Reg. 22188 (April 21, 2014).

Established in 1947, Defenders is a national, non-profit, science-based conservation organization. With more than 1.2 million members and supporters nationwide, Defenders is dedicated to the protection of all native wild animals and plants in their natural communities and the preservation of the habitat on which they depend.

Patagonia Area Resource Alliance (PARA) is a grassroots organization of volunteer community members committed to protecting and preserving the Patagonia, Arizona area. It is a watchdog organization that monitors the activities of industrial developers such as mining corporations, as well as government agencies, to make sure their actions have long-term, sustainable benefits to local public lands, watersheds, and the town of Patagonia. In particular, PARA strives to protect streams, riparian areas, and watersheds in the Patagonia Mountains as these areas are important to the survival of many native wildlife species and the town of Patagonia itself.

Defenders supports much of the proposed definition of "waters of the United States," particularly the inclusion of certain categories of waters as jurisdictional waters. These categories are generally grounded in sound scientific principles and peer-reviewed science and consistent with the case law and statute, with some exceptions and needed improvements noted below. Defenders also supports the inclusion of the category of "other waters" that must be evaluated on a case-by-case basis to determine if they are jurisdictional waters. However, Defenders does not support the categorical exclusion of certain types of waters, particularly groundwater, from Clean Water Act jurisdiction. These categorical exclusions are generally not supported by sound scientific principles, as EPA's Scientific Advisory Board (SAB) has repeatedly noted, and are not

required by case law or statute. We urge the agencies to abandon this attempt to categorically exclude groundwater and other categories of waters and instead analyze them under the same test as "other waters" in proposed subsection (s)(7).

In addition to the comments submitted in this letter, Defenders agrees with and incorporates in full the comments submitted by Earthjustice on this proposed definition.

GENERAL COMMENTS REGARDING THE SCOPE OF THE PROPOSED RULE

The Clean Water Act (originally known as the Federal Water Pollution Control Act) was enacted to "restore and maintain the chemical, physical and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). This protection is to be applied broadly to all "navigable waters," defined in the statute as "waters of the United States, including the territorial seas." 33 U.S.C. § 1362 (7). Nearly three decades ago, the Supreme Court agreed that "waters of the United States" includes both navigable and non-navigable waters, including wetlands adjacent to navigable waters and their tributaries. See U.S. v. Riverside Bayview Homes, Inc., 474 U.S. 121, 133-39 (1985). As detailed in Earthjustice's comments, the legislative history for the 1972 Federal Water Pollution Control Act and the case law continue to support a broad application of the Act's jurisdictional reach. While the agencies' proposed definition of waters of the United States is intended to respond in part to Justice Kennedy's "significant nexus" test in Rapanos v. United States, 547 U.S. 715 (2006), no other justice adopted this test as the exclusive means of determining Clean Water Act jurisdiction. As a result, Rapanos does not provide controlling precedent regarding a single justification for excluding waters from Clean Water Act jurisdiction. Similarly, the Court's opinion in Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (SWANCC), 531 U.S. 159 (2001), rejected reliance on migratory birds to establish jurisdiction over "isolated" nonnavigable ponds, but did not otherwise undermine the Act's broad application.

To the extent the "significant nexus" test is the appropriate test, the proposed definition generally meets that standard. The proposed rule and the scientific literature supporting it recognize that tributaries (whether permanent, intermittent, or ephemeral), wetlands and open-waters in riparian areas and floodplains, and many other categories of waters are connected physically, chemically, and biologically to downstream navigable and/or interstate waters through many different processes. See EPA, Office of Research and Development, "Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence," External Review Draft, September 2013 (hereinafter "EPA Connectivity Report") at 1-3 – 1-4. Wetlands and open-waters outside of riparian areas and floodplains also affect downstream waters where there is a surface or groundwater connection to a river network. Id. at 1-3 – 1-4. These waters provide many services, including "storage of floodwater; retention and transformation of nutrients, metals, and pesticides; and recharge of groundwater sources of river baseflow," all of which affect downstream water quality and integrity. Id.

As noted in more detail below, maintaining these connections and protecting the health of all of these waters are critical for many wildlife species and their habitats. In reviewing EPA's draft Connectivity Report, the SAB emphasized that EPA must "recognize that all aquatic habitats

have some degree of connection, although they may vary widely through space and time in terms of effects on the integrity of downstream waters." "SAB Review of the Draft EPA Report Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence," October 17, 2014, at 56 (hereinafter, "SAB Review"). Even "relatively low levels of connectivity can be meaningful in terms of impacts on the chemical, physical, and biological integrity of downstream waters." Id.

Moreover, the goal set by the Clean Water Act in 1972 to "restore and protect our Nation's waters" is far from achieved. Development, agriculture discharges, and other activities continue to pollute our waterways and destroy wetlands and other riparian areas. Restoring and protecting the health of our nation's waterways – and the ecosystems they support – depends on restoring and maintaining the health of their tributaries, wetlands, impoundments, groundwater, pools, and other connected waters. Only by protecting these waters, and the habitats they support, will EPA and the Corps effectuate the explicit language, purpose and intent of the Clean Water Act, 33 U.S.C. § 1251 et seq.

COMMENTS ON SPECIFIC SUBSECTIONS OF THE PROPOSED RULE

I. Defenders Generally Supports the Proposed Definitions in 40 C.F.R. § 230.3(s)

Defenders supports the inclusion of the waterbodies in proposed subsection (s)(1)-(6) as jurisdictional waters. These subsections are generally consistent with the scientific literature, case law, and the Congressionally-expressed purpose and intent of the Act. As the SAB concluded, "the available science supports the conclusion that the types of water bodies identified as waters of the United States in the proposed rule exert strong influence on the physical, chemical, and biological integrity of downstream waters." Letter From SAB to Gina McCarthy, EPA Administrator, Subject: "Science Advisory Board (SAB) Consideration of the Adequacy of the Scientific and Technical Basis of the EPA's Proposed Rule Titled 'Definition of Waters of the United States under the Clean Water Act,'" September 30, 2014 (hereinafter "SAB letter"), attached as Exh. A. We provide more detail on certain aspects of the proposed subsections below.

A. Subsection (s)(5) – Tributaries

Defenders strongly supports the inclusion of "tributaries" to waters identified in (s)(1)-(s)(4) as waters of the U.S. However, as noted below and in Earthjustice's comments, the definitions in proposed subsections (s)(5) and (u)(5) are too limited.

The science is overwhelming that tributaries significantly affect downstream waters, and that to protect a downstream navigable and/or interstate water, its tributaries must also be protected. As the agencies acknowledge, "[t]he great majority of tributaries are headwaters streams, and whether they are perennial, intermittent, or ephemeral, they play an important role in the transport of water, sediments, organic matter, nutrients, and organisms to downstream environments." 79 Fed. Reg. at 22201; see EPA Connectivity Report at 1-3 ("All tributary streams, including perennial, intermittent, and ephemeral streams, are physically, chemically, and biologically connected to downstream rivers via channels and associated alluvial deposits where

water and other materials are concentrated, mixed, transformed, and transported."). Similarly, the SAB concluded, "[t]here is strong scientific evidence to support the EPA's proposal to include all tributaries within the jurisdiction of the Clean Water Act." SAB letter at 2; see also SAB Review at 3 ("Strong scientific support has been provided" for the agencies' conclusion that "all tributary streams are physically, chemically, and biologically connected to downstream waters" and "related findings").

The inclusion of intermittent and ephemeral tributaries is particularly critical to protect downstream waters. See 79 Fed. Reg. at 22202 ("The flow in the tributary may be ephemeral, intermittent, or perennial, but the tributary must drain, or be part of a network of tributaries that drain, into an [s](1) through [s](4) water under today's proposed rule."). According to EPA's data, 59% of the streams in the lower 48 states and Hawai'i are intermittent or ephemeral. EPA Office of Research and Development, "The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest," (2008), at 5 (hereinafter "EPA 2008").[1] In the desert Southwest, the number and importance of ephemeral and intermittent tributaries to hydrologic systems is even greater: 81% of all streams in the six Southwestern states are ephemeral or intermittent, including 94% of Arizona's streams and nearly two-thirds of California's streams. Id. at 5, 48. Thus, allowing degradation of ephemeral or intermittent streams – by failing to protect them under the Clean Water Act as waters of the U.S. – would detrimentally affect most of the Southwest's and California's watersheds. EPA 2008 at 48.

Ephemeral and intermittent tributaries play an important part in the area's ecology and water supply by flowing above ground into perennial waters of the U.S., charging aquifers, or otherwise connecting underground to perennial waters of the U.S. As EPA explained, the water in these streams provides critical hydrologic connections to all other waters in the watershed:

> Ephemeral streams are unique in that they lack permanent flow except in response to rainfall events. Intermittent streams flow continuously only in places where it receives water from a ground-water source or from seasonal runoff. Nevertheless, they perform the same critical hydrologic functions as perennial streams: they move water, sediment, nutrients, and debris through the stream network and provide connectivity within the watershed.

Id. at 13; id. at 72 ("We believe that the information presented in this report shows that ephemeral and intermittent streams in the arid and semi-arid Southwestern U.S. are ecologically and hydrologically connected to downstream waters, and have a significant effect on the chemical, physical, and biological integrity of those waters."). Similarly, one member of the SAB explained, "[i]n many landscapes, especially the arid and semi-arid and western US, these intermittent or ephemeral connections are critical, providing much of the connectivity that facilitates that transport of mass, energy, and organisms to downgradient waters (e.g., Izbicki, 2007)." "Compilation of Preliminary Comments from Individual Panel Members on the

[1] Also available at http://www.epa.gov/esd/land-sci/pdf/EPHEMERAL_STREAMS_REPORT_Final_508-Kepner.pdf (last visited Sept. 23, 2014).

Scientific and Technical Basis of the Proposed Rule Titled 'Definition of Waters of the United States Under the Clean Water Act,'" (as of August 14, 2014) (hereinafter "Member Comments") Dr. Mark Rains, at 71, attached as Exh. B; see also EPA 2008 at 64 ("Ephemeral and intermittent streams and tributaries provide a wide range of functions that are critical to the health and stability of arid and semi-arid watersheds and ecosystems in the American Southwest. Most importantly, they provide hydrologic connectivity within a basin, linking ephemeral, intermittent, and perennial stream segments, thereby facilitating the movement of water, sediment, nutrients, debris, fish, wildlife, and plant propagules throughout the watershed.").

According to the California Department of Fish and Wildlife, ephemeral streams in dryland watersheds provide the same ecosystem services as perennial streams, largely determining the ecological health of the entire watershed. These desert streams and washes support biological communities that do not depend on mature woodland or stream corridor conditions and are the predominant fluvial forms in arid and semiarid environments, supporting high biodiversity and habitat values relative to drier uplands. For example, in the Mojave Desert, these ephemeral streams provide important habitat for threatened Desert tortoise, Desert bighorn sheep, and a myriad of migratory birds. Ephemeral streams provide ecosystem services such as: watershed and landscape hydrologic connections; water supply protection and water quality filtering; wildlife habitat and movement/migration corridors; groundwater recharge and discharge; sediment transport, storage and deposition; nutrient cycling and movement, and vegetation community support. Letter to California Energy Commission from the California Department of Fish and Wildlife on the subject of Hidden Hills Solar Electric Generating System, State Waters Compensatory Mitigation (February 14, 2014).

The riparian areas around ephemeral and intermittent streams "generally support the greatest concentrations of wildlife, providing the primary habitat, predator protection, breeding and nesting sites, shade, movement corridors, migration stopover sites, and food sources." EPA 2008 at 47. "In the arid Southwest, about 80 percent of all animals use riparian resources and habitats at some life stage, and more than 50 percent of breeding bird species nest chiefly in riparian habitats (Krueper 1993)." Id.

EPA's 2008 Report on Ephemeral and Intermittent Streams in the Southwest highlighted some of the many wildlife species that depend on the habitats created by ephemeral and intermittent streams for various life stages. For example, in southern Arizona and adjacent Sonora, Mexico, "[m]any reptiles and amphibians depend on permanent springs, seeps, and ephemeral streams for their survival. Although these species are widely distributed throughout the region, their narrow ecological distributions and low densities make them extremely vulnerable to habitat degradation." Id. at 55. These impacts include groundwater pumping and pollution. Id. In Saguaro National Park near Tucson, Arizona, lowland leopard frogs depend on bedrock pools in ephemeral streams for breeding habitat. Id. The canyon tree frog uses the temporary pools during summer rains for breeding and is found along temporary, intermittent, and permanent streams, springs, and tinajas in rocky desert canyons in much of the Southwest. Id. at 56. Similarly, many species of birds, mammals, and invertebrates depend on ephemeral and intermittent streams, in some cases more than perennial streams. Id. at 57-62. EPA cited one study that compiled a list of 55 mammals that use riparian areas in any way for breeding,

foraging, cover or migration, and noted that only a few mammals in Arizona were truly tied to aquatic habitats found in perennial streams. Id. at 60. Moreover, many species of fish can be found in isolated perennial pools in otherwise ephemeral or intermittent streams. Id. at 63. Even where ephemeral streams cannot support fish, they help fish indirectly by supplying the required nutrients and other materials to the perennial segments. Id. at 64.

The importance of protecting the ephemeral and intermittent stream connections is illustrated in the mountains surrounding the town of Patagonia, Arizona. Tailings piles from more than 100 abandoned hard-rock mines have contaminated ephemeral and intermittent tributaries of Harshaw Creek and Sonoita Creek. For example, the Trench Mine filled the head of Alum Gulch, an intermittent tributary to Sonoita Creek, with mine tailings. Flow in upper Alum Gulch carries measurable quantities of cadmium, copper, and zinc and has excessively low pH. During heavy rain events in 2014, this contaminated water flowed through Alum Gulch directly into Sonoita Creek, a perennial water. This stretch of Sonoita Creek is the site of proposed critical habitat for the threatened western yellow-billed cuckoo. Other federally listed species dependent on Sonoita Creek include the Huachuca water umbel, Gila Topminnow, Chiricahua leopard frog, and northern Mexican gartersnake. Sonoita Creek eventually flows through Lake Patagonia, where many people fish and recreate, Sonoita Creek state natural area, and then ultimately into the Santa Cruz River.

Outside of the arid Southwest and California, headwater streams, which are not always perennial, are also critical for fish and wildlife. For example, headwater streams provide critical habitat for fish species that migrate between marine and small stream environments, such as Pacific and Atlantic salmon, and American eels. EPA Connectivity Report at 1-8. Similarly, many fishes in prairie streams swim upstream to tributaries to lay their eggs, which develop as they float downstream. EPA Connectivity Report at 1-8. Small streams also provide "refuge habitat for riverine organisms seeking protection from temperature extremes, flow extremes, low dissolved oxygen, high sediment levels, or the presence of predators, parasites, and competitors." Id.

Defenders also supports the fact that under the proposed definition in (u)(5), a water that otherwise qualifies as a tributary "does not lose its status as a tributary if, for any length, there are one or more man-made breaks… or one or more natural breaks" including a "stream that flows underground." One common trait of western streams is that they may flow above ground in some areas and below ground in others, dependent upon stream flow and substrate. It is common for western streams to flow above ground above impermeable rock and then sink below ground when traversing permeable limestone or alluvial depositions. A stream may travel below ground for a distance and then be forced to the surface by underlying igneous rock. Such underground connections that ultimately link to waters of the U.S. should be covered under the definition of waters of the U.S. For example, Sonoita Creek is ephemeral where it flows through the town of Patagonia, but it surfaces on the west side of town at The Nature Conservancy's Patagonia-Sonoita Creek Preserve. Contamination of the creek above the underground flow should be considered contamination of a waters of the U.S. because the water surfaces and ultimately links with Lake Patagonia and other waters of the U.S.

Although the inclusion of tributaries in the proposed definition of "waters of the U.S." is scientifically sound and consistent with the purpose and intent of the Clean Water Act, we also note that the definition is too limiting. In particular, the limitation to tributaries with ordinary high water marks excludes some tributaries that will affect waters downstream. Eliminating this limitation would be consistent with SAB's recommendation. "The Board advises the EPA to reconsider the definition of tributaries because not all tributaries have ordinary high water marks. An ordinary high water mark may be absent in ephemeral streams within arid and semi-arid environments or in low gradient landscapes where the flow of water is unlikely to cause an ordinary water mark. The Board advises the agency to consider changing the wording in the definition to 'bed, bank, and other evidence of flow.'" SAB letter at 2.

In the California Desert, the stream banks of a waterway can be slight or nearly imperceptible, and hence the degree of channel confinement can vary along the line of flow. According to the California Department of Fish and Wildlife in a review of Dryland Water ways, "[w]hile the hydrologic controls are fundamentally the same in dryland regions as those of temperate and humid areas the pronounced distribution and temporal intensity and discontinuities in runoff volumes and durations for dryland streams lead to a much less ordered pattern of processes and stream forms (Thornes 2009). As a consequence, dryland streams are often outside the normal range of the hydrologic and morphologic characteristics of their temperate and humid region counterparts, and their hydrology, sediment transport characteristics, and resultant channel forms characteristics, and resultant channel forms." A Review of Stream Processes and Forms in Dryland Watersheds, California Department of Fish and Game, Prepared by Kris Vyverberg, Senior Engineering Geologist Conservation Engineering, December 2010, at p. 5.

In addition, the physical characteristics – scour lines, flood debris, etc. – used to delimit waters are left by frequently recurring floods, whereas riparian functions can be supported by less frequent floods. In the East, this is unimportant because seasonal and annual flow variations are muted. For example, the increase in flow between the one-year and 50-year flood in a Pennsylvania watershed is 2.5 times (i.e., the 50-year flood carries 2.5 times as much water as the one-year flood). Western dryland systems, however, are much more variable. The same figure in a dryland stream is 280, and in small southern California dryland basins the 50-year flood may carry 400 times as much water as the one-year flood. Western riparian vegetation has adapted to establish and survive in portions of the floodplain inundated relatively infrequently, beyond the boundary of physical characteristics left by the frequent flood events and hence outside of Clean Water Act jurisdiction. Aaron Allen and D. Malanchuk, Guidelines for Jurisdictional Determinations for Waters of the United States in the Arid Southwest, June 2001, USACOE, South Pacific Division; and Allen, A., remarks at 5th Annual California Regulatory Coordination Conference, USCOE South Pacific Division, Sacramento, California, December 18, 2002. These dynamic hydrologic regimes should also be subject to Clean Water Act protection.

EPA also asked for comment on the potential exclusion of wetlands from the definition of tributary because they lack a bed, bank, or ordinary high water mark. 79 Fed. Reg. at 22206. As described more fully by Earthjustice, we strongly oppose this suggestion because wetlands are often tributaries to waters of the U.S. and should be treated as such.

Finally, Defenders also objects to the limitation in the definition of tributaries in proposed subsection (u)(5) to waters identified in subsections (s)(1) through (s)(4). This definition should include tributaries to waters identified in subsections (s)(6) and (s)(7) as well. There is no principled scientific or legal basis to exclude tributaries to any waters of the U.S. from the Act's jurisdiction.

In short, the inclusion of tributaries in the definition of waters of the U.S. is solidly grounded in science and the law and is required by the purpose and intent of the Act. See Chevron, USA v. NRDC, 467 U.S. 837, 842-43 (1984). At a minimum, including tributaries as waters of the United States is a reasonable interpretation of the Clean Water Act, while excluding them would be inconsistent with the science in the record and the purpose and intent of the statute and an impermissible interpretation of the agency's authority. See id. Defenders urges the agencies to retain the inclusion of tributaries in the final definition and strengthen it as noted above.

B. Subsection (s)(6) – Adjacent Waters, Including Wetlands.

Defenders supports the inclusion of "adjacent" waters, including wetlands, as waters of the United States under proposed subsection (s)(6) because this inclusion is consistent with the science, consistent with the purpose and intent of the Act, and, at a minimum, is a reasonable interpretation of the agencies' regulatory authority. See Chevron, 467 U.S. 837, 842-43. Excluding wetlands would be inconsistent with the Act and an impermissible interpretation of the agency's authority. See id. Wetlands are critical to healthy ecosystems. According to EPA data, "[m]ore than one-third of the United States' threatened and endangered species live only in wetlands, and nearly half use wetlands at some point in their lives." http://water.epa.gov/type/wetlands/basic.cfm (citing U.S. Environmental Protection Agency, 1995, "America's Wetlands: Our Vital Link Between Land and Water." EPA 843-K-95-001). Wetlands "provide nursery habitat for breeding fish, colonization opportunities for stream invertebrates, and maturation habitat for stream insects." EPA Connectivity Report at 1-3. When all California wetlands types are considered together, they support more species of plants and animals than any other type of habitat in the state and are the most important stop off along the Pacific Flyway for millions of migratory birds. California Natural Resources Agency, State of the State Wetlands 2010.

The scientific literature supports the fact that wetlands are physically, chemically, and biologically connected to waters of the U.S. downstream. See SAB letter at 2; SAB Review at 4-5. The SAB supported the inclusion of wetlands in the proposed definition specifically because "adjacent waters and wetlands have a strong influence on the physical, chemical, and biological integrity of navigable waters." SAB letter at 2; see also SAB Review at 39 ("the literature substantiates the conclusion that, in an overwhelming number of cases, floodplains and waters and wetlands in floodplain settings support the physical, chemical, and biological integrity of downstream waters"). Wetlands also play a role in sustaining the health of downstream waters by "retaining floodwaters, sediment, nutrients, and contaminants that could otherwise negatively impact the condition or function of downstream waters." EPA Connectivity Report at 1-3; see also SAB Review at 44-46 (discussing chemical linkages between wetlands and floodplains and downstream waters). Thus, "destruction of riparian areas and floodplains can impair water

quality by exacerbating nutrient runoff from agricultural lands, reducing or eliminating nutrient uptake, denitrification, and sedimentation of adsorbed phosphorus." SAB Review at 47.

Wetlands also provide critical habitat connections for many species that live part of their lives in a downstream water. For example, the SAB noted that "[a]s discussed by Bestgen et al. (2007) and Modde et al. (2001, 2005), floodplain wetlands and off-channel waters play an important role as spawning grounds and fish nurseries during high-water seasons for species (including several endangered fishes) that ultimately populate downstream fisheries." SAB Review at 42. The SAB also recommended that EPA document these biological linkages more thoroughly, and explicitly note these connections. "For example: 'Flood plain wetlands can provide critical nursery habitat for fish, which then disperse into downstream waters, becoming part of river food webs and serving as a biological vector of nutrients.'" SAB Review at 49.

In California, rivers haven been channelized by more than 1600 miles of levees, cutting off important floodplains and wetlands. Despite these barriers, the floodplains still exist and provide important benefits.

The definition of wetlands should be strengthened to the extent that the current proposed definition defines adjacency solely based on distance, rather than hydrologic relationships. Adjacency should be defined by actual hydrological connections and effects to downstream waters, which would include the outer extent of riparian and floodplain areas and groundwater connections. See SAB letter at 2-3; Member Comments, Dr. Kenneth Kolm, at 34 ("Distance to water body frequently is not the story."); Member Comments, Dr. Mazeika Sullivan, at 86 ("Although distance can be one measure to help ascertain the degree of hydrological connectivity, biological and chemical connectivity should also be considered.").

In addition, in addressing non-floodplain wetlands, adjacency should not be limited to those that have a "shallow subsurface hydrologic connection or confined surface hydrologic connection." See proposed subsection (u)(2) (defining "neighboring"); Member Comments, Dr. Allison Aldous, at 2; Dr. Kenneth Kolm, at 33, 39 (noting that limiting the definition to "shallow subsurface hydrologic connection is not consistent with the science"). The SAB recommended that EPA consider the "four pathways by which non-floodplain wetlands can be connected to downstream waters: via surface water and subsurface (shallow or deep groundwater) flowpaths, or through the movement of biota." SAB Review at 58. These connections may heavily influence downstream waters. "Many watersheds have a large number of non-floodplain wetlands that are collectively responsible for: the maintenance of base flows; the attenuation of floods; the production of organic material that fuels downstream food webs; and the trapping or removal of sediments, nutrients and contaminants that would otherwise contribute to the degradation of the physical, chemical, or biological integrity of downgradient waters." SAB Review at 56; id. at 6 ("[T]he SAB finds that the scientific literature provides ample information to support a more definitive statement (i.e., numerous functions of non-floodplain waters and wetlands have been shown to benefit the physical, chemical, and biological integrity of downgradient waters)"); id. at 55-56 (discussing gradient of connectivity for non-floodplain wetlands and downstream waters).

Finally, the rule's treatment of a "shallow subsurface hydrologic connection" in the definition of "neighboring" in proposed subsection (u)(2) is confusing and inconsistent with the science for another reason. Although the definition of "adjacent waters" includes waters with a "shallow subsurface hydrologic connection or confined surface hydrologic connection to such a jurisdictional water," the rule later excludes all groundwater from Clean Water Act jurisdiction. See proposed subsections (u)(2), (t)(5)(vi). There is no scientific or legal basis to protect a wetland connected to a jurisdictional water by groundwater, but not the groundwater itself. As described in more detail below, Defenders strongly disagrees with the exclusion of groundwater.

C. Subsection (s)(7) – "Other Waters."

Defenders generally supports the inclusion of "other waters" in the definition of waters of the U.S. on a case-specific basis, with the caveats and additions described in Earthjustice's comments. In addition, Defenders notes that the "significant nexus" test in this proposed definition should include a consideration of groundwater connectivity, to the extent it does not do so already. As set forth more fully below, ignoring the connections between groundwater and surface water is inconsistent with sound science. See Member Comments, Dr. Kenneth Kolm, at 43, 52.

D. Inclusion of Additional Waters.

EPA requested comment regarding the inclusion, or categorical exclusion, of particular types of waters as waters of the U.S., including prairie potholes, vernal pools, Delmarva and Carolina bays, pocosins and playas. 79 Fed. Reg. at 22212.

There is strong scientific support for categorically including most of these waters as waters of the United States. See Member Comments, Dr. Mazeika Sullivan, at 88 ("I believe that the science is currently available (partially summarized starting at 22250) to demonstrate that sufficient connectivity exists without a case-specific analysis for certain subcategories of 'other waters' (22216) (e.g., prairie potholes, Carolina and Delmarva bays, pocosins, Texas coastal prairie wetlands, western vernal pools).").

Vernal pools are highly specialized seasonal wetlands restricted almost entirely to California. Vernal pool habitat, of which over 90 percent has been lost in California, is home to 20 federally listed species, including 10 endangered plants, 5 threatened plants, 3 endangered animals, and 2 threatened animals.

In addition, prairie potholes are essential parts of the Upper Midwest's hydrologic systems. Prairie potholes are the thousands of shallow lakes and marshes in the Upper Midwest, including Iowa, North Dakota, South Dakota, Wisconsin, and Minnesota, that were formed when glaciers gouged out shallow depressions and then retreated 10,000 years ago. Each spring these depressions are filled by rain and snow melt. Some retain water year round.

Prairie wetlands can function as groundwater recharge sites, flow-through systems, or groundwater discharge sites. The hydrologic function a particular wetland performs is determined by variations in climate, its position in the landscape, the configuration of the

associated water table, and the type of underlying geological substrate. See U.S. Geological Survey, Northern Prairie Wildlife Research Center, "Wetlands of the Prairie Pothole Region: Invertebrate Species Composition, Ecology, and Management," available at http://www.npwrc.usgs.gov/resource/wetlands/pothole/prairie.htm. Prairie potholes serve as natural sponges that reduce the severity and risk of downstream flooding by holding excess water. They also recharge groundwater systems that supply water to farmlands and wells. See National Wildlife Federation, "Prairie Potholes," available at http://www.nwf.org/wildlife/wild-places/prairie-potholes.aspx.

Prairie potholes provide essential habitat for millions of water fowl, including more than 50 percent of North American migratory waterfowl species. Species dependent on the potholes for breeding include pintails, mallards, gadwall, blue-winged teal, shovelers, canvasbacks, redheads, white pelicans, rails, herons, piping plover (protected under the Endangered Species Act), American avocet, and Wilson's phalarope. Prairie potholes provide important migration habitat species such as lesser hudsonian godwit, American golden plover, sandpipers, scaup, wigeon, green-winged teal, Canada geese and snow geese. See National Wildlife Federation, "Prairie Potholes," available at http://www.nwf.org/wildlife/wild-places/prairie-potholes.aspx; Ducks Unlimited, "Prairie Pothole Region," available at http://www.ducks.org/conservation/where-we-work/prairie-pothole-region.

Ducks Unlimited rates the Great Plains and Prairie Pothole Region as the number one most important and threatened waterfowl habitat in North America, with 50 percent of the original 8 million hectares (20 million acres) already lost or severely degraded (USGS, "Wetlands of the Prairie Pothole Region"; Ducks Unlimited, "Prairie Pothole Region") and with only ten percent remaining in pre-settlement condition (Darrel Drake, Brenda Tozer, and Geoffrey Stillwell, "Prairie Potholes Wetlands and Region" (2012), available at http://academic.emporia.edu/aberjame/student/drake2/ppr.html, attached as Exh. C). Efforts to restore drained potholes to natural conditions have been generally unsuccessful, and climate change will be an additional stressor. See id. The predominant cause of loss and degradation is agriculture, draining for conversion to crops, and deposition of pesticides, sediments, and excess nutrients, as well as non-agricultural impacts from road construction and urban development. See USGS, "Wetlands of the Prairie Pothole Region."

The SAB noted that prairie potholes, along with other waters such as Carolina and Delmarva Bays, Texas coastal prairie wetlands, pocosins, and western vernal pools, are "similarly situated" and "thus could be considered waters of the United States," while "other sets of wetlands may be identified as 'similarly situated'" as the science develops. SAB letter at 3; see also SAB Review at 24 ("the individual effect of any single water or wetland on downstream waters might be negligible, but the cumulative effects of many similarly situated waters and wetlands on downstream waters might nevertheless be important"). The Connectivity Report recognized that "unidirectional wetlands" such as prairie potholes, vernal pools, and playa lakes can be "hydrologically connected directly to river networks through channels, nonchannelized surface flow, or subsurface flows," even if surrounded by wetlands. EPA Connectivity Report at 1-12; see also id. at 1-3 – 1-4 ("Unidirectional wetlands" provide functions including "storage of floodwater; retention and transformation of nutrients, metals, and pesticides; and recharge of groundwater sources of river baseflow").

In short, Defenders urges the agencies to categorically include these waters as "waters of the U.S.," or, at a minimum, retain the flexibility to review these waters on a case-by-case basis under proposed subsection (s)(7). Including these waters within the jurisdiction of the Clean Water Act is consistent with the science, case law, and statute and a reasonable interpretation of the statute. See Chevron, 467 U.S. 837, 842-43. Critically, the SAB noted that "the existing science does not support *excluding* groups of 'other waters' or subcategories thereof." SAB letter at 3 (emphasis in original); see also Member Comments, Dr. Mazeika Sullivan, at 88 ("I do not believe that the science is sufficiently developed to support a determination to exclude any groups of 'other waters' (or subcategories thereof, e.g., Great Plains playa lakes) from jurisdictional status at this time in spite of the resource-intensive nature of a case-specific analytical approach.").

II. Defenders Objects to the Agencies' Proposal to Exclude Groundwater and Other Categories of Waters From the Protections of the Clean Water Act.

Defenders disagrees with the agencies' proposal to categorically exclude waters listed in proposed subsections (t)(1)-(5), particularly groundwater, from Clean Water Act protections because this proposal is not grounded in science or the law. As detailed by the individual members of the SAB, the scientific evidence gathered for the Connectivity Report demonstrates that these waters, at a minimum, should be included in the "other waters" category in proposed subsection (s)(7) because they often play critical ecological, hydrological, and biological roles in connecting surface waters and waters of the U.S. As the SAB report concluded, "[t]he Clean Water Act exclusions of groundwater and certain other exclusions listed in the proposed rule and the current regulation do not have scientific justification." SAB letter at 3. In addition, these exclusions have no legal justification. Excluding the waters listed in proposed subsections (t)(3)-(t)(5) based on "longstanding practice" and administrative convenience (79 Fed. Reg. at 22217) is not a reasonable or permissible interpretation of the statute. See Chevron, 467 U.S. 837, 842-43.

Groundwater is excluded under the proposed subsection (t)(5)(vi). However, groundwater often significantly influences the chemical, physical and biological integrity of surface waters of the U.S. For example, "[i]n the arid and semi-arid lands. . . groundwater is the dominant source of flow to both tributaries and the main stem river segments." Member Comments, Dr. Kenneth Kolm, at 31. The SAB wrote to EPA that "[t]he available science. . . shows that groundwater connections, particularly via shallow flow paths in unconfined aquifers, are critical in supporting the hydrology and biogeochemical functions of wetlands and other waters. Groundwater also can connect waters and wetlands that have no visible surface connections." SAB letter at 3; see SAB Review at 20 ("[a]n understanding of regional groundwater flow systems is critical to the understanding of four-dimensional hydrologic connectivity on both the local and regional scales."); id. at 27 ("the conclusions in the [EPA Connectivity] Report should emphasize that dynamic groundwater-surface water connections not only maintain the ecological integrity of ephemeral streams, but also connect them structurally and functionally to downstream waters, whether or not the upstream channels are perennial").

These connections mean that protecting groundwater is often essential to protecting surface water. As the U.S. Geological Study concluded, "[m]uch of the ground-water contamination in the United States is in shallow aquifers that are directly connected to surface water. In some settings where this is the case, ground water can be a major and potentially long-term contributor to contamination of surface water." U.S. Geological Survey Circular 1139, "Ground Water and Surface Water: A Single Resource," (1998), at VI, attached as Exh. D. The USGS also noted changes in the groundwater and surface water connection can impact the aquatic species that depend on the habitats created by this interchange. Id. at VII.

The San Pedro River in southeastern Arizona illustrates the critical role that groundwater can play in a watershed. The San Pedro and its surrounding riparian habitat supports one of the richest areas of biodiversity in the United States and is an important corridor for millions of migrating songbirds. The San Pedro supports hundreds of species of birds, mammals, reptiles, amphibians, and plants, including three species protected by the Endangered Species Act: the western yellow-billed cuckoo, Southwestern willow flycatcher, and the Huachuca water umbel, as well as designated critical habitat for the umbel. In 1988, Congress recognized that the river is one of the nation's and the world's environmental crown jewels and protected 36 miles of the river and its surrounding riparian habitat through the creation of the San Pedro Riparian National Conservation Area (SPRNCA). 16 U.S.C. § 460xx (purpose of SPRNCA is "to protect the riparian area and aquatic, wildlife, archaeological, paleontological, scientific, cultural, educational, and recreational resources of the public lands surrounding the San Pedro"). The base flows for the river segments within the SPRNCA, and the water supply for the surrounding cottonwood forest, are provided by groundwater within the Sierra Vista subwatershed. See, e.g., Thomas, B.E., and Pool, D.R., "Trends in Streamflow in the San Pedro River, Southeastern Arizona, and Regional Trends in Precipitation and Streamflow in Southeastern Arizona and Southwestern New Mexico," U.S. Geological Survey Professional Paper 1712 (2006), attached as Exh. E. Thus, the health of the river within the SPRNCA – and the health of the riparian habitats supporting hundreds of species – depends upon the health of the groundwater within the Sierra Vista subwatershed. Due to the close groundwater-surface water connection in this subwatershed, both the groundwater and the river itself should be protected as waters of the U.S. – not just the San Pedro. It would be nonsensical and contrary to the purpose and intent of the Clean Water Act to protect the river, but not the groundwater that sustains it.

Similarly, west of the Sierra Vista subwatershed, the Town of Patagonia, Arizona, relies on Sonoita and Harshaw Creeks and their subterranean aquifers as their only source of potable water. "The Hermosa Mine Proposal: Potential Impacts to Patagonia's Water Supply" (October 2014), at 22-23, attached as Exh. F. "The shallow depth of the aquifers combined with the nature of the soils and underlying geology make the relationship between the surface and ground water watersheds a particularly close and interconnected one." Id. at 22 (quoting Coronado National Forest Draft Land and Resource Management Plan at 137). Isotopic analysis have also confirmed these connections. Id. As noted above, both creeks are the site of past and proposed mining operations. The acid mine drainage and heavy metals from these operations may seep into the aquifer and then contaminate these connected streams, affecting Patagonia's water supply and potentially affecting habitat used by several species protected under the Endangered Species Act, including the western yellow-billed cuckoo and Gila topminnow. As with the San

Pedro River, protecting the surface water of Harshaw and Sonoita Creeks under the Clean Water Act – but failing to protect the groundwater that sustains them – is nonsensical and contrary to the purpose and intent of the Clean Water Act.

A recent study in California mapped all of the Groundwater Dependent Ecosystems (GDE) (seeps, groundwater dependent wetlands and rivers) and provides an excellent source of information as to how many "waters of the U.S." in California are dependent upon groundwater. All three types of groundwater-dependent ecosystems studied were widely, although unevenly, distributed across California. Although different types of GDEs are clustered more densely in certain areas of the state, watersheds with multiple types of GDEs are found in both humid (e.g. coastal) and more arid regions. Springs are most densely concentrated (high percentage of land area ranking 4) at the HUC12 scale in the North Coast and North Lahontan, whereas groundwater dependent wetlands and associated vegetation alliances are concentrated in the North and South Lahontan and Sacramento River hydrologic regions. The percentage of land area where stream discharge is most dependent on groundwater is found in the North Coast, Sacramento River and Tulare Lake regions. Howard J, Merrifield M (2010) Mapping Groundwater Dependent Ecosystems in California. PLoS ONE 5(6): e11249. doi:10.1371/journal.pone.0011249.

A recent court decision recognized that a discharge into groundwater requires a permit under the Clean Water Act where the groundwater acts as a "conduit" for pollutants from the point of discharge to surface water that is a jurisdictional water. Hawai'i Wildlife Fund v. County of Maui, 2014 WL 2341565 (D. Haw. 2014). While some discharges may be properly regulated under this "conduit" approach, it is more scientifically and legally sound to protect the groundwater itself as a water of the U.S. where the aquifer has a significant connection to surface "waters of the U.S." Defenders urges the agencies to include groundwater in the "other waters" category to be evaluated on a case-by-case basis under the "significant nexus" test. Because there is no support in the scientific literature or the law to exclude groundwater from the jurisdictional scope of the Act, the proposed exclusion of groundwater is an unreasonable interpretation of the statute. See Chevron, 467 U.S. 837, 842-43.

CONCLUSION

Defenders supports a definition of "waters of the U.S." that is science-based and consistent with the purpose and intent of Clean Water Act and relevant case law. Defenders believes that much of the proposed rule meets these criteria. However, Defenders urges EPA and the Corps to heed the advice of the SAB Panel reviewing the rule and the Connectivity Report and revise the proposed definition to strengthen it and to avoid categorical exclusions, particularly of groundwater, from this definition. Defenders appreciates the opportunity to submit comments. Please feel free to contact the undersigned should you have any questions.

Sincerely,

s/ McCrystie Adams

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November 5, 2014

The Honorable Gina McCarthy
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army, Civil Works
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Washington, DC 20310

Attn: Docket ID No. EPA-HQ-OW-2011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy:

Ducks Unlimited (DU) was founded in 1937 by concerned and farsighted sportsmen conservationists. Our mission is to conserve, restore, and manage wetlands and associated habitats for North America's waterfowl, and for the benefits these resources provide other wildlife and the people who enjoy and value them. DU has grown from a handful of people to an organization of over 1,000,000 supporters who now make up the largest wetlands and waterfowl conservation organization in the world. With our many private and public partners we have conserved more than 13.3 million acres of habitat for waterfowl and associated wildlife in the U.S., Canada, and Mexico.

Ducks Unlimited is first and foremost a science-based conservation organization. Every aspect of our habitat conservation work is rooted in the fundamental principles of scientific disciplines such as wetland ecology, waterfowl biology, hydrology, and landscape ecology. Thus, the perspectives on the Clean Water Act (henceforth, "the Act" or "CWA") and information that we offer here are based on our extensive grounding in these scientific disciplines.

In addition, however, as day-to-day practitioners of on-the-ground wetland conservation in every state in the Nation, we have extensive, hands-on experience in complying with the CWA's regulatory components. Thus, DU not only sees the CWA through the lens of its importance to our organization's conservation mission, but we also view it through the lens of being a part of the CWA's "regulated community." This puts DU in a somewhat unique position relative to the Act.

DU has very limited landholdings, and the vast majority of our wetland and waterfowl conservation projects are conducted on lands owned and managed by others. While some of our projects are conducted on public lands, most of the lands on which we have worked in the U.S. are privately owned. Thus, an additional important perspective that Ducks Unlimited brings to this issue stems from our strong, longstanding, and ongoing partnership with the agricultural and ranching communities. Even more importantly, we have worked at a personal level with thousands of individual farmers and ranchers who contribute significantly to the conservation of wildlife and other natural resources on their lands, while at the same time earning their living from those lands. In addition, hundreds of thousands of DU members and volunteers are farmers or ranchers, members of their families, from farming/ranching communities, or are associated with the Nation's vital agricultural and livestock-based economy. Thus, while we do not purport to represent the farming and ranching communities' views on the Clean Water Act, we are sensitive to their perspectives and concerns.

Some farmers and ranchers with whom we have spoken about this issue have stated that they do not have a concern with conserving the remaining natural wetlands that store waters they use and, in a great many instances, from which they also derive pleasure as a direct result of the fish and wildlife that use those habitats and share their lands. Their primary concern is that CWA jurisdiction not be expanded beyond that which has long existed under the current regulations, and that a new rule should not subject them to new or additional restrictions or CWA permitting requirements that would affect their day-to-day ability to farm or raise livestock.

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I. Introductory Comments and Context for DU's Review and Analysis of the Proposed Rule

A. The touchstone for the final "Waters of the U.S." rule and future administration of jurisdiction must be the primary purpose of the Clean Water Act – *"to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."*

The "legal analysis" contained within Appendix B of the proposed rule, as well as references throughout the document, cite and highlight the primary purpose of the Act. Needless to say, it is critically important to the issue of assessing jurisdictional limits to keep in mind the purposes of the Act and the intent of Congress. The overarching intent of the Act, as expressly articulated by Congress, was "to establish a comprehensive long-range policy for the elimination of water pollution." The Act's well-known primary purpose, cited above, underscores their intention. In addition, Congress directed the agencies to "develop comprehensive programs for preventing, reducing, or eliminating the pollution of the navigable waters and ground waters and improving the sanitary condition of surface and underground waters."

The legislative history of the Act makes clear that the 1972 Act was intended to curb and eliminate pollution of the Nation's waters. Congress also clearly understood that achieving their objective would require broadly protecting the inter-connected waters of the U.S., including its wetland resources. This goal has been shared by the states, who cooperatively administer the Act. In contexts as recent as comments to the 2003 Advance Notice of Proposed Rulemaking and an amicus brief from states' attorneys general and the District of Columbia in the *Rapanos / Carabell* case, at least 42 states expressed support for broad, federal jurisdiction of wetlands and other waters under provisions of the Clean Water Act.

Thus, while a new rule is clearly necessary to appropriately interpret the findings of the Supreme Court and formally incorporate them into the regulations that are used to administer the Act, it is important to promulgate the new rule with the purpose of the Act as expressed by Congress at the forefront - "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." We believe that Justice Kennedy's language in his *Rapanos* opinion provides a strong legal foundation for doing that and, in essence, includes a mandate to develop the new rule based on the related science. We recognize and accept that Justice Kennedy's language imposes limits that will have the effect of limiting jurisdiction of "waters of the U.S." under the new final rule to fewer waters than are jurisdictional under the existing rule. However, we believe, and will attempt to demonstrate through the synthesis of existing and emerging science, that protection by rule of some additional subcategories of "other waters" is consistent with the science and with the Supreme Court's rulings, and would in turn help achieve other important goals and objectives of the rule, most notably including the nearly universal desire for clarity, certainty, and predictability on the part of the regulated community as well as the regulating agencies.

B. Ducks Unlimited's review and comments regarding the proposed rule were developed with five primary criteria in mind, which we suggest would be useful for the agencies to expressly consider to help guide the numerous decisions that will be enshrined within the final rule:

a. Is it consistent with the preponderance of the available and emerging science?
b. Is it consistent with Justice Kennedy's language regarding the application of science to determining jurisdiction?
c. Will it promote increased clarity, certainty, and predictability?
d. Is it scientifically and administratively efficient and pragmatic?
e. Is it consistent with the agencies' public statements that the new rule would not be an expansion of jurisdiction relative to the existing regulations, and that the agricultural and ranching sectors, in particular, would not be subject to increased permitting requirements?

In light of DU's somewhat unique perspective as a wetland conservation organization that is also part of the regulated community and works in close partnership with thousands of farmers, ranchers, and other landowners, we developed these comments and assessed the individual elements of the proposed rule through the lens of five key criteria above. It is clear that the agencies also considered similar criteria to some degree. However, we believe that some of the preliminary decisions as expressed as elements of the proposed rule are not as consistent with the fulfillment of and balance among these criteria, taken together, as they could or should be. Our detailed comments will touch on those areas of divergent perspectives, and we will offer scientific evidence that we believe supports our position on those issues. First, we offer comments on each of our five criteria.

a. Is it consistent with the preponderance of the available and emerging science? It is clear through an examination of the draft report of the EPA's Scientific Advisory Board entitled, *"Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence"* (henceforth, the "Report" or "Connectivity Report"), that there is a large and diverse body of science regarding wetland and other aquatic components of the environment that relates to this rule. While there is much in the existing literature that informs a science-based evaluation of the fundamental question of "significant nexus" between various types of waters, the specific issue of connectivity between waters is experiencing a recent acceleration of research as a result of the Supreme Court decisions and the new importance of connectivity *per se* having become evident. Thus, this science is rapidly emerging and relevant new research appearing frequently in new issues of related journals and other publications.

An extremely important, overarching issue in the finalization of the rule is the extent to which the existing science can and will be appropriately generalized. It is clear that much of the past research was not conducted to answer questions related to the specific issue of connectivity in the current context of a "significant nexus" analysis. In addition, the distribution of past

research, geographically and across wetland types, was influenced less by the need to fill gaps in the science that would ultimately be important in a regulatory context, than it was influenced by factors such as the coincidental proximity of universities and other adequately funded research entities to wetlands and wetland systems. Only very recently has research increasingly focused on key wetland landscapes for the explicit important purpose of seeking information related to specific questions of connectivity in recognition of the need for this kind of information to provide the foundation for assessment of significant nexus, jurisdiction, and conservation.

Nevertheless, the existing and growing body of science is demonstrating key generalities regarding the functions of wetlands and their connectivity with other waters, particularly downstream waters. These wetland functions and generalizations regarding connectivity are addressed in detail in the Report, the science appendix to the proposed rule, and emerging literature that currently appears in neither. While we recognize the tremendous variability in the level to which any particular wetland, or wetlands in the aggregate in some landscapes provide for the suite of functions that wetlands serve, essentially all wetlands provide functions which, if disrupted, have the potential to affect other waters as a result of their nexus with them. Of course, a key issue is the significance of that nexus. The level of significance is not only a science-based function of the size, density, and functional proximity and relationship of wetlands to downstream waters evaluated within the context of the appropriate ecological scale, but also a reflection of society's willingness to accept the level of risk associated with the impacts (e.g., increased flooding, decreased water quality, increased toxic algal blooms, degradation or loss of fish and wildlife habitats, etc.) that are observed as a consequence of cumulative wetland loss at local, regional, and national scales.

Thus, in reviewing the proposed rule and related scientific literature, and in developing our comments, we have tried to apply an approach similar to the "weight of evidence" approach described by Omernik (2004) in the context of defining ecoregions. This approach is a more qualitative approach as opposed to being "rule-based." We believe that a basis for its reasonableness in approaching the science-based issues at the center of this proposed rule is fundamentally related to the similarity between the two situations (i.e., ecoregion definition and assessment of significant nexus for "other waters") – a need for consistent decision-making and application of a national rule in the face of incomplete and imperfect information across the U.S. Nevertheless, although information may be incomplete and imperfect relative to evaluation of a specific situation, using the "weight of the evidence" approach to draw and appropriately apply information from wetlands in the same general region, in the landscape setting, and/or for wetlands in general, allows a reasonable *a priori* assessment by the agencies of whether or not the wetlands in a particular landscape or ecoregion are likely to have a significant nexus with downstream waters. We will expand upon this in more detail in the section on ecoregional analyses.

Some of Justice Kennedy's language regarding categorical and/or regional protection of wetlands seems to explicitly invite this approach. Furthermore, in their 9-0 *Riverside Bayview* decision, the Court explicitly recognized that while *"not every adjacent wetland is of great importance to the environment of adjoining bodies of water,"* "*if it is reasonable for the Corps to conclude that in the majority of cases adjacent wetlands have significant effects on water quality and the ecosystem, its definition [of adjacency] can stand."* We believe that this is a clear indication of the Court's willingness to accept the "weight of the evidence" approach and reasonable generalization of existing science.

As we have reviewed the proposed rule and the science related to the issue of whether the wetlands in particular landscapes, such as the Prairie Pothole Region, have a significant nexus to downstream waters, we have sought to apply the "weight of the evidence" approach to address the fundamental question of:

> "If all the similar wetlands in a particular region, in the aggregate, were to be filled and/or drained, based on the weight of the existing evidence and science, is it more likely that (1) there would be a significant impact, or (2) there would not be a significant impact on downstream waters?"

We encourage the agencies to take this approach to assessing which categories and subcategories of "other waters," in particular, should be determined to be jurisdictional by rule based on the weight of all the related scientific evidence.

b. Is it consistent with Justice Kennedy's language regarding the application of science to determining jurisdiction? Justice Kennedy's language places the science of connectivity between wetlands and downstream navigable waters (or other jurisdictional waters in the context of the proposed rule) front and center. He makes it clear that if there is a "significant nexus" between these waters, they should be considered jurisdictional to help fulfill the fundamental purpose of the Act. His apparent understanding that a *lack* of connectivity via surface waters can provide the basis for a significant nexus, particularly when viewed in the aggregate, in some cases (such as the prairie potholes), is insightful and demonstrates his acceptance and intent that science be the foundation for jurisdiction.

It is also useful to examine one of the primary examples he referenced in his opinion to gain insights into his view of the intent and purpose of the Act, and of his view of the end product of defining and applying CWA jurisdiction. Justice Kennedy states:

> *"Important public interests are served by the Clean Water Act in general and by the protection of wetlands in particular. To give just one example,* amici *here have noted that nutrient-rich runoff from the Mississippi River has created a hypoxic, or oxygen-depleted, "dead zone" in the Gulf of Mexico that at times approaches the size of Massachusetts and New Jersey* [cites omitted]. *Scientific evidence indicates that wetlands play a critical role*

> *in controlling and filtering runoff* [cites omitted]. *It is true, as the plurality indicates, that environmental concerns provide no reason to disregard limits in the statutory text, but in my view the plurality's opinion is not a correct reading of the text. The limits the plurality would impose, moreover, give insufficient deference to Congress' purposes in enacting the Clean Water Act and to the authority of the Executive to implement that statutory mandate."*

Justice Kennedy's choice of the Gulf of Mexico's perennial hypoxic zone is informative and important in that the development of this particular example of degradation of the Nation's waters could not have been prevented or ameliorated by applying jurisdiction to only navigable-in-fact waters, their tributaries, adjacent waters, and wetlands that occur in floodplains. Only through safeguarding the functions provided by the millions of wetland basins and tens of millions of acres of wetlands that are (or were) distributed across much 1.2 million square mile Mississippi River watershed could the situation of the Gulf of Mexico hypoxic zone have been potentially prevented or managed at a lesser scale. It is in part because significant nexuses existed between these now long-gone wetlands, in the aggregate, and downstream waters ultimately leading to the Mississippi River and the Gulf of Mexico, that the hypoxic zone is as expansive as it is today. This fact, in conjunction with Justice Kennedy's follow up language regarding "deference to Congress' purposes in enacting the Clean Water Act," seems a clear indication of the breadth of jurisdiction to which he opens the door, assuming that the weight of the scientific evidence for significant nexus exists.

Despite the expansive view he expressed regarding the purpose of the Act and choice of the hypoxic zone as an example of the kind of situation it was intended to prevent, Justice Kennedy's language in its totality places an outer limit on jurisdiction so that not every, tiny water body with an inconsequential connection to downstream waters could fall within the scope of the Act. There must be a "significant nexus" of wetlands and other waters, in the aggregate, with downstream navigable waters, recognizing that even wetlands lacking a surface connection can have the required significant nexus. Thus, his language provides the basis for placing wetland, hydrologic, and related sciences at the forefront of determining jurisdiction such that, as long as his conditions are met, jurisdiction can be applied in order to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," including that required to prevent the degradation of the Gulf of Mexico.

c. Will it promote increased clarity, certainty, and predictability? The language of the proposed rule contains many references to the agencies' desire to provide increased clarity, certainty, and predictability, perhaps best summarized by the statement, *"The agencies' goal is to promulgate a rule that is clear and understandable and protects the Nation's waters, supported by science and consistent with the law."* We couldn't agree more with the importance of each component of that well-articulated and appropriate goal.

The EPA published a list that demonstrated the wide diversity and large number of governmental entities, elected officials, trade organizations, and conservation organizations that are all on record expressing their desire for a new rule in recent years. The almost universally agreed-upon and principal desire was that a new rule should increase the degree of certainty regarding the scope of jurisdiction in a clear, understandable, and pragmatic fashion. It seems clear to us that the agencies have taken that to heart and have attempted to develop a proposed rule with those characteristics. Many have expressed concern about the draft rule as falling short of that goal, and while DU agrees that there are improvements that can be made to the proposed rule in some respects, we appreciate the agencies' efforts in formulating the draft and their expressed willingness to make changes in the final rule to better achieve its stated goals. We will offer specific comments for ways in which we believe clarity, certainty, and pragmatism can be significantly advanced. We encourage the agencies to continue to apply this criterion to the numerous individual decisions that will need to be made in the process of finalizing the rule, and to pay careful attention to the many requests for clarity that we know will be submitted during the comment period.

d. Is it scientifically and administratively efficient and pragmatic? At the intersection of our comments above with respect to "clarity, certainty, and predictability" and the encouragement to broadly apply a "weight of evidence" approach, is the issue of predictability. In the end, a rule will only be effective if it is not only clear, founded in science, and consistent with the existing judicial record, but it must also be realistic from the standpoint of what can be pragmatically accomplished, both administratively and scientifically.

Many of the strongest pieces of research that provide the strongest and most compelling evidence regarding significant connectivity took years to conduct. That is the nature of science. Most studies involved a relatively few wetlands, or were otherwise limited in their geographic scope while nevertheless providing some important, broadly applicable information, useful and applicable within the "weight of evidence" approach.

Against those scientific realities as a backdrop, the net result of the proposed rule is that it seems to place a heavy reliance on the "case-specific analyses" of "other waters." In the proposed rule's current form, it appears the vast majority of the surface area of the U.S. would fall within watersheds that would require case-specific analyses to determine jurisdiction for the multitude of wetlands occurring within these areas. Therefore, being aware of the staffing, budget, and other administrative constraints and realities that the agencies face today and anticipate for the foreseeable future, we must seriously question the pragmatism of some aspects of the proposed rule, particularly those related to "other waters." And in a related way, although science-based case-specific analyses may sound appealing in terms of their ability to be focused on specific wetlands, watersheds, and/or ecoregions, such science is both expensive and time-consuming, sometimes requiring years to conduct a scientifically sound and accurate analysis of a situation. We must again, therefore, question the practicality of a rule that would place an increasing

emphasis on requiring these kinds of costly, time-consuming analyses for a high proportion of the Nation's waters within a regulatory framework that desires certainty, predictability, and administrative efficiency and timeliness.

Thus, as the agencies evaluate comments and develop the final rule, we strongly encourage them to place greater weight on this criterion of administrative and scientific "pragmatism." Later in our comments we will offer suggestions, such as *a priori* analysis based on existing science and using a "weight of the evidence" approach of major categories of "other waters" and ecoregions, that we believe will be not only more pragmatic to apply and administer, but will also go a long way toward providing significantly increased clarity and certainty for all stakeholders.

e. Is it consistent with the agencies' public statements that the new rule would not be an expansion of jurisdiction relative to existing regulations, and that the agricultural and ranching sectors, in particular, would not be subject to increased permitting requirements? It seems clear from the content of the proposed rule, the issuance of the special "interpretive rule" addressing conservation practices, the fact sheets released by the agencies, and the public comments made by the EPA Administrator and other top officials of the EPA and Corps of Engineers, that the desire of both agencies and the intent of the proposed rule is to preserve and even strengthen the statutory exemptions for normal farming, ranching, and silvicultural practices. Public statements have been made to the effect of, "if you didn't need a permit for your farming activities before, you won't need one under the proposed rule." Nevertheless, despite the agencies' efforts, it is clear that much of the agricultural community remains concerned that the new rule does not increase their level of clarity and certainty, would expand jurisdiction compared to the existing regulations, and could burden them with new or additional permitting requirements.

Relative to agriculture and ranching, this situation indicates the need for at least two things in the final rule. First, there is apparently a need for increased clarity to alleviate the concerns of the agricultural and ranching communities that the rule represents an expansion of jurisdiction and associated regulatory burdens. Similarly, the clear meaning of the rule must also be apparent to the thousands of individuals who work within the regulating agencies. Many farmers and ranchers are concerned that if not stated with sufficient precision, they may be subjected to a wide variety of interpretations of the new rule across the many Corp of Engineers districts and EPA regions.

For example, the production of rice is critical to the future of migratory populations of North American waterfowl, and plays an important role in contributing habitat needed by many other species. Approximately 3 million acres of rice is planted annually, primarily in the Lower Mississippi Valley, Central Valley of California, and Gulf coastal prairie regions. In the latter two regions, waste rice provides over 40% of the nutritional requirements of wintering waterfowl populations (Petrie et al. 2014). Without these food resources, important waterfowl and other wildlife conservation objectives would be unattainable.

Statements have been made by representatives of the agencies that the activities and jurisdictional issues related to rice producers would be completely unaffected by the rule. Nevertheless, some specific language of the proposed rule causes some concern among rice producers that, regardless of intent, potential interpretation of the wording could potentially bring what are currently non-jurisdictional rice fields and related infrastructure under the new definition of "waters of the U.S." These language issues must be resolved so that it is clear that those producers would not be subject to new or additional permitting or other restrictions associated with jurisdiction as "waters of the U.S."

Therefore, in light of statements and commitments made by the agencies that the new rule would impose no new jurisdiction or permitting requirements that would affect the longstanding statutory exemptions related to normal farming, ranching, and silvicultural practices, a criterion for finalizing the rule must be that they uphold and are fully consistent with the agencies' related public statements.

II. Comments on the "Proposed Definition of 'Waters of the United States'"

The structure and order of our detailed comments will generally follow the preamble of the proposed rule beginning with its section III, "Proposed Definition of Waters of the United States" (FR 22198). We find the "Summary of Proposed Rule" to be an accurate reflection of the more comprehensive treatment of each individual element covered in the preamble, so we will focus our comments here on the proposed rule's individual elements.

You will note, however, that we do not offer detailed comments on every aspect of the proposed rule. Our comments will strive first and foremost to be science-based, and to provide objective analysis of the potential or likely outcomes of proposals contained within the draft rule. We will also focus our comments primarily on those aspects of the rule for which DU has relevant expertise, experience and/or perspectives. Thus, we pay special attention to the components of the proposed rule that deal with "other waters" given that a large percentage of the Nation's remaining wetlands fall within that broad category of waters (as defined in the proposed rule). We place significant focus on the wetlands of the northern Great Plains, where literally millions of small prairie potholes are a key ecological component of the most significant waterfowl breeding area on the continent. We are aware that other organizations will be focusing comments on other subcategories of wetlands classed as "other waters" and ecoregions in which they comprise a significant feature of the landscape. We encourage the agencies to carefully review the comments it receives regarding all of these wetland systems because we know that significant aspects of the science related to one subcategory of wetland or another will be broadly applicable to many wetlands currently lumped into the proposed "other waters" legal category.

A. Traditional Navigable Waters, Interstate Waters, and Territorial Seas

We agree that, in light of the language of the Act and related judicial findings, these categories of waters should continue to be the foundation for assessing CWA jurisdiction. It is appropriate that the fundamental question of "significant nexus" for other categories of waters be viewed through the lens of assessing their impact on these (a)(1) through (a)(3) waters.

We do not find it explicitly stated, but we must presume that "interstate waters" would also include "international waters" based on the same reasoning used to categorically include "interstate waters" in this category of being jurisdictional by rule. If that is not the case, we would recommend that "international waters" such as rivers, wetlands, and other water bodies that are on the Canadian or Mexican borders with the U.S. or flow across the border between nations, also be expressly designated as jurisdictional. The same scientific facts and legal foundation should provide the basis for extending CWA protections to these international waters, as well.

Emerging Technologies and Jurisdictional Waters: We note the agencies' expressed interest *"in identifying emerging technologies or other approaches that would save time and money and improve efficiency for regulators and the regulated community in determining which waters are subject to CWA jurisdiction."* Because traditional navigable waters, interstate waters, and the territorial seas ultimately provide the basis for designating by rule or assessing potential CWA jurisdiction for all other categories of waters, we strongly recommend that existing and readily available technology be used to map all (a)(1) through (a)(3) waters across the U.S. At the moment, it is extremely difficult if not impossible to find maps, even at the level of individual Corps districts, which clearly depict these waters. While there are limited maps available in some instances, and lists for some of these waters in some areas, there is by no means a cohesive, nationwide system of compiling and making this information available at this time. Some criteria for determining navigability, such as when *"a Federal court has determined that the water body is navigable-in-fact under Federal law,"* often involve protracted and complex court proceedings. These kinds of cases, in particular, often seem not to be transferred to readily available maps or other publicly available sources of information about waters that have been determined to be jurisdictional.

Therefore, a nationally coherent, readily available, searchable database and mapping system that depicts all the (a)(1) through (a)(3) waters could be one of the most important steps that could be taken to use technology to *"save time and money and improve efficiency for regulators and the regulated community."* Furthermore, in the event that certain components of the final rule generally conform to the proposed rule, such a geographic database should also include and depict all "other waters" that also have been determined to be jurisdictional by rule. For example, as the proposed rule stands, we would anticipate such maps and databases would include all tributaries, adjacent wetlands, and wetlands in floodplains. We understand that the satellite imagery and other technologies that would provide the basis for such maps are imperfect

and incomplete. However, those issues would be manageable in light of the tremendous benefits that such a geographic database would provide to regulators and the regulated community alike.

Finally, as additional waters are found to be jurisdictional (e.g., via court cases regarding navigability-in-fact, findings of significant nexus in the case of individual or aggregated "other waters," etc.), those findings and decisions should be incorporated into the database.

Although not an "emerging" technology, existing technology related to mapping and geographic databases could and should be used to develop this valuable tool. It could be among the most important and achievable tools for streamlining information dissemination and speeding administrative processes, thereby providing significant and tangible benefits to both regulators and the regulated community.

B. Impoundments

We agree with and support the relatively minor, clarifying changes made with respect to the issue of whether or not impoundments fall within the definition of "waters of the U.S."

C. Tributaries

We agree with the agencies' statement that the literature "clearly demonstrates that streams, regardless of their size or how frequently they flow, strongly influence how downstream waters function." The preamble provides an excellent summary of the relationship between the synthesis of the science related to tributaries and the purposes of the Act, articulated as follows: *"One of the primary purposes and functions of the CWA is to prevent the discharge of petroleum wastes and other chemical wastes, biological and medical wastes, sediments, nutrients and all other forms of pollutants into the "waters of the United States," because such pollutants endanger the Nation's public health, drinking water supplies, shellfish, fin fish, recreation areas, etc. Because the entire tributary system of the traditional navigable, interstate waters or the territorial seas is interconnected, pollutants that are dumped into any part of the tributary system eventually are washed downstream to traditional navigable waters, interstate waters, or the territorial seas where those pollutants endanger public health and the environment."* Therefore, based on the science thoroughly reviewed in the draft Connectivity Report and in Appendix A, Scientific Evidence (henceforth, "Appendix"), the finding that all tributaries, as a class, have a significant nexus with and impact upon the physical, chemical and biological integrity of downstream (a)(1) through (a)(3) waters and are therefore jurisdictional by rule, is scientifically appropriate and sound.

However, related to the definition of tributaries, we agree with the recommendation contained in the EPA's Science Advisory Board's (SAB) letter to the Administrator (9/30/14) regarding the adequacy of the scientific and technical basis for the proposed rule as it relates to the definition of tributaries. The SAB's draft report "advises the EPA to reconsider the definition of tributaries because not all tributaries have ordinary high water marks [OHWM]," and that "an OHWM may

be absent in ephemeral streams within arid and semi-arid environments or low gradient landscapes where the flow of water is unlikely to cause an OHWM." Noting the difficulty that has been experienced in some areas with application of the OHWM criterion, we agree with the SAB's recommendation that the wording of the definition of tributary be changed to "bed, bank, and other evidence of flow." In other respects, we generally support the definition of tributaries and find it to be in keeping with the related science.

In cases in which wetlands serve as water sources at the upper limit of the tributary system, or serve to connect two waters from among the other classes of wetlands considered jurisdictional by rule, we agree with the proposed approach of considering such wetlands as a "tributary" for purposes related to jurisdiction. The alternative approach of considering them "adjacent wetlands" would appear to achieve the same end result, but the proposed approach seems more efficient, particularly when considering the issue of classification of these waters for purposes of potential future database management.

Treatment of "Ditches" Within the Tributary Class: In general, we find the EPA's treatment of ditches scientifically sound and acceptable. For example, it is clear that a significant nexus to other jurisdictional waters would be provided by the four primary types of ditches that would remain jurisdictional by rule:

- natural streams that have been altered (e.g., channelized, straightened or relocated);
- ditches that have been excavated in "waters of the United States," including jurisdictional wetlands;
- ditches that have perennial flow; and,
- ditches that connect two or more "waters of the United States."

We accept the proposed definition and treatment of "upland ditches" as non-jurisdictional. This will help provide clarity and certainty to farmers, ranchers, and other landowners. We also agree that it is helpful to make it explicitly clear that, as the proposed rule states, excluded ditches cannot be "recaptured" under other provisions of the rule. Again in the interest of providing as much clarity and certainty as possible, we support the preamble's explicit inclusion of statements such as, *"ephemeral features located on agricultural lands that do not possess a bed and bank are not tributaries", "such farm field features are not tributaries even though they may contribute flow during some rain events or snowmelt*", and *"of importance with respect to tributaries is the exclusion of gullies, rills, non-wetland swales, and certain ditches.*"

We are aware that the issues of ditches, swales, gullies, and rills have caused concern among the agricultural sector. For example, the rice industry has expressed the concern that the changes made to the treatment of ditches and irrigation canals could bring these key on-farm infrastructural components of rice production within the new definition of "waters of the U.S."

Thus, the longstanding exemption for the agricultural drainage ditches and irrigation canals (enshrined within past regulatory practices, if not rule) needs to be made perfectly clear by the language of the final rule.

We encourage the agencies to consider any revisions to the definitions and language of the rule and preamble that help ensure its intentions with respect to these types of waters and artificial water conveyances, and the meaning and interpretation of the rule, are clear and precise to the public and to their own regulators.

D. Adjacent Waters

Jurisdiction by rule for adjacent wetlands and other waters: We agree with the agencies' finding, based on the weight of the scientific evidence presented in the Report and the Appendix, that adjacent waters such as riparian and floodplain waters *"significantly affect the chemical, physical, and biological integrity of (a)(1) through (a)(3) waters"* due to the existence of a significant nexus. The preamble of the proposed rule states the science-based conclusion that *"all adjacent waters should be jurisdictional by rule because the discharge of many pollutants (such as nutrients, petroleum wastes and other toxic pollutants) into adjacent waters often flow into and thereby pollute the traditional navigable waters, interstate waters, and the territorial seas."*

This conclusion is also consistent with the current legal framework and reflects Justice Kennedy's statement that *"the agencies' existing regulation "rests upon a reasonable inference of ecologic interconnection, and the assertion of jurisdiction for those wetlands is sustainable under the Act by showing adjacency alone."* And again, the Court in their *Riverside Bayview* decision stated that while *"not every adjacent wetland is of great importance to the environment of adjoining bodies of water,"* "*if it is reasonable for the Corps to conclude that in the majority of cases adjacent wetlands have significant effects on water quality and the ecosystem, its definition [of adjacency] can stand."* Thus, not only do these examples show that the Supreme Court supports a "weight of the evidence" approach to using and applying the underlying science, in each of these cases they do so in the context of adjacent waters. So, the agencies are on firm scientific and legal ground with respect to their categorical inclusion of adjacent waters as jurisdictional "waters of the U.S."

Definition of "adjacent" should incorporate the concept of "functional adjacency": However, we cannot agree with every aspect of the proposed rule as it treats "adjacent waters" because some appear to be inconsistent with existing science. The primary underlying concern we have, and which affects a number of individual aspects of the draft rule, is that it seems to consider adjacency almost wholly within the framework of physical proximity to the nearest jurisdictional water. This narrow view of adjacency may be administratively attractive in light of its simplicity, however it diverges too significantly from the underlying science to be acceptable in a rule that purports to be guided by the science.

We strongly encourage that, in light of the abundant related science, adjacency be viewed from the context of "functional adjacency." We were glad to see that the SAB in their September 30 letter to the Administrator articulated the same concern, stating that *"importantly, the available science supports defining adjacency or determination of adjacency on the basis of functional relationships, not on how close an adjacent water is to a navigable water. The Board also notes that local shallow subsurface water sources and regional groundwater sources* [emphasis ours] *can strongly affect connectivity. Thus, the Board advises the EPA that adjacent waters and wetlands should not be defined solely on the basis of geographical proximity or distance to jurisdictional waters."*

We advanced the concept of "functional adjacency" in some detail in DU's comments responding to the Advance Notice of Proposed Rulemaking in 2003 (Docket ID No. OW-2002-0050). The central issue now would be the recognition that adjacency, from the standpoint of the physical, chemical, and biological integrity, should not be viewed as being simply limited by physical proximity, but rather in terms of functional linkages. Thus, *functionally* "adjacent wetlands" can be physically distant from navigable waters (just as a jurisdictional surface tributary may be located many miles upstream of a navigable water), yet its direct functional linkage to (i.e., its significant nexus with) the waters of the U.S. for purposes of maintaining the integrity of the downstream waters would remain the central element of the jurisdictional decision.

For example, simulation of regional groundwater flow systems in Stutsman and Kidder counties, North Dakota, portrayed lateral movement of groundwater flow over 16 mi that discharge into Pipestem Creek (Winter and Carr 1980). As another example, Novacek (1989) stated that the sandhills and associated wetlands in Nebraska (including wet meadows) are important to water table and aquifer recharge, with the region containing five principal drainage basins that all ultimately empty into the Platte and Missouri rivers, thus creating a significant nexus between wetlands and navigable waters, even though the wetlands are not in physical proximity to the jurisdictional waters. This example demonstrates that this issue is not restricted to adjacent waters, but also carries over into the consideration of "other waters" and, in fact, is important in illustrating the scientific fact that "adjacent waters" and "geographically isolated" waters represent a continuum as opposed to a simple dichotomy.

A particularly interesting and relevant example of the significant nexus between physically non-proximate and traditional navigable waters is Nebraska's Platte River and its tributaries in Colorado (South Platte River) and Wyoming (North Platte), an area covering 23,000 sq. mi. The Platte River provides important habitat for four federally listed threatened and endangered species. Large amounts of surface water have been diverted from this river for irrigation and other purposes all along the system, and the effects of this diversion on the river have been significant enough to contribute to the Platte River in Nebraska occasionally running dry (e.g., in 2003).

As a consequence of the over-appropriation of water in the region, and the acceptance as fact that wetlands and other geographically isolated, non-adjacent waters in this region provide groundwater recharge that in turn provides base flow to these navigable rivers, artificial groundwater recharge sites and wetlands have long been used as a tool for replenishing river water (Warner et al. 1986; Watt 2003). Complex hydrologic models have been developed so that landowners and regulators can closely estimate how much water, and in what time frame, will be "delivered" to the river from a particular wetland or recharge site (Warner et al. 1986). Through contractual agreements supported by Colorado water law, and under the auspices of the interstate federal "Platte River Recovery Implementation Program Cooperative Agreement" signed in 2006, the water in this interlinked wetland/lake/groundwater/Platte river system is commercially exchanged on the basis of this well-established and scientifically demonstrated significant nexus. Notably, recharge wetlands and other sites are typically located a mile or more away from the river and would not be considered "adjacent" merely by virtue of proximity as proposed in the draft rule, as opposed to applying a functional perspective on adjacency. Some sites are much farther away. For example, the Fort Morgan recharge sites (Warner et al. 1986) and Brush Prairie wetlands/ponds are located 5-7 miles from the South Platte, and are credited with the capacity to recharge 13,000 acre-feet of water annually to the river. It is estimated that it takes five years for that water to move from the Brush Prairie wetlands to the South Platte River. Another project, the Little Bijou Reservoir, involves a distance of eight miles, requiring about 12 years for the water to move from the water body to the river. Regardless of the distance and time involved, however, this water is bought and sold and constitutes a significant component of the fiscal and water economy of the region, all based upon the accepted certainty of the functional connectivity and significant nexus that exists between the Platte River and waters that do not currently fit within the proposed definitions of adjacent merely because of the distance involved.

In addition, there are many examples in which a significant nexus is demonstrated between adjacent or "other waters" and jurisdictional waters, and is created via regional or deeper groundwater sources, not simply shallow subsurface water sources. For example, Tiner et al. (2002) indicated that most sandhill wetlands are interconnected with the local groundwater and the agriculturally important Ogallala, or High Plains, aquifer. Furthermore, Weeks and Gutentag (1984) stated that groundwater from this aquifer discharges naturally into flowing streams and springs, and that the aquifer and valley-fill deposits and associated streams comprise a stream-aquifer system that links the High Plains aquifer to surface tributaries of the Platte, Republican and Arkansas rivers. We will discuss this in more detail in our treatment of several regional wetland systems later in our comments.

The available science clearly shows then that, in many cases, the subsurface connections emphasized in the proposed rule's rationale for protecting physically proximate adjacent wetlands extends far beyond the short distance that the current definitions of "adjacent" and "neighboring" seem to imply, and that significant nexuses also exist via deeper groundwater connections in many cases. This not only underscores the need to look beyond distance in

assessing adjacency from the scientifically more meaningful perspective of functional adjacency, but it also raises a temporal component to the question of adjacency, significant nexus, and the purpose of the Act. There is no question that physical proximity is an important component of adjacency, but distance should not override reasonable evidence of the functional connections that provide for a significant nexus. The fact that it may take longer for water to move through subsurface avenues from wetlands within a region to jurisdictional waters should not in itself disqualify these wetlands from being jurisdictional by rule as being adjacent. It should not matter whether or not an impairment to the physical, chemical or biological integrity of jurisdictional water would occur in a month, year, or even 10 or 100 years. If the significant nexus is known or can be reasonably inferred to exist based on available science, the integrity of the future downstream waters, not to mention the health and welfare of future citizens, should be protected now.

Thus, we believe that demonstrated linkages between wetlands, groundwater and navigable waters within a broad variety of wetland categories and across a diversity of landscapes and regions, indicate that adjacency and significant nexus should be interpreted from a functional perspective if the purposes of the Act and the welfare of our citizens are to be benefited. From that perspective, we strongly support the SAB's recommendation that the definitions associated with adjacent waters be revised to recognize the scientifically demonstrated functional relationships that provide for a significant nexus.

In that light, we are concerned about the agencies' statement that, *"a determination of adjacency based on shallow subsurface or confined surface hydrologic connection outside the riparian area or floodplain requires clear documentation."* For some areas, science exists to support the contention that these connections exist across broad areas including many wetlands. But, depending upon the scale of a jurisdictional decision, the information might not be considered by some regulators to rise to the level of "clear documentation." Furthermore, and again depending upon the application of such a direction for "clear documentation," this requirement may go beyond Justice Kennedy's expectation that the regulation *"rests upon a* <u>*reasonable inference*</u> [emphasis ours] *of ecologic interconnection."*

At the same time, we recognize that there are some ecoregions or landscapes in which the soils, geology, and other characteristics would lead to the reasonable inference that even functional adjacency would not extend very far from the jurisdictional water. This variability in the relationship between distance and the reasonable inference of a significant nexus provides another indication of the benefits of doing *a priori* significant nexus assessments of at least some of the Nation's key ecoregions. These *a priori* analyses would allow identification, by rule, of those ecoregions for which a presumption of significant nexus between its wetlands, in the aggregate, and other jurisdictional waters would be reasonable, and thereby in turn provide a greater degree of clarity, certainty, and predictability regarding CWA jurisdiction within those

landscapes. We will address this suggestion in more detail in our treatment of "other waters" to follow.

Definitions of "neighboring," "riparian," and "floodplain": We agree with the general goal of categorically incorporating riparian and floodplain waters as jurisdictional "adjacent waters" within the definition of "neighboring." The science is strong in terms of indicating that riparian waters almost universally have a significant hydrologic connection and nexus with the jurisdictional waters that are usually adjacent, in the sense of both physical and functional proximity. In addition, we find the definition of "riparian area" to be simple, direct, and clearly science-based. We would expect relatively little debate over "riparian areas" while recognizing the reality that the field delineation of the borders of such areas will inevitably involve the application of expert judgment and some degree of variability.

The preamble makes the statement that, *"Waters, including wetlands, determined to have a shallow subsurface hydrologic connection or confined surface hydrologic connection to an (a)(1) through (a)(5) water would also be 'waters of the United States' by rule as adjacent waters falling within the definition of 'neighboring.'"* In addition, it states that, *"For waters outside of the riparian area or floodplain, confined surface hydrologic connections (as described above) are the only types of surface hydrologic connections that satisfy the requirements for adjacency. Waters outside of the riparian area or floodplain that lack a shallow subsurface hydrologic connection or a confined surface hydrologic connection would be analyzed as "other waters" under paragraph (a)(7) of the proposed rule."*

This language raises the question of whether it is the intention of the agencies to consider under "neighboring," wetlands and waters such as those mentioned above in the discussion related to the Platte River, or freshwater wetlands along the Gulf Coast of Texas and Louisiana that have shallow subsurface connections to waters like the Gulf and that can extend many miles inland. However, other language in the preamble seems to indicate that even though such wetlands fit within the definition of "neighboring," they would nevertheless be excluded from the definition of "adjacent" due solely, in spite of the functional connection, to their distance from the jurisdictional water. For example, it states: *"In circumstances where a particular water body is outside of the floodplain and riparian area of a tributary, but is connected by a shallow subsurface hydrologic connection or confined surface hydrologic connection with such tributary, the agencies will also assess the distance between the water body and tributary in determining whether or not the water body is adjacent. 'Adjacent' as defined in the agencies' regulations has always included an element of reasonable proximity."*

Thus, these relationships and definitions require clarification given some apparent inconsistencies among them and conflicts with some important aspects of the science that supports the existence of a significant nexus. Again, *a priori* ecoregional assessments could greatly increase clarity and certainty, as well as greatly streamlining administration of the Act because wetlands in some landscapes (including but not limited to the above-cited Gulf Coast,

Platte River and tributaries region, and similar circumstances) that are situated far beyond the floodplain or riparian area could be determined to be "neighboring" by virtue of functional adjacency and the significant nexus via subsurface connectivity. They could thus be designated as jurisdictional by rule, therefore obviating the need for many time-consuming and costly case-specific analyses. The available and emerging science in many systems strongly supports such an approach.

With respect to "floodplains," we find the definition scientifically reasonable but perhaps less clear than it could or should be. We note the reference to *"formed by sediment deposition from such water under present climatic conditions…."* We must assume that "climatic" in this definition was carefully selected on the basis of its science-based meaning, and that "current land use conditions" would not be used synonymously. Recent changes to the landscape, including levee construction and extensive land use change, have in many cases changed the height and frequency of flooding in and around many historic floodplains.

We further believe that while the seemingly heavy reliance on "best professional judgment" might lead to reasonable determinations in most cases, the situation for determination of the floodplain as described in the preamble leaves the regulated community very much in the dark. The definition of floodplain, or at least the intended administrative treatment of what constitutes a floodplain, requires additional treatment to provide greater clarity and certainty to the public, and better guidance to the many regulatory staff that the agencies have distributed across the country and who will be applying the rule to actual circumstances in the field.

We note reference to *"10 to 20 year flood interval zone"* in one spot, and we would consider that relatively high frequency flood zone as being too narrow to reflect the actual floodplain in many if not most circumstances. In light of the definition's use of the phrase, *"is inundated during periods of moderate to high flows,"* we would expect something more on the order of 100 years to be a more reasonable approximation of "high flows," especially given the increasing frequency of large floods in many areas and the increasing costs to society that are incurred in conjunction with these floods.

However, we also recognize that maps of flood zones do not exist for many, if not most, areas of the country outside urban and suburban areas. That being the case, we would suggest considering the use of more objective, science-based surrogate criteria such as soil classifications. The soils associated with the floodplain would certainly not be restricted to hydric soils, but given the definition's reference to the central element of *"sediment deposition,"* we suggest there are elements of soil and/or geologic characterizations that could serve as a surrogate for helping to narrow the understanding and/or definition of floodplains for purposes of this rule.

Related Agricultural Issues: The above comments notwithstanding, it should be made more clear that, as a result of the longstanding exclusions of rice fields from jurisdiction, the interpretation

of adjacency will not result in the extension of jurisdiction to rice fields. While we sometimes refer to rice fields as "surrogate wetlands" in recognition of their wetland-related ecological functions, ranging from habitat for waterfowl and other migratory birds to improvements of water quality, that they often provide, rice fields are nevertheless not "wetlands" and therefore should not be regulated as such. Although a science-based case for adjacency could be argued in some cases, the longstanding exemption of rice fields must be clearly preserved by the final language of the rule.

In the same vein, the exclusion of "artificial lakes or ponds created by excavating and/or diking dry land and used *exclusively* [emphasis ours] for such purposes as stock watering, irrigation, settling basins, or rice growing," should be modified. Many of the artificial reservoirs used for rice agriculture, for instance, serve additional, ancillary purposes such as waterfowl hunting. These water bodies, whose primary use is clearly to provide agricultural irrigation water and which have not previously been regulated, should not now be brought under the jurisdiction of the new rule because there are often secondary uses of that water. We leave it to the agencies to work with the agricultural sector to develop suitable wording to address this concern.

E. "Other Waters"

The proposed rule classifies all waters falling outside the categories discussed above as "other waters." By virtue of being defined at a national level, "other waters" includes wetland types as diverse as the prairie potholes of the Northern Great Plains, Gulf Coast freshwater prairie wetlands, playas, and alvar wetlands of the Great Lakes region, among many others. As currently defined, "other waters" includes a significant percentage of the Nation's remaining wetlands across the country as a whole. In some areas, such as the Prairie Pothole Region, they constitute the vast majority of the waters of the region and comprise a dominant component of the landscape.

We cannot agree with the proposed jurisdictional treatment in the draft rule of "other waters" in light of the strength, abundance, and diversity of the available and rapidly growing scientific literature that sheds light on the significant nexuses that exist between many of these wetland categories and "waters of the U.S.", or given the language and rationale contained in Justice Kennedy's ruling viewed in concert with other judicial decisions. We believe the regulatory presumption that all "other waters," across the entire U.S., lack a significant nexus with traditionally navigable waters, interstate waters, or the territorial seas, and therefore have no impact on the integrity of these waters, is an inappropriate presumption in the face of the abundant science available. To make this presumption is to willfully exclude waters that science clearly demonstrates have a significant impact upon downstream waters and therefore will result in degradation of the chemical, physical and biological integrity of the Nation's waters, and expressly run counter to the fundamental purpose of the Act.

While we certainly understand that not all "other waters" possess the significant nexus required by the judicial rulings, our reading of the science indicates that more likely do have such nexuses than do not. We strongly suggest that during the finalization of the rule, the agencies evaluate these "other waters" on an ecoregional basis and, based on the available science and judgments of wetland and hydrologic experts, determine for which regions of the country the wetlands that exist therein should be designated as jurisdictional by rule. The special SAB panel on connectivity appears to agree that the available science supports such an approach, and the SAB's September 30 letter explicitly states that, *"There is also adequate scientific evidence to support a determination that certain subcategories and types of "other waters" in particular regions of the United States (e.g., Carolina and Delmarva Bays, Texas coastal prairie wetlands, prairie potholes, pocosins, western vernal pools) are similarly situated (i.e., they have a similar influence on the physical, biological, and chemical integrity of downstream waters and are similarly situated on the landscape) and thus could be considered waters of the United States. Furthermore, as the science continues to develop, other sets of wetlands may be identified as "similarly situated."* Our comments will examine the circumstances and science related to a few such regions, including related science from other regions that we believe is broadly applicable to the regions in question, putting particular emphasis on the Prairie Pothole Region of the northern Great Plains.

First, however, we will provide some comments and evaluation of the other critical components of designating "other waters" as having a significant chemical, physical, or biological relationship to downstream navigable waters.

Relationship to Downstream Waters: The draft rule currently proposes that the required significant nexus of an "other water" (assume that our use of this phrase considers that to also include "in the aggregate" and in most cases not simply a single wetland) must be demonstrated with and (a)(1) through (a)(3) water, i.e., a traditionally navigable water, interstate water, or territorial sea. However, we believe that the science supports our recommendation that this should include (a)(4) and (a)(5) waters (i.e., tributaries and impoundments of such waters), as well. Under the proposed rule, and as strongly supported by the available science, the entire tributary system is considered to be a "water of the U.S." Thus, it is not clear to us, and seems to defy a science-based rationale, as to why a significant nexus between "other waters" and a tributary that is a "water of the U.S." by rule due to its direct impact on a traditionally navigable water, is any less significant than that of an "other water" that is demonstrated to have a significant nexus directly with the navigable water. If such a significant nexus exists, whether it is with the traditionally navigable water or with its tributary, the net effect is the same in both cases – the significant nexus affects the integrity of the navigable water.

We therefore recommend that when case-specific analyses of "other waters" are conducted, the required significant nexus should be able to be applied to any categorically designated "water of the U.S." This would include not only (a)(1) through (a)(3) waters, but also include at least

(a)(4) and (a)(5) waters. As the situation with regard to waters that will be "waters of the U.S." by virtue of their adjacency is further clarified, the final class of (a)(6) waters should likely also be included as a potential avenue of demonstrating significant nexus.

Finally, given the pivotal importance of the classes of waters that will ultimately be required to be used to evaluate significant nexus, this situation further underscores the importance and necessity of having a comprehensive, standardized, and publicly available database that allows the regulated community to determine the location of the nearest such water. The creation of such databases and/or maps would significantly increase the ability of the regulated community and regulators to first determine if a permit is necessary, and then to work through the permitting process in a timely fashion. These tools would significantly increase the efficiency of the entire process of administering and complying with the Act.

Application of the "significant nexus" test: In light of Justice Kennedy's opinion and other related judicial decisions, we understand and acknowledge the requirement that only those waters that either alone or in the aggregate have a significant relationship with downstream navigable waters can be considered to be "waters of the U.S." and therefore be included within the jurisdiction of the CWA. Thus, we understand that waters not falling within the (a)(1) through (a)(6) categories will, at some point or another, need to be subjected to a case-specific significant nexus analysis.

However, one of the most important recommendations contained within these comments, to which we have alluded previously, is that *a priori* case-specific analyses should be conducted by the agencies for major subcategories of "other waters" as a part of finalizing the rule. Then, in cases where a significant nexus is either demonstrated or found to be a reasonable presumption based on the weight of the scientific evidence, the wetlands and other waters within these landscapes (e.g., ecoregions), would be determined to be jurisdictional by rule. Because of (1) the work that has already been done with respect to compiling a massive amount of the literature in conjunction with the drafting of the Connectivity Report, (2) the multiple levels of reviews to which the Report has been subjected, (3) the additional science that has been contributed by the special SAB panelists and the public during the review periods, (4) the science and analyses that will be provided to the agencies as a part of this comment period on the proposed rule, and (5) the increased attention being paid to the related emerging literature, the agencies are uniquely situated to move ahead right now, as a part of finalizing this rule, with these significant nexus analyses as a part of the rulemaking process. Such an approach offers a number of advantages and we believe contributes significantly to helping advance several of key objectives articulated by the agencies:

- By conducting these analyses of "other waters" that exist across broad landscapes, the designation of these waters as "waters of the U.S." by rule, where supported by the science, would provide much greater clarity and certainty for all landowners and regulators within those regions.

- Those regions for which a finding of significant nexus was warranted and its waters declared jurisdictional by rule would not have to be subjected to future case-specific analyses, thereby reducing the future administrative burdens associated with the rule. The reliance on time and resource-intensive, case-specific analyses could therefore be significantly reduced.
- The description of these regional significant nexus analyses and the associated findings would provide a tangible demonstration of the agencies' view of how these analyses should be conducted, and the sufficiency of science required to support a finding of significant nexus. They would therefore serve as model for the agencies' districts and regions, for the regulated community, and for scientists interested in conducting the research necessary to provide information key to future analyses and/or re-analyses.
- This approach acknowledges the diversity among categories of "other waters" across the U.S., and the fact that the body of science that currently exists clearly supports findings of significant nexus in some regions, but may not currently support such findings in other regions.
- The nature of science is that it builds upon itself over time, and this approach would begin the process of building a science-based "case law," so to speak, relative to the science and practice of assessing significant nexus as it relates to "waters of the U.S." Determinations of significant nexus could be documented and accumulated within a database and on maps that would significantly contribute to the efficiency of CWA administration and compliance, and increase clarity and certainty across the nation over time.

Given the breadth and depth of the science and scientific expertise currently at the agencies' disposal with respect to this issue, and the significant degree to which it would benefit several key objectives of the agencies as well as desires and concerns of the public, we therefore strongly encourage the agencies to conduct significant nexus analyses across key landscapes for the purposes of identifying those landscapes whose "other waters" should be designated as "waters of the U.S." by rule based on the existing science. We note and acknowledge, however, that such analyses cannot and will not assert jurisdiction as broadly as do the existing regulations. Nevertheless, this would represent a significant step in providing CWA protections to those waters that meet the scientific and legal thresholds required by recent judicial decisions.

In regard to all significant nexus analyses, conducted either *a priori* or after finalization of the rule, we strongly agree with the SAB's statement in their letter: *"The Board notes, however, that the science does not support excluding groups of "other waters" or subcategories thereof."* In other words, if the science currently available is not considered in certain cases to be sufficient to support a finding of a significant nexus at this time, it does not mean that such a nexus does not exist. Future science could emerge that could clearly demonstrate such a nexus. Thus, the lack of a significant nexus finding should not be the basis for placing such waters into the category of

being permanently excluded from jurisdiction. However, for operational purposes, they would clearly remain non-jurisdictional unless a significant nexus finding was warranted by future analyses with additional scientific support.

Definition of "Significant Nexus": We agree that in light of Justice Kennedy's opinion, there is a need to define the phrase, "significant nexus," to the extent possible. We re-iterate the concern we raised in our July 20, 2011 comments on the previously proposed (and subsequently withdrawn) revised guidance (Docket ID No. EPA-HQ-OW 2011-0409) about the differences in the language of science and the law, and the very divergent perspectives that can arise over terms such as "significant," "speculative," and "could," among others. We are glad to see this issue of the language of science and the law explicitly raised in Appendix B, Legal Analysis (FR 22262). It will be important to keep this in mind as definitions and the remainder of the important substance of the rule is finalized to address the kinds of issues that we raise in our comments.

With respect to the specific definition of "significant nexus," we note and appreciate the legal thinking behind the agencies' close adherence to Justice Kennedy's language. However, it must be understood that his language on a fundamentally scientific question is being offered from within a legal context and by a justice, not a scientist. We have no issue with the definition's inclusion or reference to Kennedy's key language, but we recommend that the final rule go further in terms of explaining with more clarity how his language should be used in the science-based context of the analyses of connectivity that will be conducted for "other waters." Furthermore, we refer again to the fact that his opinion contains additional language (see quotes cited previously herein) that can and should inform the translation of his efforts to describe his legal perspective on a scientific topic into a more meaningful, science-based final rule for the scientists, managers, and others who will be charged with assessing whether or not a "significant nexus" exists.

The SAB September 30 letter to the EPA recommended that *"the EPA clarify in its general communications and in the preamble to the final rule that "significant nexus" is a legal term, not a scientific term."* We agree with this statement and recommendation.

Looking ahead, it is perhaps here that the agencies could more thoroughly explain how a "weight of the evidence" approach, for example, could or would be used in the context of significant nexus analyses. The definition (and/or related preamble language) could provide even more guidance with greater clarity regarding to what extent various components of the science related to wetland functions, such as water storage, nutrient transformation, and maintenance of base flows, can be generalized and reasonably applied to analyses of ecoregions and/or watersheds outside the one in which a particular piece of research was conducted, as Justice Kennedy indicated was acceptable in at least some contexts. The agencies should build upon the definition of "significant nexus" that is currently in the proposed rule so that it not only conveys the legal perspective on the term, but also provides some additional guidance with respect to the science-based analyses that will be required in order to satisfy the legal issues.

We note many positive aspects of the preamble language regarding the types of hydrologic, chemical, physical, and biological connectivity that are relevant to a significant nexus determination. We especially support the comments regarding application of regional and national studies to waters occurring elsewhere, where appropriate. This is important given the rapidly emerging state of the science of connectivity.

Some of our concerns stem in part from two seemingly conflicting messages in the proposed rule regarding the agencies' intent with respect to these analyses and the use of related science. On the one hand, the explanatory language seems to offer what is scientifically sound, helpful guidance with respect to the analyses of "other waters" for significant nexus. However, on the other hand, there are broad geographic swaths of subcategories of "other waters" that, at least in the current form of the proposed rule, would not be jurisdictional by rule. These would therefore be required to be subjected to case-specific significant nexus determinations in spite of the seemingly strong, broadly based scientific information that indicates that a significant nexus for these waters clearly exists, including subcategories of "other waters" which the EPA's SAB and special panel of experts on connectivity agree possess, in the aggregate, the required significant nexus. Thus, this situation offers additional rationale for proceeding with as many *a priori* significant nexus determinations of ecoregions, watersheds, or other suitable landscapes as is reasonable based on the available science, and designating jurisdictional by rule those waters that satisfy the agencies' significant nexus evaluation.

Regarding the question of whether or not a nexus is "significant," the agencies should consider the range of pollutants (or fill) that could be deposited in a non-jurisdictional wetland and their potential impacts on the integrity of downstream waters, as well as health and human welfare. For example, deposition of soil into a single isolated wetland, such as one that might be located miles away from the South Platte River as described earlier, might be deemed to have an "insubstantial" impact on the navigable waters. Infiltration would be impacted and a decrease in the base flow would result, for example. If there were no other wetlands suitable for contributing to an aggregate analysis, this could be a situation in which the nexus was considered insubstantial. However, if instead of soil a water soluble toxic chemical were to be deposited in that same wetland, in a few years the water carrying the compound would have moved through the groundwater and be discharged into the river, ultimately causing serious degradation of the chemical and biological integrity of a navigable "water of the U.S." This is but one illustration of the kinds of possibilities that will inevitably be encountered, and therefore should be considered when evaluating the "significance" of a nexus.

An actual example can be used to even better illustrate that point. The ongoing events involving the spill of an estimated 5,000-7,000 barrels of crude oil spill that occurred in the small town of Mayflower, Arkansas in March 2013 demonstrate this kind of scenario, and the associated potential legal ramifications of failing to identify the existence of a significant nexus and designating jurisdiction when such a nexus indeed exists. Some of the crude oil that spilled as a

result of a ruptured Exxon pipeline flowed into wetlands and inlets adjoining Lake Conway, a popular fishing and recreational lake surrounded by homes and cottages. Some media reports (http://arkansasnews.com/news/arkansas/judge-won-t-toss-joint-state-federal-lawsuit-over-mayflower-oil-spill) state that Exxon's defense includes the assertion that the State Attorney General failed to show that "rupture of the Pegasus pipeline polluted navigable waters." Thus, at least a portion of the company's defense regarding their legal responsibility for damages to the integrity of the associated water bodies apparently hinges on whether or not the waters were jurisdictional, in spite of the observed connections and impacts. This is just one example of the potential consequences stemming from the interpretation of "significant" and the results of future significant nexus analyses.

Interpretation and Application of "Similarly Situated" to Significant Nexus Analyses: Although we strongly agree with and support evaluation of wetlands and other waters in the aggregate when conducting most case-specific analyses, we are concerned about the landscape scale and type of aggregation proposed and described in the preamble. First, with respect to "similarly situated," we recognize the importance and benefits of hewing closely to Justice Kennedy's language, but we again caution that in this case his somewhat casual use of that phrase in the context of a Supreme Court opinion may be being given unintended weight in the context of developing the science-based processes that will be needed to administer a new rule.

For example, the preamble states that, *"other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a 'water of the United States' so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (a)(3). This combination of functionality and proximity to each other or to a "water of the United States" meets the standard provided by Justice Kennedy. Examining both functionality and proximity also limits the "other waters" that can be aggregated for purposes of determining jurisdiction."* We suggest that Justice Kennedy, in the absence of additional clarification, more likely simply intended the phrase to mean something along the lines of "located in the same region," as opposed to having thought about the variety of functions that wetlands provide, and the variability among individual wetlands with respect to those functions that the proposed rule appears to seek to address. It seems to us, looking at Justice Kennedy's opinion more holistically, it is more likely the simplest interpretation is the most likely, i.e., that he simply meant "located in the same region" (leaving it to the agencies to define the appropriate science-based scale for "region").

Most wetlands in an appropriately sized and delimited "region" will generally perform many of the same functions to one level or another. We understand that lentic and lotic systems can differ substantially and that these kinds of waters would not be considered "similar." However, virtually everything encompassed by lotic will already be jurisdictional by rule.

In cases, perhaps, it might be fully appropriate to separate deepwater habitats from wetlands within the lentic classification. Overall however, we believe that a scientifically valid and more efficient method of aggregating wetlands falling within the classification of "other waters" would be to evaluate them all in a simple, direct, comprehensive aggregation within the appropriate region.

Furthermore, we do not see the reason for injecting wetland density or proximity to a "water of the U.S." as criteria for qualifying as being "similarly situated" for purposes of being evaluated "in the aggregate" for a case-specific significant nexus evaluation. We certainly understand that functionality, proximity, and density would all be important factors in assessing whether or not the waters in question actually possess a significant nexus with "waters of the U.S." that is scientifically appropriate and necessary. However, those factors need not be introduced into the determination of which wetlands within a region qualify as being similarly situated, thereby qualifying for aggregation. We believe that what should be a more science-based element of the proposed rule, based on a subjective interpretation of Justice Kennedy's language by the agencies, goes well beyond what he intended, assuming that the appropriate sized and delimited "region" would be used to define the boundaries within which the wetlands would be considered "similarly situated." This kind of approach would be much clearer, simpler and efficient to administer than the current more complex approach outlined in the proposed rule.

Interpretation and Application of "In the Region" to Significant Nexus Analyses: As indicated above, the delineation of the scale of the region to be used for case-specific analyses is one of the most far-reaching aspects of the rule relative to "other waters." This is critical to the scientific validity of the analyses, the appropriate scope for aggregating similarly situated wetlands, and the degree to which the integrity of the "waters of the U.S." is maintained and restored, among other things. Perhaps most important to many, and to the rule's ultimate success, is that the scale of "in the region" will in large part be responsible for determining the efficiency, clarity, and certainty of the administrative processes associated with the rule and the Clean Water Act more broadly.

We agree with aggregating wetlands for a significant nexus analysis at the scale of the single point of entry watershed to the nearest (a)(1) through (a)(3) watershed, at the minimum. The rationale articulated in the preamble for starting at this watershed level makes sense, and has a good scientific basis. And, as we stated above, it would be most efficient and supported by the science to consider all the waters, at least within the wetland class, in the aggregate. Again, given the range of functions provided across a variety of wetland types located within the same watershed or ecoregion, there will generally be more overlap and similarities among them than there will be differences. That being the case, and in light of the above discussion regarding Justice Kennedy's legal language applied to a more scientific context, we fail to see a good, science-based rationale for attempting to separate types of wetlands existing in the "other

waters" class within a particular watershed when in fact most will exist at somewhere along a continuum relative to a number of functions.

However, as we stated, we believe that the single point of entry watershed should be the minimum scale for evaluating similarly situated wetlands in the aggregate. We believe that there are many instances in which a watershed at this scale, upon review of its many characteristics related to topography, soils, land use, and the many other physical, chemical and biological characteristics reflected in the watershed's wetlands and other water bodies, will be very similar, and in some cases almost indistinguishable, from neighboring watersheds (see Lorenz et al. 2010). For example, there are a number of single point of entry watersheds that are lined up north to south along the Red River of the North between North Dakota and Minnesota and that exhibit strong similarities in almost every respect. When a need for case-specific analyses of "other waters" arises in circumstances such as this, it would seem to be consistent with the science and also administratively expeditious to first briefly review neighboring watersheds to determine if they are similar enough to the one in question to warrant an aggregation of more than one watershed into the analysis. There are numerous such examples of single point of entry watersheds that would be sufficiently similar, ecologically and hydrologically warrant being grouped together.

Therefore, combining adjoining watersheds to the extent scientifically appropriate and justifiable would lead to greater administrative efficiencies, and perhaps actually strengthen the results and validity of the scientific evaluation of significant nexus. Importantly, it would also more quickly provide a greater level of clarity and certainty to those affected by the rule across the broader geographic area of aggregated watersheds that simply expand upon an appropriate aggregation of waters. Of course, if neighboring watersheds were deemed, for science-based reasons, to be sufficiently different than the one in question, such aggregation of watersheds would not be appropriate.

F. "Other Waters" that Should be Evaluated for Being Jurisdictional by Rule:

The preamble requests public comment on a number of other specific aspects of the proposed rule, potential alternatives, and general issues associated with "other waters." As we address some of these, we note that the Report states that, *"science shows that tributaries and adjacent waters play an important role in maintaining the chemical, physical and biological integrity of traditional navigable waters."* We must also comment that the same is true for a great many "other waters," perhaps most if we only had complete knowledge available to us at this time. We do not, of course, have complete knowledge but the existing body of science indicates that we already know enough to accurately apply this statement to many subcategories of "other waters." The preamble to the proposed rule also states that, *"a growing body of scientific literature, as well as the agencies' growing body of scientific and technical knowledge and field expertise, led the agencies to conclude that it is reasonable to establish certain categories of waters that are jurisdictional by rule as they have a significant nexus to jurisdictional waters."*

We agree, and this applies to some significant categories of wetlands in various regions across the U.S.

We are particularly interested in providing comment addressing the specific issue raised in the preamble of whether the universally desired increase in clarity, certainty, and predictability could be advanced by *"determining that additional waters should be jurisdictional by rule."* The related question is whether the agencies could rely less on case-specific analyses through such an alternative, also thereby increasing efficiency.

As stated previously, we strongly believe that the breadth and depth of the available science, and the unique position of the agencies at this time, warrants conducting significant nexus analyses for wetlands, in the aggregate, for a number of significant regions of the country to determine which regions contain wetlands that could be designated as being jurisdictional by rule with a positive finding of significant nexus.

We disagree, however, that wetlands in other regions would necessarily have to "be determined to not be similarly situated." Some ecoregions, for example, could contain a wide diversity of landforms, range of altitudes, and other geologic and climatic attributes and could indeed include a broad range of wetland types that could not reasonably be considered to be "similarly situated." In such cases, a single point of entry watershed would perhaps be the best approach. However, other ecoregions might simply contain a lower density of wetlands, but they could very well be relatively similar in terms of their type, functions, and distribution across the landscape. The wetlands, in the aggregate, in some of these kinds of ecoregions might fail to rise to the level of being found jurisdictional by rule. However, given that the relevant science continues to emerge, these wetlands could in the future be found to be jurisdictional as a result of a case-specific significant nexus analysis. Therefore, those wetlands should by no means *"be determined to be not similarly situated"* if not included as jurisdictional by rule, and as a consequence have future case-specific analyses unnecessarily constrained in a way that could potentially eliminate any role for emerging science. We do agree that the *a priori* analyses of ecoregions would have to consider the variability across the regions and the extent to which each has "distinguishing factors."

The preamble contains a series of questions related to the issue of where and how to apply aggregation such that the "other waters" in some regions would be considered together for a case-specific analysis, or considered as individual wetlands. We strongly suggest that unless there are clear ecological regions for separating wetlands within the landscape under consideration, aggregation should be the rule. A predominance of case-specific analyses of "other waters" would tend to maximize uncertainty, unpredictability, and the regulatory burdens on both regulators and the regulated community. Every scientifically and legally justifiable reason to support aggregation should be explored before resorting to case-specific analyses of individual wetlands.

The selection and use of the appropriate scale of regions for these analyses is a critically important part of the scientific rationale for taking the above approach to aggregation. Careful selection and application of the appropriate scale for analysis of the "other waters" in each geographic unit helps:

- ensure a scientifically valid scale is consistently applied across all areas of the country;
- ensure each area's topography, geology, climatic conditions, soils and other physical, chemical, and biological features are reasonably similar;
- ensure the scale minimizes the diversity of "other waters" within its boundary and thereby supports aggregation of these waters for significant nexus analyses;
- promote regulatory clarity, certainty, and predictability across reasonably broad but scientifically valid landscapes; and,
- ensure the final rule is pragmatic to understand and administer, while remaining consistent with the available science and case law.

We agree with the agencies' suggestion that Level III ecoregions as described by Omernik (2004) represents the most appropriate scale for such analyses. Omernik articulated the need for and benefits of a more common geographic framework for management purposes, and described the accepted scientific basis for these geographically distinct landscapes. An indication of their widely accepted scientific validity is that Level III ecoregions have increasingly been adopted as the basis for science-based geographic systems for managing a variety of natural resources (e.g., the development of Bird Conservation Regions [NABCI 2001]). A review of the map of Level III ecoregions shows the contiguous U.S. is divided into 85 such regions, and combined with our knowledge of and field experience with many of the key wetlands areas contained within these ecoregions, they appear to be an appropriate scale for retaining strong scientific validity while contributing to a more pragmatic rule.

In the context of the proposed rule, the agencies should also note that Omernik (2004) and McMahon et al. (2001) articulate a strong rationale for using a "weight of the evidence" approach, which is qualitative in nature but founded on collective expertise, over a more rule-based or quantitative approach to ecoregion definition. We suggest that the rationale they provide for the weight of the evidence approach is directly applicable to some of the overarching issues and challenges that the agencies face in formulating a final rule. The rule must be clearly based on the available science and consistent with case law while at the same time being pragmatic to apply and protective of the integrity of the Nation's water resources as mandated in the Act, while cognizant of the limits imposed by case law.

Therefore, we agree with and strongly support the use of Alternative 1 (FR 22215), *"determine by rule that 'other waters' are similarly situated in certain areas of the country."* For reasons articulated previously, the agencies should proceed with *a priori,* science-based significant nexus analyses of the selected, high-priority regions, and the waters in those ecoregions in which a

significant nexus was found for wetlands in the aggregate should then be designated as jurisdictional by rule.

After reviewing the list of ecoregions proposed as being potentially suitable for such analyses (FR 22215), we concur with the list of 25 regions as a good starting point. Clearly, priorities should be established so that those ecoregions containing well-known, important wetland systems would be examined first. The SAB September 30 letter to the EPA states that, *"there is also adequate scientific evidence to support a determination that certain subcategories and types of 'other waters' in particular regions of the United States (e.g., Carolina and Delmarva Bays, Texas coastal prairie wetlands, prairie potholes, pocosins, western vernal pools) are similarly situated (i.e., they have a similar influence on the physical, biological, and chemical integrity of downstream waters and are similarly situated on the landscape) and thus are waters of the United States."* We agree with this statement, and the wetland systems listed therein include the following Level III ecoregions, which should therefore be priorities for significant nexus analysis in the aggregate:

- 6 – Central California Foothills and Coastal Mountains
- 7 – Central California Valley
- 9 – Eastern Cascades Slopes and Foothills
- 34 – Western Gulf Coastal Plain
- 42 – Northwestern Glaciated Plains
- 46 – Northern Glaciated Plains
- 47 – Western Corn Belt Plains
- 48 – Lake Agassiz Plain
- 63 – Middle Atlantic Coastal Plain
- 65 – Southeastern Plains

Of particular interest to Ducks Unlimited is the area traditionally known as the Prairie Pothole Region, which is contained within ecoregions 42, 46, 47, and 48. We will provide a detailed review of some of the science for this region, as well as a few others, later in our comments. One of those will be the Nebraska Sandhills (ecoregion 44), which contains the sandhills wetland system, an area for which we suggest the science also supports a finding of significant nexus. We therefore recommend that ecoregion 44 be added to the above list of the highest priority ecoregions.

We further suggest that the agencies consider adding several ecoregions to the larger list of 25 on FR 22215:

- 25 – High Plains: This ecoregion contains the South Platte and portions of the Platte River system that we referenced earlier as containing wetlands and other waters that are known to have shallow, subsurface connectivity with the rivers, and that are being

managed to augment maintenance of base flows in the rivers to benefit four federally listed threatened and endangered species as well as maintaining water supplies for irrigation and other interests.

- 53 – Southeastern Wisconsin Till Plains: This ecoregion, and the three that follow, adjoin the Great Lakes. In light of the high priority of these interstate/international waters, and the level of concern generated by an increasing number of high profile algal blooms and their relation to public health and welfare as well as economic impacts, we suggest that these Great Lakes ecoregions be added to the list.
- 56 – Southern Michigan / Northern Indiana Drift Plains
- 57 – Huron / Erie Lake Plains
- 61 – Erie Drift Plain
- 73 – Mississippi Alluvial Plain: This region was historically highly significant in terms of its wetlands and their importance to the Mississippi River and major tributaries. A significant amount of wetlands remain there, although most would likely be captured within the definition of riparian areas and adjacent waters. However, the remaining "other waters" in this ecoregion would most likely be considered similarly situated, and therefore suitable for a significant nexus evaluation in the aggregate.

All of the factors listed (FR 22216) as being used to develop the list are suitable science-based factors that appropriately relate to the primary question of significant nexus. However, we note that the list contains no reference to biological factors. This is of some concern because the EPA's original draft of the Connectivity Report, and this proposed rule, both seemed to minimize the biological component of the integrity of the Nation's waters. This was also pointed out by the SAB's special panel on connectivity. We will highlight a situation in our detailed treatment of the Texas Prairie Coastal Wetlands that is a biologically based example of connectivity that is fully consistent with the scientific and legal requirements for significant nexus. Thus, we recommend that a biological factor should be added to the list proposed by the agencies.

We do not agree with the second portion of alternative 2 (FR 22216), which would result in the "other waters" in those ecoregions considered to not have a demonstrated significant nexus to be designated as non-jurisdictional. We support the comment in the SAB's draft report in which they state that *"the Board notes, however, that the science does not support excluding groups of 'other waters' or subcategories thereof."* For the final rule to fulfill its objectives, and those of the Act, it must be science-based. In the case of the second portion of alternative 2, it must be understood that not finding a significant nexus is not scientifically the same as determining that these waters "lack a significant nexus to an (a)(1) through (a)(3) water," as stated in the proposed rule. While there may be a few instances in which such a statement of certainty and finality is justified by the circumstances and the science, most cases will be situations in which not finding a significant nexus simply means that the science currently available is insufficient to make such a designation. So, as science continues to emerge, areas in which a significant nexus could not currently be determined might indeed be later found to have a significant nexus based on new

science. For the final rule to be truly science-based, it must allow for this distinct and likely possibility. Clearly, for regulatory purposes, those waters for which a significant nexus cannot be demonstrated at this time would need to be treated as non-jurisdictional unless and until shown otherwise.

The preamble requests comments "on how to best accommodate evolving science that could indicate a significant nexus for these 'other waters.'" This is a critically important consideration because, even as this rule is being reviewed and finalized, relevant new science continues to emerge, as it surely will long into the future. Science builds upon itself and is inherently cumulative. A science-based rule must recognize and incorporate that reality into the rule. We strongly recommend that the agencies incorporate into the final rule a process by which "other waters" within ecoregions, or single point of entry watersheds, can be subject to scientific assessment, and/or re-assessment as necessitated by emerging science, and the findings incorporated into the cumulative body of scientific "case law," so to speak. In that light, we again suggest that if the geographic database (with accompanying mapping features) discussed earlier were to be developed and maintained to facilitate the objectives of clarity, certainty, predictability, and administrative efficiency for the benefit of all stakeholders and affected publics, it could include data layers related to the findings of significant nexus analyses of "other waters" that would clearly depict:

- ecoregions and/or watersheds for which significant nexus analyses were conducted, and those for which an analysis has not yet been conducted;
- areas within which "other waters" in the aggregate were found to have a significant nexus and would therefore be jurisdictional;
- areas whose "other waters" in the aggregate could not at this time be demonstrated to have a significant nexus, and would therefore be non-jurisdictional; these areas could be subject to re-assessment as new science emerges;
- if applicable, areas in which it was determined that the "other waters" do not and could not possibly be shown to ever have a significant nexus, and therefore would be non-jurisdictional, or perhaps even excluded if the determination could be made with sufficient scientific finality; and,
- other relevant information.

We maintain that such a nationally standardized and consistently applied database would be a tremendously useful tool in many broad and significant ways that would ultimately benefit all aspects of the Act and its administration.

G. Waters that are not "Waters of the United States":

We agree with the inclusion of the expanded list of waters that would be explicitly excluded from jurisdiction. As the agencies well know, this proposed rule has been controversial, to a large extent because of confusion about which waters would be excluded and which could have

jurisdiction restored (again, recognizing the overarching fact that the proposed rule will cover significantly fewer waters than are jurisdictional under the existing regulations). Much of the expressed concern and confusion has stemmed from within the agricultural community. Codification of the agricultural and other exclusions, direct and clear communications about them, and follow up administration of the rule that is fully consistent with those communications on a nationwide basis, will go a long way toward increasing certainty and predictability on the part of farmers, ranchers, and other landowners.

In addition, given the concerns that are often raised about small, inconsequential (from the perspective of affecting "waters of the U.S.") water bodies, we believe it is also important and useful for the agencies to have taken the step of explicitly listing a number of exclusions relevant to those concerns, e.g., gullies, rills, non-wetland swales, small ornamental waters, and water-filled depressions incidental to construction activity, among others. Expressly making all of these kinds of waters non-jurisdictional by rule will help convey clarity and address many of the concerns of important segments of the landowning public and, in particular, the farming and ranching communities.

Finally, with respect to the issue of groundwater, it is scientifically appropriate and necessary that groundwater be allowed to be used as an avenue of documenting significant nexus. It is among the most important of the types of connectivity that exists between adjacent, neighboring, and "other waters" and "waters of the U.S." However, given the abundant existing case law relative to governance of groundwater, it is appropriate that the final rule explicitly exclude groundwater from jurisdiction. Given the magnitude and importance of that issue to the states and landowners in many parts of the country, any change to existing practices with respect to state-based regulation of groundwater should come only as a result of Congressional action. Similarly, it is also desirable to be very clear that the proposed rule has no impact on states' authorities to regulate water from the standpoint of addressing quantity and allocation issues. We believe the new rule could and should actually benefit those efforts by helping to maintain water flows in "waters of the U.S.," particularly if findings of significant nexus are scientifically justified and jurisdiction by rule is extended to the "other waters" in ecoregions in which wetlands and other waters contribute to base flows and are important components of the ecosystem.

III. Science-based Comments Regarding Connectivity and Significant Nexus Considerations for Specific Regions

A. Introduction

In this section of our comments we will attempt to highlight and augment some of the existing science that supports a finding that the "other waters," in the aggregate and across broad ecoregions, or significant portions thereof, possess a significant nexus with downstream jurisdictional waters. The draft Connectivity Report contains a tremendous amount of

information that bears upon this key issue, and we recognize we will repeat some of that as we attempt to add to and synthesize the science for a few regions. We are also aware that the final set of recommendations from the SAB's special panel on connectivity will contain additional references to relevant literature, and that many of those citations will likely be incorporated into the final Connectivity Report.

That being the case, we will focus on conveying the primary points relevant to the existence of a significant nexus, as supported by key citations, in order to frame the case in support of these wetlands being designated as jurisdictional by rule. We understand that agency scientists with access to the referenced reports and all the science contributed through the public comment period will ultimately be responsible for synthesizing the wealth of information from these diverse sources as the rule is finalized.

The area on which we will focus much of our attention is the Prairie Pothole Region. This landscape is the United States' most important waterfowl breeding and production area, and it contains more wetlands, at a higher density, than any other comparable area in the U.S. Thus, prairie pothole wetlands provide one of the best opportunities to show that a large subcategory of wetlands falling primarily within the "other waters" category do indeed have a demonstrable significant nexus with downstream navigable waters. While we put special focus on the Prairie Pothole Region, we have also compiled some similar information for Texas Gulf coastal prairie wetlands and Nebraska's sandhill wetlands, in particular, and included scientific citations from other key wetlands such as playas and rainwater basins. The wetland types and regions we have focused on were selected for special emphasis for several reasons: (1) they are all key wetlands and landscapes for waterfowl conservation; (2) wetland loss has been significant in each region and the remaining wetlands are highly threatened in the absence of CWA protections; (3) there is literature that clearly demonstrates the abundance and strength of the significant nexuses that exist among these waters and with downstream navigable waters; (4) these wetland types largely fall into the "other waters" category; and, (5) despite individual wetlands often not being situated in proximity to (a)(1) through (a)(3) waters, there is a compelling scientific basis for the vast majority of these waters to be considered jurisdictional on the basis of a comprehensive, science-based significant nexus evaluation.

In our synthesis of much of the related science for the Prairie Pothole Region and other areas, we will also offer citations referencing science that, while it may not have been conducted within the region, nevertheless informs the fundamental question of significant nexus in a geographically broad way such that the findings of the research are to at least some degree applicable to the Prairie Pothole Region.

As the agencies conduct these evaluations, they should keep in mind the overall context within which important decisions about significant nexus and jurisdiction will be made. The CWA has been an important component of the national framework of wetland conservation for more than 30 years. It has been the basis of one of the most successful environmental efforts in the

Nation's history, and has helped measurably improve the chemical, physical, and biological aspects of the Nation's waters since its enactment. However, approximately 53% of the estimated 221 million acres of wetlands originally present in the United States have been lost (Dahl 2000). The CWA undoubtedly contributed to the decrease in the rate of wetland loss since 1972, when the Act was passed, through 2004 (Dahl 2006). However, not counting the increases of ponds that often have little wildlife value (e.g., golf course ponds, storm water retention lagoons, farm ponds, etc.), the Nation has nevertheless experienced a net loss of over 16 million acres of wetlands since the mid-1950s. Since 1986, the Nation has lost over 2 million acres of vegetated wetlands and 1.4 million acres of freshwater marshes that are among the most important wetlands for waterfowl and other wildlife (data from Dahl 2000; Dahl 2006; Dahl 2011). These kinds and magnitudes of losses have had a cumulative negative impact not only on critical waterfowl habitats, but also on the Nation's water quality and other federal interests.

Unfortunately, the most recent national wetlands status and trends report (Dahl 2011) reported that between 2004 and 2009 the rate of wetland loss had increased by 140% over the previous report period. This is the first acceleration of wetland loss over a 50-year period, and given that this is the first survey period occurring entirely post-*SWANCC*, the acceleration of wetland loss is likely at least partially attributable to the jurisdictional confusion and withdrawal of CWA protections by the agencies in the wake of the *SWANCC* and *Rapanos* cases.

Therefore, it is reasonable to anticipate that the trajectory of the future status and trends of the Nation's wetlands will be significantly influenced by the content of the final rule on the "definition of the 'waters of the U.S.'" We believe that the science, viewed comprehensively, clearly supports the contention that the loss of over 50% of the Nation's wetlands has had a lasting, negative effect on the physical, chemical and biological integrity of navigable waters partly as a direct result of the lack of recognition and appropriately science-based regulatory framework to protect those waters that have a significant nexus with downstream navigable waters. Thus, the level of protection afforded wetlands by the final rule will be a significant determinant of the future trajectory of the status of wetlands in this country, and therefore of the future direction of the condition of the Nation's waters.

B. Prairie Potholes

Prairie Potholes: General Information and Status

The Prairie Pothole Region (PPR; Fig. 1) of the northern Great Plains encompasses over 300,000 square miles, and is situated within four Level III ecoregions (#42, 46, 47, and 48). This is the most important breeding area for ducks (e.g., mallards, blue-winged teal, northern pintails, canvasbacks) in North America (Ducks Unlimited 2001). An estimated 50% of the total average annual production of continental duck populations originate from this region (Dahl 1990), including up to 70% in wet years (Ducks Unlimited 2001). One analysis (U.S. Fish and Wildlife Service 2001) suggested that duck production in the PPR of the U.S. northern prairies would

decline by over 70% if all wetlands less than one acre were lost, and another analysis (Johnson 2010) estimated that pre-CWA wetland loss in a five-county portion of the PPR in west-central Minnesota resulted in a reduction in waterfowl productivity in excess of 80%. Because of the PPR's importance to continental waterfowl populations, and as a response to the challenges of wetland loss in the region, Ducks Unlimited and its partners have expended billions of dollars to protect and conserve the wetlands and other habitats that remain in the region.

However, despite those investments, which include significant federal resources, there continues to be a net loss of wetlands in this region (Dahl 2006; Dahl 2014). Oslund et al. (2010) documented that the Prairie Coteau portion of Minnesota's PPR lost 15% of its wetlands between 1980 and 2007, and the Minnesota River Prairie ecological region lost 7.9%. The most recent evaluation of wetland status and trends in the PPR (Dahl 2014) documented a net loss of over 74,000 acres of wetlands, and a loss of over 95,000 acres of emergent wetlands. Interestingly, some of the greatest rates of loss were noted in the places (e.g., Minnesota) that had already experienced some of the greatest overall wetland loss (quantity) over time. Historic drainage has been most intense in Iowa, where about 95-99% of the original wetlands (Dahl 1990; Miller et al. 2009) have been lost. Miller et al. (2009) indicated that about 30,500 ac remain out of what was originally about 3.5 million ac, or almost 50% of that region in Iowa.

Prairie pothole wetlands are stereotypical examples of wetlands that would generally be characterized as being "geographically isolated" and classed as "other waters" in the proposed rule. The region is characterized by high wetland densities, and typically contains between 15 and up to 150 wetlands per square mile (National Wetlands Working Group 1988; Baldasarre and Bolen 2006; Fig. 2 - 6). With typically high wetland densities over such a large area, it is estimated there were originally approximately 20 million acres of prairie pothole wetlands, largely in the Dakotas, Minnesota and Iowa, and one study estimated wetlands covered approximately 25,000 square miles of the region (van der Valk and Pederson 2003). As of 2009, Dahl (2014) estimated 6.4 million acres of wetlands remained in the U.S. PPR, involving 2.6 million wetland/water basins.

In general, the PPR possesses a limited internal drainage system so inflow and outflow to prairie potholes via streams is uncommon (Winter and Woo 1990; Carroll et al. 2005; Fang et al. 2014). One analysis (Petrie et al. 2001) documented that most (>95%) prairie potholes would likely not be considered adjacent to, or even located within 0.6 mi (~50%) of navigable or jurisdictional waters. However, as is readily apparent from Figures 2 – 6 or a casual look at satellite imagery throughout the region, and as documented most recently by Dahl (2014), wetlands in the PPR tend to be remarkably similar in general size and structure, and consequently function. Of the total 6.4 million acres of wetlands in the U.S. PPR, 88% are emergent wetlands (i.e., marshes), making up 93% of all wetland basins in the region (Dahl 2014). Open water ponds made up only 4% of the remaining acreage, while 8% had woody vegetation (forested and scrub-shrub wetland; Dahl 2014). Most of the latter are located along stream and river courses, and near

large lakes. Because they are so similar in structure and function, the emergent marsh habitat that comprise the potholes are sometimes further classified by the amount of time that they typically contain water, although that classification is subject to change to some extent depending upon the dynamics of short and long-term precipitation and climatic regimes (Stewart and Kantrud 1971). Dahl (2014) documented that in 2009 almost 50% of the emergent wetland basins were temporarily flooded (temporary ponds, low prairie wetland), about 42% were seasonally flooded (seasonal ponds, shallow marsh), 6% were semi-permanently flooded (semi-permanent ponds, dugouts, deep marsh), and about 2% were farmed wetlands. The agencies are encouraged to consult Dahl (2014) and others for more detailed information about prairie pothole wetland status and ecology.

In large part, the marked similarity among prairie potholes is due to the fact that they were all formed when large chunks of ice were dropped by the receding glaciers along with other materials that had been carried southward by the glaciers. The pothole basins are the depressions that remained after the chunks of ice melted amongst the other material left behind, thereby creating the knob and kettle and moraine landforms that dominate there.

We will provide a sense of the documentation and scientific literature that supports the determination that wetlands in the PPR, in the aggregate, generally possess a significant nexus with navigable waters as outlined by Justice Kennedy. The case is most convincingly, and efficiently, made at the ecoregional scale. There are several compilations of peer-reviewed literature and related information (e.g., Tiner et al. 2002; several papers in the September 2003 special issue of the journal *Wetlands*) that provide an abundance of detail regarding the points we reference in these comments.

Prairie Potholes: Surface Water Storage and Flood Attenuation

Prairie pothole wetlands and their function of water retention might very well have been what Justice Kennedy had in mind when he wrote that, *"given the role wetlands play in pollutant filtering, flood control, and runoff storage, it may well be the absence of hydrologic connection (in the sense of interchange of waters) that shows the wetlands' significance for the aquatic system,"* and that *"wetlands possess the requisite nexus, and thus come within the statutory phrase "navigable waters," if the wetlands, either alone or in combination with similarly situated lands in the region,* [emphasis ours] *significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable.'"* The abundance and density of potholes on the PPR landscape in conjunction with their general lack of direct surface water connection to streams and rivers is most important in creating the basis for an especially significant nexus between these wetlands and large navigable waters like the Red, Missouri, and Mississippi rivers.

The proposed rule states: *"Tributaries serve to store water, thereby reducing flooding, provide biogeochemical functions that help maintain water quality, trap and transport sediments,*

transport, store and modify pollutants, provide habitat for plants and animals, and sustain the biological productivity of downstream rivers, lakes and estuaries." We submit that, based on the body of the available science, the same can be said for prairie pothole wetlands and some other wetland subcategories. Just as water during storm events moves through the multitude of small tributaries and eventually affects the integrity of downstream "waters of the U.S.," the same thing occurs with prairie potholes although in the case of the potholes, it is more common for them to serve the function of storing water that would otherwise flow to downstream waters and thereby affect the downstream navigable waters by decreasing flood flow. However, in many cases, a "fill and spill" type of connectivity is exhibited when the wetland fills to capacity and then spills over into other wetlands and/or to downstream waters (Kahara et al. 2009; Shaw et al. 2012; Shaw et al. 2013; Winter and LaBaugh 2003). During wet periods, there might actually be a smaller number of wetlands on the landscape as a result of nearby wetlands becoming "aggregated" (Kahara et al. 2009) as a result of the magnitude of stored water in areas of high pothole density.

Their nature and position on the landscape is the primary reason that potholes serve so well the function of capturing runoff and storing it in intact "non-contributing" basins, i.e., wetlands and lakes (Winter et al. 1984). In general, the presence of many isolated wetlands decreases runoff velocity and volume by capturing high magnitude short duration flows, e.g., runoff of spring thaws, and releasing water (such as through groundwater and evaporation) over an extended period (Carter 1996; Carroll et al. 2005). The net effect of this important wetland function is to abate flooding by lowering and moderating the peaks of flood stages, thereby reducing flood damages (Mitsch and Gosselink 1986). Prairie potholes store surface water and attenuate flood flows (Hubbard and Linder 1986; Gleason and Tangen 2008; Minke et al. 2009), and potholes in North Dakota have been estimated to hold roughly half the surface water within the state (Ripley 1990). Winter (1989) stated that for selected watersheds in Minnesota, mean annual flood increases were inversely related to the percentage of lakes and wetlands within the watersheds. Stated another way, the flood increases in the watersheds Winter (1989) studied are directly proportional to the amount of drainage of lakes and wetlands within the watersheds. Other work (Kantrud et al. 1989; Hayashi et al. 2003; Huang et al. 2011) concluded that small pothole wetlands retained most of the runoff from spring snow melt within their respective watersheds, thereby moderating snow melt input to regional drainage systems. Miller and Nudds (1996) compared U.S. and Canadian rivers and landscape changes on each side of the international border to provide further evidence that wetland drainage in the upper reaches of the Mississippi River watershed has increased flooding in the Cannonball and Sheyenne rivers in North Dakota, and the Moreau and Big Sioux rivers in South Dakota.

Vining (2002) demonstrated the importance of storage by wetlands and impacts on stream flow of Starkweather Coulee in North Dakota, stating that his findings were likely similar to the situation found in other drainage basins. Vining (2004) also studied two watersheds in the Red River Basin of North Dakota and Minnesota with results indicating that total stream flow from a

flood event was reduced due to storage in wetlands. And although the Red River basin of northwest Minnesota has only 25% of its wetlands remaining, Pomeroy et al. (2014) demonstrated that even in PPR watersheds that have been subjected to extensive drainage, downstream flows can nevertheless be "strongly impacted by further drainage." For a Minnesota watershed, Wang et al. (2010) estimated that the loss of the first 10-20% of its wetlands resulted in up to a 40% increase in the peak discharge to downstream waters.

Much recent research on potholes and water storage has been conducted just across the border in Canada. Ecologically, the PPR of southern Canada is simply an extension of and similar to the ecoregions in the U.S., with only the political border of the two countries separating the two areas. Thus, these Canadian studies are directly relevant to significant nexus evaluation on the U.S. side of the border. In the absence of federal wetland legislation and weakly enforced provincial regulation, prairie potholes in Canada are being drained at an even faster rate than those in the U.S. For example, it was recently estimated (Ducks Unlimited Canada, unpubl. data) that Saskatchewan alone had lost about 617,750 ac of pothole wetlands over the last 60 years, and was losing about 15,000 ac of wetlands annually. The volume of water estimated to have been contained within those basins was approximately 400,000 ac ft. The extent of the cumulative changes to the regional hydrology stemming from the cumulative loss of "other waters" is evident at even a cursory look at satellite images of the region (Fig. 7) when coupled with an understanding that all the water once contained within those potholes now drains quickly to streams and rivers via the artificial connections created by the drainage activities.

Hayashi et al. (1998) found that approximately 30-60% of the water in the potholes entered as runoff from spring snowmelt. Thus, when considered in the context of wetland densities and the total storage capacity of the wetlands in the region, this represents a huge volume of water that would otherwise move through artificial ditches until ultimately reaching a navigable waterway and increasing flood flows in the river. Fang et al. (2014) and Pomeroy et al. (2014) studied water storage in wetlands and the relationship to downstream flood flows in the 150 mi^2 Smith Creek watershed in Saskatchewan. Pomeroy et al. (2014) demonstrated that the annual volume of streamflow, as well as peak daily discharge, had a "remarkably strong sensitivity" to historic wetland drainage over the 1958 to 2008 period. They demonstrated that wetland drainage had a strong impact on stream flood flows associated with both snow melt and rainfall. They also estimated that continued drainage of the remaining geographically isolated pothole wetlands would increase annual flow by up to 32%. The extent of the artificial connectivity created, and related impacts to the hydrology of the region, is evident in examining a representative portion of that particular landscape (Fig. 8). Other analyses they conducted resulted in similar findings, and were ultimately demonstrably important to the quality of water in downstream Lake Winnipeg (Pomeroy et al. 2014), the third largest lake contained within the borders of Canada.

Specifically, in the Red River basin which delivers the majority of the nutrients to Lake Winnipeg, over 50% of the wetlands have been eliminated in the U.S. portion of the watershed

(Schindler et al. 2012), with as much as 90% or more loss in the portion of the Red River watershed in Canada (Hanuta 2001). Over this same time frame and looking at a number of watersheds in the PPR of central Saskatchewan and in the Lake Winnipeg watershed, the runoff:precipitation ratio has increased dramatically (Ehsanzadeh et al. 2011), likely due to the synergistic interaction of increased drainage (i.e., increased hydrologic connectivity) and precipitation. Increases in flooding and water yield have been directly linked to increased phosphorus export in the Lake Winnipeg watershed (Environment Canada and Manitoba Water Stewardship, State of the Lake Report 2011) and demonstrate the ability for isolated wetlands, in the aggregate and at the level of the watershed, to affect the integrity of one of the world's largest lakes.

Wetland drainage has significantly decreased the cumulative storage capacity of wetlands (Dahl 1990; Dahl and Johnson 1991; see Fig. 9 for example), and this decrease has been linked to increases in the frequency of flooding in and around the PPR (Miller and Frink 1984; Miller and Nudds 1996; Manale 2000). In most cases, as previously stated, when a pothole is drained or filled, the water that would have otherwise been retained in the basin is diverted to a ditch or other conveyance and makes its way to a navigable waterway much more rapidly than when the wetland was intact. The significant nexus between the intact pothole and the nearest navigable water, described by Justice Kennedy as the "absence of [direct] hydrologic connection," then becomes apparent as the altered flow pattern (see Fig. 10 for example) brings more water, carrying more sediment, nutrients and other pollutants, much more rapidly, to the navigable water and downstream communities, farms, and other landowners.

For example, a recent study of the Broughton Creek watershed in the Red River Valley in the northeastern PPR (Yang et al. 2008), which also provides water to Lake Winnipeg, documented that 70% of the wetlands had been lost or degraded due to drainage between 1968 and 2005. These wetland losses were associated with a 31% increase in the contributing area draining downstream, which was associated with a 30% increase in stream flow and an 18% increase in peak flow. Further work on Broughton's Creek (Yang et al. 2010) showed that if the wetlands in the watershed could be restored to 1968 levels, peak creek discharge could be reduced by 23.4%, similarly demonstrating the significant impact of these wetlands on flowing waters. If protected and left intact, they store water, but when unprotected and drained, the potholes contribute significantly increased flood flows to the downstream receiving waters, thereby affecting their integrity (see Fig. 11 for example). This impact is even more significant when the sediment and chemicals carried in this additional discharge are also considered (as discussed in a later section). Similarly, Johnson et al. (1997) reported that about 33% of the drained wetlands in the flood-prone Vermillion River watershed (southeast South Dakota) flowed into artificial drainage ditches, and that a quantity of water equivalent to about half of the river's annual flow could be stored by restoring those wetlands. Pomeroy et al. (2014) pointed out that artificial drainage of prairie potholes has the effect of adding permanent surface connections, thereby reducing the ability of the watershed to store water, even under wet conditions, with the consequences being

increased stream flood frequencies and magnitudes (Gleason et al. 2007; Yang et al. 2010). Brun et al. (1981) also found that increased stream flows in the Red River Valley were strongly correlated with the extent to which a watershed's wetlands had been drained. Jahn (1981), also in the context of the Red River system, stated that wetlands there significantly reduced flood levels in major metropolitan areas downstream.

Hey (1992) estimated that as a result of approximately two-thirds of the original potholes having been lost to drainage, the region has lost 20-30 million acre-feet (0.87-2.2 trillion cubic feet) of water storage capacity. A number of studies have concluded that loss of pothole wetlands has contributed significantly to flooding and increases in associated damages along the Red River of North Dakota and in portions of Minnesota and Iowa (e.g., Campbell and Johnson 1975; Moore and Larson 1979; Brun et al. 1981). Ludden et al. (1983) found that small basins in the Devil's Lake watershed in North Dakota could store 72% of the total runoff from a two-year frequency flood and approximately 41% of the total runoff from a 100-year frequency flood, with Malcolm (1979) and Gleason et al. (2007) and others reporting impacts of similar magnitude for north central North Dakota and western Minnesota, respectively. Hann and Johnson (1968) found that depressional areas in north central Iowa had the ability to store more than one-half inch of precipitation runoff within their individual watersheds.

The results of several studies shed light on the issue from the converse perspective of evaluating the water retention benefits to downstream waters of restored wetlands, and strongly support the same general finding that a significant nexus exists between prairie potholes, in the aggregate, and nearby (viewed from a regional, ecologically valid scale) navigable waterways. Gleason et al. (2008), based on a study covering almost 500 wetlands across Iowa, North Dakota, South Dakota, Minnesota, and Montana, conservatively estimated wetland catchments covering ~1.1 million acres on USDA Conservation Reserve Program and Wetland Reserve Program lands can capture and store an average of 1.1 acre-feet of water per acre of wetland (a total of more than 1.2 million acre-feet [52.2 billion cubic feet] of water). This estimate did not account for the additional water that would further reduce water flowing to the navigable waters as a result of infiltration to groundwater and evapotranspiration. Although these particular areas represented pothole wetlands that were restored to the landscape as a result of a voluntary government incentive program, the clear inference that can be drawn is that if this quantity of natural wetlands were lost because of a lack of CWA protection, there would be significant impacts from the more than 1.2 million acre-feet of water that would otherwise flow more directly and rapidly to the downslope navigable waters.

Gleason et al. (2007) simulated the effects of wetland restoration in the upper Mustinka sub-basin (Red River valley of west central Minnesota) and found that restoring 25% of the restorable wetlands there would increase flood storage by 27-32%, and a 50% restoration would increase storage by 53-63%. Similarly, if viewed as if those wetlands were natural wetlands remaining on the landscape and the impacts of their removal were under consideration, these

results provide a sense of the magnitude of the impacts on downstream waters, i.e., the significance of the nexus, as a result of that lost flood storage capacity.

Kurz et al. (2007) modeled peak flow reductions associated with artificial storage of precipitation on flooded agricultural lands in the Red River valley of the north central PPR, and estimated that with both conservative (259,000 acre-feet) and moderate (2,188,400 acre-feet) storage volumes placed on the landscape, flood stages like those of the flood of 1997 on the Red River could have been reduced by 2-5 feet at Grand Forks. Thus, it is reasonable to predict that similar impacts of flood attenuation would be associated with similar storage volumes in natural wetlands, again demonstrating the significant nexus that exists between the aggregate of the pothole wetlands with navigable waters.

Although potholes typically are not directly hydrologically connected to other waters via surface connections, during wet periods water tables rise and surface water levels reach outlet elevations of most potholes (Sloan 1972; LaBaugh et al. 1998; Winter et al. 1998; USGS 1999). This "fill and spill" phenomenon results in temporary but direct hydrologic connections among and between potholes, and between complexes of potholes and the streams and rivers in the region, with associated impacts on regional water regimes in navigable waters and their tributaries (Stichling and Blackwell 1957; Sloan 1972; Leitch 1981; Winter 1989; USGS 1999; Leibowitz and Vining 2003).

Lenhart et al. (2011) studied the wetlands in the Minnesota River Basin, which covers much of central and western Minnesota and some of Wisconsin. Their significant findings are most applicable to the eastern portion of the PPR, where the topographic relief is generally lower and there is a more integrated drainage system. They noted that over the last 30 years stream flows at less than bank full elevation had increased, and that while large floods had not significantly increased, the larger, longer duration flow volumes had a significant impact on the movement of sediment and nutrients, with clear implications for total daily maximum loads and nutrient management issues. Odgaard (1987) found average daily flows only one-third bank full were associated with increased bank erosion, streambank collapse and downstream sedimentation. Looking broadly at agricultural watersheds in two time periods (1940-70 versus 1980-2009), Lenhart et al. (2011) found streamflow had increased in the agricultural landscapes due to increased stormwater runoff and base flows, both of which are associated with wetland drainage. They stated mean annual flows had increased in most of the Minnesota River basin and Red River basin, as well as in the Des Moines, Sugar and Root rivers.

In an important recent study of 21 southern Minnesota watersheds, all contributing flow via tributaries to the Mississippi River, Schottler et al. (2013) showed surface drainage of wetlands was a significantly greater driver of increased downstream river flow than was land conversion to crops, precipitation, or subsurface tile drainage. They demonstrated drainage (depressions lost as a percentage of watershed area over a range of about 3% to 19%) was highly correlated with increases in water yield across the 21 watersheds. Importantly, the consequences of the

increased flows extended to increased erosion and widening of stream channels which in turn causes increased turbidity and sediment loading and transport (Wolman and Miller 1960; Doyle et al. 2005; Simon and Rinaldi 2006). Schottler et al. (2013) quantified six watersheds and also found a direct relationship with channel widening (up to 10-40%) with drainage of wetland basins, stating that that their findings were broadly applicable to the region.

Prairie Potholes: Surface-Groundwater Interrelationships

Prairie potholes, as well as other types of "other waters," can, and very often do, contribute to groundwater recharge, and this groundwater often continues to move downslope toward intermittent or flowing streams ultimately discharging into navigable waters or their tributaries (Winter et al. 1998). For prairie potholes, where the water table tends to be a subdued image of the topography and is generally very near the land surface (Sloan 1972), pothole wetlands can serve as groundwater recharge sites (Euliss et al. 1999). Winter and LaBaugh (2003) stated that prairie potholes are commonly connected via groundwater flow systems, and water that seeps from the wetland into shallow gravel aquifers can annually travel many kilometers, while movement through clay or silt layers can be much slower. A study of the water balance of potholes in southern Saskatchewan found that subsurface flow out of study wetlands was relatively minor in a clay-rich deposit (Conly and van der Kamp 2001), but given the extremely large number and high density of potholes in the region even minor contributions from each one (Hayashi et al. [1998] estimated 1%) represents a significant contribution to groundwater resources in the aggregate. In some areas, such as Cottonwood Lake, North Dakota on the edge of the Missouri Coteau, 16% of the outflow from potholes in the study area was discharge to the underlying aquifer (Carroll et al. 2005). Van der Kamp and Hayashi (1998) stated that there is little groundwater recharge from dry uplands outside depressions, and that groundwater recharge from small depressions constitutes a large proportion of the total recharge in many areas.

Winter and Rosenberry (1998) stated that some water seeping from potholes into groundwater passes beneath local flow systems and discharges to wetlands at lower elevations, commenting on the complexity of the connections between potholes and groundwater while recognizing that the fundamental connections are nevertheless common. Some of the complexity results from the dynamic climatic and related water conditions on the prairies (LaBaugh et al. 1996; Rosenberry and Winter 1997; Winter and Rosenberry 1998), underscoring the importance of using a weight of the evidence approach to determining significant nexus in such systems. Short-term, scientifically verified determinations are not only costly and largely impractical to apply, they can also lead to conclusions that are incorrect in the long-term due to their short-term nature and inability to account for variation over time.

A number of studies have shown that connections between the groundwater and the water contained within potholes occur mainly at the shoreline zones where more impermeable soils of the basin grade into more permeable soils in transition zones, or through fractures in the basins' substrate (Williams and Farvolden 1967; Millar 1971; Eisenlohr and Sloan 1972; Sloan 1972;

Weller 1981). Furthermore, because seepage contributions to groundwater are greatest where wetland shoreline is largest relative to the water volume (Millar 1971), the smallest pothole wetlands are proportionately more important to groundwater connectivity. Sloan (1972) stated that surface water seepage to groundwater was greater for ephemeral and temporary wetlands than for other wetland types. These are the very types of wetlands that are currently being drained at the greatest rates (Dahl 2014), and are most at risk of degradation or loss absent CWA jurisdiction. Woo and Rowsell (1993) examined recharge from potholes and adjacent land in southern Saskatchewan and found that the inundated zone of the pothole itself contributed much more to recharge of the shallow subsurface aquifer (three orders of magnitude) than the adjacent non-inundated zone.

Some potholes have a net seepage outflow (groundwater recharge basins), others have a net seepage inflow (groundwater discharge basins), and many basins function alternately - at times having a net outflow into the groundwater and at other times having a net inflow (Sloan 1972; Swanson et al. 1988; LaBaugh et al. 1998; Johnson et al. 2004). Hubbard and Linder (1986) concluded that approximately 12% of the total storage capacity of wetlands in an area in northeast South Dakota infiltrated to groundwater as recharge, and that drainage of potholes therefore significantly reduces ground water recharge rates. Net seepage outflow into the groundwater can more typically amount to 20-30 percent of the total water loss for prairie wetlands (Eisenlohr and Sloan 1968; Shjeflo 1968; Eisenlohr and Sloan 1972; Winter and Rosenberry 1995).

Pothole wetlands are generally connected to and continuous with the groundwater in the surrounding area in relatively local groundwater flows (van der Kamp and Hayashi 2008), but these surficial aquifers can extend up to several miles. Regional aquifers are located deeper than the surface aquifers, and water flow into and through these deeper aquifers can be significant in locations in which they underlay an extensive area, and often flow to distant discharge areas (van der Kamp and Hayashi 2008). While a relatively small portion of recharge water flows to these deeper, geographically more expansive regional aquifers, this portion of the groundwater recharge from wetlands is important for sustaining groundwater resources (van der Kamp and Hayashi 2008). Input from wetlands on the topographically higher parts of the landscape (such as the Missouri Coteau and Prairie Coteau in North and South Dakota and Minnesota, where wetland densities are often highest) most commonly recharge regional aquifers. Hayashi et al. (1998) documented for one wetland that approximately 4% of infiltration reached a regional aquifer, so this clearly can be a significant volume of recharge water to aquifers when multiplied by tens or hundreds of thousands of similarly situated wetlands within a region.

To support CWA jurisdiction, it is important to note that the groundwater to which the pothole wetlands are linked subsequently provides input to lower-lying wetlands and stream valleys (van der Kamp and Hayashi 1998). Numerical simulation of regional groundwater flow systems in Stutsman and Kidder counties, North Dakota, portrayed lateral movement of groundwater flow

over 16 miles to discharge into Pipestem Creek, a prominent stream in the region (Winter and Carr 1980). In another area of the PPR in northwest Minnesota, Cowdery et al. (2008) demonstrated that horizontal hydraulic conductivity in shallow aquifers was high and that these aquifers can extend tens of miles in the region and interact with deep aquifers in some areas. Surface aquifers were recharged in significant part from surface waters, particularly from at-risk seasonal and ephemeral wetlands. Notably, discharge areas for the water from these shallow aquifers included surface waters, as well as withdrawal from wells. In fact, 17-41% of the water from the surface aquifers was discharged to surface waters that left the study area, and groundwater discharge comprised 30-71% of all surface drainage flow, helping to maintain base flow. van Voast and Novitzki (1968) concluded that groundwater and surface water interconnections (including flowing waters) were typical in the Yellow Medicine River watershed in the PPR region of southwest Minnesota.

Prairie Potholes: Water Quality Relationships

Potholes act as sinks for nutrients and other chemicals, including those widely used for agricultural purposes, and thereby affect and improve the quality of runoff water (van der Valk 1989; Davis et al. 1981; Crumpton and Goldsborough 1998; Whigham and Jordan 2003). Ditches draining potholes create new surface connections between previously geographically isolated wetlands and tributaries and rivers (Brunet and Westbrook 2011). With pothole wetlands being the landscape's primary storage area for nutrients and salts, these solutes (along with increased sediment loads) are transported via these new surface connections downstream when the potholes are drained (Brunet and Westbrook 2011; Lenhart et al. 2011). Yang et al.'s (2008) study of the Broughton Creek watershed estimated that a 31% increase in nitrogen and phosphorus load from the watershed and a 41% increase in sediment loading were associated with wetland loss in the watershed. Yang et al. (2010) looked at this issue using an alternate approach, providing additional support to their earlier conclusions regarding both nutrients and sediment. Thus, when as a result of the ditching or filling of wetlands the retention time is shortened or eliminated and the associated biochemical processes are thereby altered, the cleansing or filtration function of the former wetland is lost or degraded, with direct negative impacts on the quality of the downstream navigable waters. Similarly, water retained in a pothole is cleansed of much of its load of pollutants via biochemical processes before it enters groundwater and flows laterally to other areas and other waters, or downward into deeper aquifers, as described earlier.

Goldhaber et al. (2011) indicated that oxygenated groundwater in the region interacts with soil constituents and focuses sulfate-bearing water from topographically higher to lower areas. Of course, drainage courses that ultimately flow to navigable waters are the topographically lowest areas in the landscape, and would therefore be chemically altered as a consequence of changes to the connections between wetlands, groundwater, and the flowing waters. In addition, Cowdery et al. (2008) pointed out that one of the discharges of aquifers was withdrawal from wells for

domestic and farm/ranch use. Therefore, filling or draining of pothole wetlands so that infiltration is reduced or water quality affected, or the addition of pollutants to the wetland from any source, would likely ultimately affect the well water quality (as well as the quality of navigable waters receiving discharges from the affected aquifer from either surface or subsurface flows).

Ginting et al. (2000), working in the Minnesota River watershed, also showed that draining wetlands there led to increased runoff, thereby carrying elevated levels of solids and nutrients into downstream waterways. The findings of Lenhart et al. (2011) and Odgaard (1987) described earlier clearly demonstrated that the physical impacts of increased downstream flows resulting from drainage of potholes were also accompanied by degradation of the physical and chemical integrity (increased sediment movement and nutrient transport and concentration) of downstream waters in the PPR. The increased stream flows that result from draining potholes and reducing the retention time of water on the landscape causes increased stream flow, which in turn increases river erosion, bank sloughing and widening, and reduces water quality by increasing turbidity and sediment loads (Schottler et al. 2013). All of these significant impacts to the integrity of downstream waters are the direct consequence of the drainage or filling of pothole wetlands across the landscape.

Water captured and retained within pothole wetlands has been shown to have elevated levels of pesticides. In a portion of the Canadian PPR containing almost 1.8 million potholes, up to 60% of the wetlands examined exceeded Canadian guidelines for the protection of aquatic life for at least one pesticide (Donald et al. 1999). Squillace et al. (1996) found that in the Cedar River basin of Iowa a number of agricultural chemicals moved from surface water bodies into the groundwater, and subsequent movement and discharge of that groundwater served as the primary source of these chemicals entering the Cedar River and thereby impacting its chemical integrity. Concentration of pesticides in wetlands across broad areas in other landscapes with an important wetland component, e.g., the High Plains with its playas, has also been demonstrated (Belden et al. 2012), thus drainage would mean these waters with elevated pesticide levels would flow to and impact the chemical integrity of downstream waters if drained.

Blann et al. (2009) provided an important and comprehensive review of the effects of agricultural drainage in the southern PPR on the aquatic ecosystems of the region. Their work provides an excellent overview of the inter-relationships between predominately geographically isolated wetlands, groundwater, and flowing waters that would be jurisdictional under the proposed rule.

Prairie Potholes: Biological Nexus

Although prairie potholes are biologically significant on a continental scale due to their continental importance as a breeding landscape for waterfowl and other migratory birds, because of the relative paucity of internal drainage networks there has to date been little research on the

biological connections between this category of "other waters" and navigable waters in the context most useful to the proposed rule. In one important study, however, Lannoo (1996) demonstrated that where PPR wetlands have been connected to navigable waters (e.g., in the Iowa Great Plains region), amphibian populations in the formerly isolated wetlands have decreased significantly. Thus, in an instance such as this, the creation (by draining and ditching) of a surface hydrological nexus where none previously existed between the wetland and navigable water had a significant negative effect on the biological integrity of the waters involved. In addition, several waterfowl species require or use both saline lakes and freshwater wetlands and rivers in North Dakota (Windingstad et al. 1987; Swanson et al. 1984), with the freshwater wetlands being necessary for purposes of osmoregulation.

In addition, the cumulative impacts of pothole drainage to downstream waters, including increased pesticide levels (Donald et al. 1999) and increased turbidity and sedimentation (Gleason et al. 2003; Schottler et al. 2013), would clearly impact the biological integrity of downstream waters. Gleason et al. (2003) found that sediment deposition of only 0.5 cm resulted in a 99.7% reduction in total invertebrate emergence and 91.7% reduction in seedling emergence in an experiment conducted in the context of the PPR. The increased flows in downstream waters resulting from drainage or filling of potholes (see previous section and citations) would also affect the capability of those waters to sustain populations of organisms more suited to the lower flows, decreased concentrations of nutrients and other solutes, and lower sedimentation rates of waters not impacted by drainage. Thus, the biological impacts to aquatic life in navigable waters that result from the increased hydrological connectivity and corresponding increases in stream flow and erosiveness, sediment loads, and nutrient and pesticide concentrations, cannot be ignored as an important component of the significant nexus evaluation for the ecoregion.

Prairie Potholes: Economics

Some of the greatest economic impacts associated with the alteration of the significant nexus between pothole wetlands and navigable waters in the PPR are those associated with increased flood damages resulting from lost flood attenuation functions. For example, the estimated net benefit of artificially storing water in the Red River valley as described by Kurz et al. (2007) exceeded $800 million over 50 years in some scenarios as a result of reduced flood stages in the Red River and avoided damages and other benefits. Hey and Phillipi (1995) documented that mean annual flood damage in the Upper Mississippi River basin had increased 140% over the previous 90 years (in adjusted dollars). Given the extent of increasingly frequent damaging floods along rivers in and flowing out of the PPR (as well as in other areas around the country), the economics associated with avoided damages through wetland protection and maintenance of flood water storage functions should also be an important component of significant nexus analyses.

One recent study (Yang et al. 2008) also estimated the value of the nutrient removal and carbon sequestration services lost due to draining or altering potholes in the Broughton's Creek watershed since 1968 to be $430 million.

In summary, we believe that the weight of the existing scientific evidence clearly demonstrates that when prairie potholes are drained or filled such that they can no longer fulfill functions such as water storage and water quality maintenance. As such, the physical, chemical and biological integrity of the receiving downstream navigable waters is negatively affected. The significant nexus they have as a result of "geographic isolation" is fundamentally altered when the basins are filled or drained via ditches and more directly linked to the downstream waters. The extent to which navigable waters are impaired depends upon the scale of the altered inputs, thereby reinforcing the importance of using an appropriate watershed, groupings of watersheds, and/or ecoregional scales to assess aggregate impacts. Again, we believe that Justice Kennedy's choice of the Gulf of Mexico's hypoxic zone as an example of the type of water quality issue that the CWA is intended to address should shed some light on the scale of the "region" that should be used to assess aggregate impacts. While we do not believe that he would consider the entire Mississippi River watershed as a reasonable basis for such determinations, we firmly believe that a single point of entry watershed is not only unwarranted on the basis of the science available for the PPR as a whole, this scale will in many cases be too small to appropriately and efficiently assess aggregate impacts of wetlands similarly situated within a region such that the objectives of clarity, certainty, and predictability are achieved. Thus, we again suggest that the level of the ecoregion is the best scale at which to examine many aggregated wetlands, such as the prairie potholes.

C. Texas and Southwest Louisiana Coastal Prairie Wetlands

The inland, freshwater wetlands of the coastal prairies of Texas and southwest Louisiana are contained within Level III ecoregion 34, "Western Gulf Coastal Plain." The region is a mosaic of low relief mounds, flats, and depressional wetlands (Moulton and Jacob 2000), and provides another good example of a situation in which it would make little sense to conduct significant nexus analyses for each single point of entry watershed. They are by-and-large aligned along the Gulf Coast, and are all very similar in their fundamental hydrogeomorphic and ecologic characteristics, strongly reinforcing the case for ecoregional analyses.

The wetlands across the region can be locally diverse, but their basic hydrology typically ranges from temporarily flooded to only rarely exposed, much like the prairie potholes. And, they typically occur in relatively high densities. Studying only a relatively small but typical portion of the ecoregion in a 200 mi^2 area near Galveston Bay, researchers counted over 10,000 non-riverine palustrine wetlands, with a median size of only 0.9 ac and 72% being less than 2.47 ac (Enwright et al. 2011). In the aggregate, the wetland basins and their catchments represented over 40% of the study area (Enwright et al. 2011). Like prairie potholes, most are geographically isolated, and are being lost relatively rapidly. In Harris County and the Houston

area, 13% were drained or filled over a recent 10-year period (Jacob and Lopez 2005). This is a region and category of wetlands which the SAB September 30 letter to the EPA identified as being similarly situated "other waters" that in the aggregate have a significant nexus that affects the integrity of downstream navigable waters, and therefore should be considered jurisdictional waters of the United States. This landscape is also of considerable importance to waterfowl conservation, so we provide here a short review to highlight and complement the literature that appears in the draft Connectivity Report.

Gulf Coastal Prairie Wetlands: Hydrologic and Chemical Connectivity

In south Texas near Galveston Bay, coastal prairie wetlands are a prominent and important component of the landscape. Two recent studies (Forbes et al. 2010; Wilcox et al. 2011) showed that in the case of these coastal depressional wetlands that have often been considered "geographically isolated wetlands," intermittent surface water connections with the surrounding coastal jurisdictional waterways involved 17-18% of the precipitation falling on the watershed during the study period. Wilcox et al. (2011) demonstrated that the complexes of the wetlands that they studied here in fact exhibited a strong surface water connection with the waterways in the region, serving in effect as headwaters with intermittent but regular discharges to flowing waters and estuaries. Both studies concluded that much of the surface runoff entering the navigable Galveston Bay and other nearby waters likely passes through coastal prairie wetlands, and support the contention that their results can be generalized across the Texas Gulf Coastal Plain. Not only is the nexus between these wetlands and the coastal waters significant on the basis of the quantity of water flows, but Forbes et al. (2010) also found that these wetlands significantly affect the water quality of navigable waters by reducing incoming inorganic nitrogen by approximately 98%, and inorganic phosphorus by 92%. Thus, these wetlands are positioned within the hydrologic flow paths to serve as strong sinks for nitrogen and phosphorus and thereby provide substantial reduction of the pollution of runoff waters that ultimately enter the Galveston Bay estuary. The fixed carbon and nitrogen then exported from these wetlands to the navigable waters provides valuable food web support, thereby creating a biological nexus, as well. Forbes (2007) serves as a useful annotated bibliography for coastal prairie freshwater wetlands as the agencies synthesize the related science for the "other waters" within this ecoregion.

An important and broadly applicable point highlighted by these recent studies of Gulf coastal prairie wetlands is that in the case of at least some, and perhaps many, of the subcategories of "other waters" in ecoregions across the Nation, it is only recently that studies have been conducted to focus on the question of connectivity in the context of the legal issues raised by the recent Supreme Court cases. In the case of these Gulf coastal prairie wetlands, we have a relatively few focused studies that have nevertheless provided strong evidence of connectivity bearing upon their potential designation as "waters of the U.S." by rule. Based on the recent increased rate of research related to connectivity of the type necessary for evaluation of

"significant nexus" determinations in the aggregate, we would anticipate a continued and important need to have a process through which new science will be able to be continually incorporated into the decision making process for what are being termed "other waters." Furthermore, this situation provides additional support regarding the benefits of applying the "weight of the evidence" approach at this important stage of the regulatory process to assess subcategories of "other waters" that could or should be designated as jurisdictional by rule, thereby aiding in providing clarity, certainty and predictability to all parties, and in making the process as efficient and pragmatic as possible.

Gulf Coastal Prairie Wetlands: Biological Connectivity

This region contains one of the best examples in which migratory birds serve as a strong indicator of biological connectivity that is fully consistent with the findings of the *SWANCC* decision and Justice Kennedy's language in *Rapanos* with regards to birds, and does not in any way resurrect the so-called "migratory bird rule" or the way in which birds were used pre-*SWANCC* to justify CWA jurisdiction.

First, it must be clear that the *SWANCC* decision did not say or imply that migratory birds were irrelevant to jurisdiction, but rather it simply found that use by migratory birds (i.e., in the fashion of the "migratory bird rule") could not be the sole basis for determining CWA jurisdiction. We accept the interpretation of the *SWANCC* decision that makes use by a *migrating* bird essentially irrelevant (setting completely aside the importance of many or most of these wetland areas to interstate and international commerce). But, in the context of assessing the biological basis for significant nexus, a *"migrating* bird" and a *"migratory* bird" are two very different things. "Migratory birds" represents a legal categorization of bird taxa that reflects their tendency to migrate between a breeding area and a wintering area, sometimes distant from one another. The U.S. Fish and Wildlife Service is legally responsible for maintaining the list of bird taxa that are considered "migratory species." Other bird taxa are considered resident or non-migratory species, and spend their entire annual life cycle within a relatively small region.

With the distinction between migrating and migratory birds in mind, we understand that, for example, the fact that a redhead duck (*Athya americana*) migrating from its breeding habitat in North Dakota stops for a short time at a wetland in central Iowa on its way to its wintering ground on the Texas Gulf Coast, cannot in and of itself be used to assert CWA jurisdiction over the Iowa wetland. However, when a migratory bird (a legal designation of a large category of birds, as opposed to resident or non-migratory species) like the redhead can be shown to be dependent upon *both* navigable waters and "other waters" *within* a season and within a relatively local or regional context, then the migratory birds should indeed contribute to the establishment of a significant biological nexus between the "other waters" and the navigable water.

Redheads and lesser scaup (*A. affinis*) during their wintering period provide excellent examples. Approximately 80% of the entire North American population of redheads winters in estuaries of

the Gulf of Mexico, mostly in the Laguna Madre of Texas and Tamaulipas, Mexico (Adair et al. 1996; Ballard et al. 2010). They forage almost exclusively on shoalgrass (*Halodule wrightii*) in the hypersaline lagoon, which is a traditionally navigable waterway (Ballard et al. 2010). Large numbers of lesser scaup also winter in the Gulf Coast region, and generally forage on invertebrates in the saline and brackish marshes and offshore habitats of Texas and Louisiana (McMahan 1970). Large concentrations of diving ducks in the region, including these two species, must also make daily use of inland, coastal freshwater ponds in order to dilute and excrete the salt loads that are ingested while feeding in the saline habitats (Mitchell et al. 1992; Adair et al. 1996; Ballard et al. 2010). Activity budgets documented that redheads and scaup spent approximately 37% and 25% of their time, respectively, on the freshwater wetlands actively drinking (Adair et al. 1996). While both studies found that redheads and scaup tended to make greater use of wetlands in closer proximity to the coast when they were available, they flew farther inland when necessary during dry conditions to acquire freshwater because they require the freshwater to survive. Adair et al. (1996) found that redheads used wetlands up to 13 miles inland, and scaup used wetlands up to 33 miles from the coastal navigable waters. Thus, these researchers and others (e.g., Woodin 1994) concluded these migratory bird species are dependent upon *both* the navigable saline waters of the Laguna Madre and Gulf of Mexico, *and* the inland, geographically isolated freshwater wetlands, throughout the approximately 5-month wintering period. Therefore, if the inland freshwater wetland habitats, i.e., the "other waters," are adversely impacted because of a lack of CWA jurisdiction, the region's ability to support redhead, scaup and other diving duck populations is degraded, and the biological integrity of the traditionally navigable water of the Gulf of Mexico's Laguna Madre would therefore be impacted. The dependency upon both the "other waters" and the navigable waters involved here therefore clearly constitutes a significant nexus that is fully consistent with the legal framework laid out by Justice Kennedy.

Gulf Coastal Prairie Wetlands: Economic Consequences Related to Hydrologic Connectivity

A series of studies around the Gulf Coast documented the direct, significant impacts of wetland drainage on actual flood damages based on real insurance costs. This is particularly relevant to examine here because the state of Texas consistently has more flood damage than any other state.

Brody et al. (2014) looked at an individual watershed within this ecoregion near Houston, and found that the presence of wetlands was the second-most important land-use-land-cover factor related to flood damages totaling $356 million over 11 years. Of all variables, being surrounded by wetlands had the strongest influence on reducing flood damages. Looking more broadly at a 37-county area along the entire Gulf coast of Texas between 1997 and 2001, Brody et al. (2008) found that alteration of wetlands was strongly correlated with flood damages. They noted that in areas with greater degrees of wetland loss, flood damages increased with a given amount of precipitation.

Brody et al. (2007a) conducted a similar examination of flood damage and wetland alteration between 1991 and 2002 over an even more expansive area that included all fourth-order HUCs within 100 miles of the coasts of Texas and Florida. Once again, they clearly demonstrated a strong relationship between wetland loss and alteration and increased flood damage. Importantly, they found that the cumulative effects of many small scale impacts to wetlands had a significantly greater effect on the level of flood damages than did larger, individual impacts. Brody et al. (2011) looked at more than $13 billion in insured property losses across 144 coastal counties in all five Gulf coast states (plus several counties in extreme southwest Georgia) over the 2001-2005 period. They again found that wetland alteration was a significant factor in explaining flood damages. Similar studies in Florida (Highfield and Brody 2006; Brody et al. 2007b) also demonstrated that flood-caused property damages significantly increased as a consequence of the degree to which naturally occurring wetlands were altered. Thus, this series of powerful studies convincingly demonstrated the direct economic consequences of failure to recognize the connectivity of many "other waters," including geographically isolated wetlands, to downstream waters, and that the cumulative effect of many small, scattered wetland impacts to these wetlands are significant, oftentimes more so than individual larger impacts.

In summary, and in accordance with the conclusion expressed by the SAB in their September 30 letter to the EPA, the available science strongly supports the designation of the "other waters" classed as Gulf coastal prairie wetlands throughout this ecoregion, and in the aggregate, as jurisdictional by rule.

D. Nebraska's Sandhill Wetlands

Ecoregion #44, the Nebraska Sand Hills, is the largest sand-dune area in the Western Hemisphere. This approximately 12 million-acre region of central and eastern Nebraska contains over 1,000,000 acres of sandhill wetlands (LaGrange 2005). The "other waters" in this region include approximately 177,000 acres of open water and marsh, i.e., permanently and semi-permanently inundated wetland, and 1.13 million acres of wet meadow, i.e., ephemeral and seasonal wetlands (Rundquist 1983). Sandhill wetlands range in size from less than an acre to 2,300 acres, but 80% are less than 10 acres (Wolfe 1984).

Ginsberg (1985) noted that although many of these wetlands and lakes appear to be geographically isolated wetlands, they are predominantly hydrologically connected to and represent an extension of the groundwater, particularly in the eastern and central sandhills and thereby supply base flows to the streams and other waters in the region. These sandhill wetlands developed as groundwater seepage areas in the valleys of wind-deposited sand dunes (Sidle and Faanes 1997). Rundquist et al. (1985) provided evidence of groundwater flow-through in a shallow lake, with the groundwater flowing toward Blue Creek, about 3 miles away. LaBaugh (1986) also documented interconnections and flow between sandhill wetlands and lakes and groundwater as water in this interconnected system flowed toward lower elevations. Novacek

(1989) stated that the sandhill wetlands in Nebraska (including wet meadows) are important to water table and aquifer recharge, with the region containing five principal drainage basins that all ultimately empty into the Platte and Missouri rivers. It has also been stated that most sandhill wetlands are also interconnected with the important Ogallala aquifer as well as the local groundwater (Tiner 2003).

Winter (1986) demonstrated that recharge of the groundwater was focused on depressions in the landscape (e.g., wetlands). Thus, in this region, the return of polluted water can enter the aquifer or regional watershed through these geographically isolated wetlands and degrade downstream water quality (Winter 1998). Winter (1998) stated that, "groundwater and surface-water interactions have a major role in affecting chemical and biological processes in lakes, wetlands and streams, which in turn affect water quality throughout the hydrologic system." Katz et al. (1995) demonstrated the ease with which changes in the chemistry of these types of "other waters" are transported and reflected in the water quality of groundwater. The extent of connectivity between the wetlands, groundwater and downstream flowing waters was provided by Chen and Chen (2004) when they documented that a very high percentage of the flow of the Dismal and Middle Loup rivers was supplied by groundwater. Further evidence of the connectivity with the groundwater is the presence of fens in the region (Steinauer 1995).

Tiner et al. (2002) indicated that most sandhill wetlands are interconnected with the local groundwater and the agriculturally important Ogallala, or High Plains, aquifer. Importantly, in terms of the issue of connectivity of the wetlands with downstream waters via groundwater, Weeks and Gutentag (1984) stated that groundwater from this aquifer discharges naturally into flowing streams and springs, and that the aquifer and valley-fill deposits and associated streams comprise a stream-aquifer system that links the High Plains aquifer to surface tributaries of the Platte, Republican and Arkansas rivers.

In summary, the scientific evidence is clear that the Sandhill wetlands are, in the aggregate and generally, connected via groundwater linkages to navigable waters and their tributaries in this region of the country. Thus, they should be strongly considered for designation as jurisdictional by rule.

E. Playa Wetlands, Rainwater Basins, and Platte River Region Wetlands

Playa Wetlands: The science of playas (sometimes referred to as "playa lakes") and related waters provides another excellent example of the types of linkages that can be used to demonstrate a significant nexus between even physically remote wetlands and navigable waters, in this case via critical groundwater connections.

Playas are relatively shallow, ephemeral, closed-basin wetlands usually not located adjacent to navigable waters (Fig. 12). They occur in high densities in several areas within ecoregion 27, the Central Great Plains, including the Rainwater basin region of Nebraska (see below) where its wetlands are very similar in structure and function to the playas that occur farther south. These shallow, typically circular basins lie at the lowest points in relatively low-relief watersheds, and each collects runoff from the surrounding area. About 66,000 playas remain in the relatively flat topographic landscape of the Great Plains of Kansas, Colorado, Oklahoma, Texas, and New Mexico (Playa Lakes Joint Venture http://www.pljv.org; Smith et al. 2012; Fig. 13). In Kansas, a recent study using improved techniques documented about double the number that had previously been estimated (new estimates of about 22,000 playas), and noted that more than 80% were smaller than 5 acres in size (Bowen et al. 2010). Playas tend to occur in clusters of high density in several distinct areas across the ecoregion, and are dominant components of the landscape in these areas (Bowen et al. 2010). For example, the total playa area in west Texas was estimated (Fish et al. 2000) to be almost 400,000 acres. Thus, given their numbers, distribution, and structural and functional similarities, the value of playas is most reasonably assessed in the aggregate across the landscapes in which they occur (Johnson et al. 2012; Smith et al. 2012).

The Ogallala (or High Plains) aquifer underlies about 170,000 square miles and is shared by eight states, including most of the playa region, as well as the Rainwater Basin area of Nebraska. This aquifer is the primary source of water in the region with about 97% being used to support irrigated agriculture (Maupin and Barber 2005), and the water has an economic value of approximately $20 billion (Moody 1990). The aquifer also provides drinking water for about 82% of the region's residents (Maupin and Barber 2005).

Conceptual models have recognized for years that the playas are critical recharge zones for the Ogallala (e.g., Wood 2000). Gurdak and Roe (2009; 2010) recently provided a comprehensive synthesis of the related literature (approximately 175 studies) and concluded that playas are pathways of relatively rapid recharge and provide an important percentage of recharge to the Ogallala aquifer. Thus, playas are, in the aggregate, critical to supplying water to an important, interstate water body, and they therefore impact the water quantity of the underlying aquifer (Gurdak et al. 2009; 2010). Furthermore, Rainwater and Thompson (1994) stated that landscape changes increased water collection in playas and that infiltration had also increased. They further stated that these factors increased the contribution of playas to Ogallala aquifer recharge and that, in some areas, infiltration from playas that receive runoff are the principal source of aquifer recharge.

Understanding that the CWA has no jurisdiction over groundwater, the importance of the aquifer to human health, welfare and economic benefit is therefore not a direct, independent concern of the Act except as it is affected by the condition of surface water and wetlands and in turn as it

impacts waters to which the aquifer discharges. For example, Weeks and Gutentag (1984) stated that groundwater from this aquifer discharges naturally into flowing streams and springs, and that the aquifer and valley-fill deposits and associated streams comprise a stream-aquifer system that links the High Plains aquifer to surface tributaries of the Platte, Republican and Arkansas rivers, as well as the Pecos and Canadian rivers (Kreitler and Dutton 1984). Further strengthening documentation of the linkage of wetlands, groundwater, and flowing navigable waters, Slade et al. (2002) showed that channel gain or loss in Beals Creek (draining into the Colorado River basin of Texas) corresponded to discharges from or recharges to the Ogallala aquifer. Thus, the significant nexus between the playa wetlands and navigable waters is created by their direct linkage via the Ogallala aquifer.

In addition to the impact that playa wetlands have on the quantity of water moving from the wetlands, through the aquifer, and to navigable waters, they also have an impact on the quality of that water. Ramsey et al. (1994) showed that playa wetlands improve the water quality of storm runoff, demonstrating that water quality in the playa is better than that found in storm runoff before entering the wetland. They stated that this wetland function thereby contributes to improving/maintaining groundwater quality in the aquifer, as would be predicted in light of playas being the principal source of aquifer recharge in some areas (Rainwater and Thompson 1994). Thus, as a result of the relationships with navigable rivers in the region (Weeks and Gutentag 1994), playas must also improve water quality in those streams and rivers.

Hence, impaired water quality functions of playas would have adverse impacts on the quality of water in the aquifer and linked navigable waters. Increased agricultural application of nitrate fertilizers makes the groundwater more vulnerable to nitrate contamination (Gurdak and Roe 2009) via playa recharge. Belden et al. (2012) found that the water in many playas sampled in Nebraska, Colorado, Texas and New Mexico contained elevated levels of pesticides, particularly herbicides. Given the linkage of playas to the Ogallala, the potential impacts of what might be deposited in the playas to the groundwater and then transferred to the receiving waters of the aquifer's discharge are clear. In addition, as a result of relatively slow recharge rates, the limited ability of the aquifer itself to attenuate contaminants such as nitrates, and the prolonged travel times of aquifer water, any potential contamination would have very long duration (Gurdak and Roe 2009) even if corrective action were taken. Thus, the natural denitrification function of intact playas takes on added significance in relation to the quality of water in the aquifer, and ultimately, to its interconnected flowing waters.

Rainwater Basin and Platte River Region Wetlands: The Platte River and Rainwater Basin region of central Nebraska is an inland situation that should be examined in more detail. The Platte River and its major tributaries transect ecoregions 25 (High Plains) and 27 (Central Great Plains), and the Rainwater basin region is in ecoregion 27, along with most of the playas (see above). In addition to the previously discussed documentation and acceptance of the fact of the

hydrologic connectivity between the Platte River, its tributaries, and "other waters" in the region, Chen (2007) noted that the river, alluvial aquifer, and the riparian zone all form a well connected hydrologic system. He additionally indicated that water in streams there may come from shallow or deep aquifers depending on evapotranspiration rates, further indicating the connectivity of the components of the aquatic system there.

Millions of waterfowl migrate through the region every year and concentrate in the small percentage of the region's remaining wetlands (approximately 5%) that provide habitat, particularly in the spring. In addition, nearly the entire population of mid-continent sandhill cranes (*Grus Canadensis*; ~500,000 birds) stages there (Krapu et al. 1982; Vrtiska and Sullivan 2009), and it is an important concentration site for the federally endangered whooping crane (*G. americana*; Austin and Richert 2005). Although this region is a migration and staging area for the crane species, the situation requires further examination because huge numbers of the sandhill cranes, and non-negligible percentages of the whooping crane, roost at night by standing in the very shallow waters of the Platte River (along about 65 miles of its length in central Nebraska), but they leave the river to use other habitats for feeding and loafing during the day. While the sandhill cranes feed predominantly on waste grain in crop fields (Krapu et al. 1984; Davis 2003; Anteau et al. 2011), the whooping crane spends more time in palustrine wetland habitats (Austin and Richert 2005). Austin and Richert (2005) analyzed habitat use from 1977-99, but did not appear to directly review their data relative to the question of the degree of dependence of whooping cranes on both the riverine habitat and the freshwater wetlands in the sense required to firmly establish a significant nexus as currently proposed.

Folk and Tacha (1990) documented patterns of use of the North Platte River and the region's temporary and semipermanent palustrine wetlands by sandhill cranes. The North and Central Platte River valley provides the primary spring staging habitat for about 80% of the entire midcontinent population of the species (Pearse et al. 2010), and the cranes typically roost in the river channel or nearby wetlands for safety during the night. They found that the cranes were collectively interdependent upon the shallow navigable river and the region's wetlands, providing a biological nexus between the two types of waters. Taken together, these and other studies (Gersib et al. 1989; Tacha et al. 1994; Bishop et al. 2010; Pearse et al. 2011) indicate that the Platte River and the wetlands of the rainwater basin and surrounding landscape function as a complex of aquatic habitats for a diversity of species, and as the "other waters" of the region are negatively impacted, so too is the biological integrity of the navigable Platte River.

Thus, playa wetlands, as well as the Rainwater basin wetlands, provide strong evidence of the kinds of linkages (often via important groundwater bodies) and relationships between "other waters" and downstream or navigable waters that can inform significant nexus analyses of aggregated wetlands in these and other regions of the country.

IV. Significant Nexus: Additional Science-based Comments Regarding Connectivity

Because Ducks Unlimited has over time focused its conservation efforts and developed its expertise in some regions more than others in relation to their relative importance to waterfowl conservation, our preceding analyses have concentrated most on those regions. However, as is evident from the Connectivity Report and the draft report of the SAB's special panel on connectivity, the scientific literature clearly documents that many other wetlands and wetland subcategories falling within the proposed rule's "other waters" classification have similar types of significant nexuses with downstream navigable waters. The remainder of our comments will highlight some of the science regarding the existence, geographic extent, and general pervasiveness of those avenues of significant nexus. We have primarily organized this additional information by hydrologic and ecologic functions, and divide our contributions into the four categories of "*Surface water storage and flood abatement*," "*Groundwater recharge and base flow maintenance*," "*Water quality relationships*," and *"Biological nexus."* It should be clear from the regional examples cited above, however, that these individual wetland functions and avenues of significant nexus can and do interact in important ways.

Obviously, we will not attempt to duplicate the exhaustive amount of work that went into reviewing and synthesizing the well over 1,000 scientific publications synthesized within the Connectivity Report and, importantly, the report of the SAB's special panel on connectivity. Instead, our intent in providing these additional comments regarding the significant nexus of "other waters" with downstream navigable waters is to encourage and provide support for the agencies' consideration to several key points.

First, we desire to contribute additional science and science-based perspective to the work that the agencies have already conducted, that will be added to by the public comments, and ultimately further synthesized in the form of the final rule. We also want to provide further encouragement to the agencies to use a "weight of the evidence" approach in making decisions regarding how "other waters" will be treated in the final rule. Our earlier comments offer what we believe is a compelling, multifaceted rationale for using that conceptual framework as the foundation for distilling the existing and emerging science into the final rule. However, we believe that, in addition to the science already presented, while not focused on particular regions, the following additional science and comment should help to foster a greater understanding of the breadth and general degree of linkages that exist to demonstrate a "nexus" between almost all "other waters" and downstream navigable waters. And finally, we hope to help convey a sense of the scientific reality that the cumulative effect of many small, scattered, seemingly isolated impacts to "other waters" ultimately has an impact on downstream navigable waters that can only be considered significant, as evidenced by the current state of the Nation's waters being a reflection of the past cumulative degradation and loss of "other waters."

A. Surface Water Storage and Flood Abatement

Wetlands in any watershed, including "other waters," serve a critical function in storing and holding water and associated pollutants (including sediment) that otherwise would flow more rapidly and directly toward navigable waters. Thus, wetlands play a significant role in local and regional water flow regimes by intercepting storm runoff and storing and releasing those waters over an extended period, either through surface or groundwater discharges (Mitsch and Gosselink 1986). Floods continue to be the most economically significant natural hazard in the U.S., and have a significant negative impact on national, regional, and local economies, as well as taking a toll on human life, health, and general welfare.

We again encourage the agencies to carefully review Blann et al.'s (2009) thorough review of the effects of surface and subsurface drainage on aquatic ecosystems (>400 citations). They make an important contribution by collecting and effectively synthesizing information that relates to the effects of drainage, often involving either existing or former "other waters," on the chemical, hydrologic and physical, and biological integrity of downstream waters. Their synthesis underscores the significance of the cumulative impacts of the upstream alterations of water bodies.

Another recent paper (McLaughlin et al. 2014) specifically examined geographically isolated wetlands from the standpoint of the current "significant nexus" context. They added to the many others who have found that these kinds of "other waters" moderated the frequency of both very high and very low water tables, and they also buffered stream base flows, thereby exhibiting a significant nexus with flowing waters. This functional connection between geographically isolated wetlands and navigable waters reduces the risk of downstream interests to flood hazards, and also reduces the erosion of stream banks and sediment movement and the physical, chemical, and biological consequences of those alterations to downstream hydrology. Additionally, groundwater exchange is controlled more by wetland perimeter than surface area, indicating the importance of many small wetlands. Importantly, their modeling work verified that given the same surface area of wetlands, landscapes with many small wetlands had more "capacitance" than landscapes with fewer large wetlands. They conclude that a significant nexus exists as a consequence of the influences of these "other waters," in the aggregate, on regional water tables and regulation of base flows.

The presence of wetlands in watersheds was found to be a significant factor in the reduction of 50- to 100-year floods (Novitzki 1978). In Wisconsin, Illinois, and the northeast U.S., wetland area within watersheds has been shown to be positively correlated with reduction in peak flows (Novitzki 1978; Novitzki 1982; Novitzki 1985; Demissie et al. 1988; Demissie and Khan 1993). Johnston et al. (1990) modeled the relationship between wetland flood storage and flood peak reduction and found that in watersheds with a wetland area of less than 10%, major effects on flood flows were associated with small additional losses in wetland area.

The decrease of 80% of the storage capacity of the Mississippi River floodplain as a result of levees and loss of forested and other wetlands (Gosselink et al. 1981) is widely considered an important contributing factor to the increasing frequency of flooding along the Mississippi River (Belt 1975). Hey et al. (2004) calculated that restoring 4 million acres of former wetlands in the Mississippi River floodplain could create approximately 16.5 million acre-feet of flood storage. Conversely, the loss of existing wetland acreage in the floodplain and watershed would increase flood flows on this navigable river. An increase in discharges from agricultural landscapes, at least in part due to wetland drainage, has been shown to be a primary contributing factor in carbon, nutrient, and pesticide exports to the Gulf of Mexico (Raymond et al. 2008).

Studies in landscapes with other types of non-proximate wetlands have similarly demonstrated that drainage of wetlands and other areas results in increased peak flows in navigable waters and their tributaries (Skaggs et al. 1980; Allan 2004). Ogawa and Male (1983) employed a hydrologic simulation model to demonstrate that for relatively low frequency floods (those occurring with 100-year interval or greater which are also those with the greatest potential for catastrophic losses) the increase in peak stream flow was very significant for all sizes of streams when wetlands were removed from the watershed. Brody et al. (2007b) analyzed 383 non-hurricane flood events in Florida, and their results suggested that property damage caused by floods was significantly increased by alteration of naturally occurring wetlands. Many or most of these floods were presumably in association with jurisdictional waters.

As with USDA programs in the PPR, Duffy and Kahara (2011) showed that wetlands restored by the Wetland Reserve Program in the Central Valley of California provided flood storage of 113 billion cubic feet in 2008. They also documented that, in the aggregate, that the palustrine, riparian, and vernal pool wetlands in the region provided flood storage of 4159, 2182, and 2140 cubic meters, respectively. Clearly, loss of wetlands in this region would ultimately increase flood flows in navigable rivers like the Sacramento and San Joaquin.

Viewed on the whole, studies like these provide examples of the general importance of wetlands in flood attenuation. The aggregate contributions of individual wetlands distributed across a regional landscape, and often located within topographically higher portions of the watershed and non-proximate to other jurisdictional waters, can nevertheless exert a very significant effect on flood volumes. Thus, many seemingly geographically isolated wetlands are in fact adjacent in functional sense, and exhibit a significant nexus with navigable waters that are clearly jurisdictional from the perspective of the Clean Water Act and federal interests such as flood and pollution control.

B. Groundwater Recharge and Base Flow Maintenance

Attention is being increasingly focused on the growing problems associated with rapidly increasing use and diminishing supply of groundwater resources in many areas across the U.S. (Russo et al. 2014). That being the case, the development of the final rule should keep in mind

the role that surface wetlands, particularly "other waters," play in the recharge of groundwater that very often also discharges to flowing waters.

There is a much greater degree of linkage between wetlands, including aggregations of wetlands classed as "other waters," and navigable waters via groundwater connections than is generally appreciated. As stated earlier, significant nexus analyses and functional adjacency should be considered in hydrologic and ecologic contexts, not merely within a physical or geographic one, in order for the regulatory environment to adequately address the stated purposes of the CWA and intent of Congress. Wetlands very often contribute to groundwater recharge, and this groundwater then continues to move downslope toward flowing streams and rivers, thereby ultimately contributing water to jurisdictional waters (Ackroyd et al. 1967; Winter et al. 1998).

Winter (1998) provided a good overview of the interconnections between streams, lakes, and groundwater systems. He concluded, "Groundwater interacts with surface water in nearly all landscapes," and provided examples from glacial, dune, coastal, karst, and riverine systems regarding these interactions. Hayashi and Rosenberry (2002) also reviewed these almost universally prevalent significant nexuses and cited many examples, coming to the same conclusions as Winter (1998). Woessner (2000) provided an overview of the interactions between groundwater and flowing waters in a fluvial plain setting, and highlighted the significant potential that exists for pollution of surface waters, such as jurisdictional waters, if groundwater becomes contaminated. (See later discussion for more on this topic.) Sloan (1972) stated that water seepage to groundwater was greater for ephemeral and temporary wetlands than for other wetland types. Other review papers and individual studies typically demonstrate that not only do connections almost always exist between wetlands, groundwater, and streams and rivers, but also that these interconnections are usually complex.

Gonthier (1996) documented the linkage and flow of water between an extensive bottomland hardwood wetland in Arkansas (a Ramsar-designated Wetland of International Importance), local flow of groundwater, and the Cache River up to ~2 miles away. However, the farther the wetland from the river, the more likely the water from the wetland was to enter groundwater flowing to the deeper Mississippi Alluvial Valley aquifer which discharges flows to major navigable rivers, including the Cache, White and Mississippi.

Flow of water and its chemical constituents from wetlands, via groundwater, to the water of the Great Lakes is extensive and important and has been frequently documented. Doss (1993) examined a coastal wetland complex in Indiana on the south shore of Lake Michigan and found strong hydrologic connectivity between the many interdunal wetlands and the lake, noting groundwater discharge to Lake Michigan was the only significant loss of water from the wetlands besides evapotranspiration. Holtschlag (1997) evaluated Michigan's entire Lower Peninsula, and estimated that groundwater discharge constituted 29.6 to 97.0% of the annual percentage of stream flow in the region. While he did not evaluate wetland interactions with groundwater *per se*, there presumably is significant recharge of the groundwater from wetland

basins in the region, although this will require further review of data from the region to verify. Holtschlag and Nicholas (1998) estimated that 67.3% of stream flow in the Great Lakes basin is groundwater discharge, and represents 22-42% of the Great Lakes water supply, its largest component. A significant portion of this groundwater is likely the result of recharge from wetland basins. In Wisconsin, groundwater flow into Lake Michigan is between 7 and 11% of the river flow, a significant part of the lake's total water budget (Chekauer and Hensel 1986).

In the case of vernal pools in California, Hanes and Stromberg (1996) reported that wetlands with discontinuous or a weakly developed hardpan had high rates of seepage and therefore contributed to subsurface flow. Tiner et al. (2002) stated that during the wet seasons these geographically isolated wetlands formed hydrologically linked complexes that could drain into perennial streams.

"Other waters" that exist in karst topography are often directly linked to subsurface water flows of relatively high velocity, moving easily through underground channels, caves, streams, and cracks in the rock. There tend to be many springs and seeps, many with surface connections, which are the source of some large streams (Winter et al. 1998), and Winter (1998) stated that groundwater recharge in karst terrain is efficient. Entire streams can go subsurface and reappear in other areas and connect directly with wetland basins, and contaminants deposited in "other waters" are easily mobilized in these regions.

In addition to the direct hydrologic connections that exist between groundwater and streams, the nature of the groundwater discharge to streams can have impacts such as influencing benthic productivity (Hunt et al. 2006). The nature of recharge from wetlands to this pool of groundwater can therefore create an even more complex significant nexus between wetlands and navigable waters as a result of the interacting hydrologic, chemical, and biological relationships.

Clearly, demonstrated linkages between wetlands, groundwater and navigable waters within a broad variety of wetland categories and across a diversity of landscapes and regions, indicate that adjacency and significant nexus should be interpreted from a functional perspective if water quality is to be protected as intended by the CWA.

C. Water Quality Relationships

The importance of the relationships between wetlands and the water quality of navigable waters is central to an informed understanding of what should constitute jurisdictional wetlands under the CWA. It is well established that wetlands of all types have the capability to improve water quality by trapping, precipitating, transforming, recycling, and/or exporting many of its chemical and waterborne constituents (van der Valk et al. 1978; Mitsch and Gosselink 1986). Wetlands serve as a natural buffer zone or filter between upland drainage areas and open or flowing water. They can improve water quality by removing heavy metals and pesticides from the water column, and by facilitating the settling of sediment to which many pollutants are attached.

Wetlands remove excess nutrients, e.g., phosphorus and nitrogen compounds, by incorporating them into plant tissue or the soil structure and by fostering an environment in which microbial and other biological activity pulls these compounds out of the water, thereby enhancing water quality.

Importantly, water quality contributions by wetlands can occur no matter where the wetland occurs on the landscape, and "other waters" also serve as chemical and nutrient sinks, trapping and holding these compounds (Mitsch and Gosselink 1986; Mitsch et al. 1999). Retention time, obviously prolonged when waters flow into a wetland before leaving via surface runoff or through infiltration into subsurface groundwater that flows to a river, has been shown to be the most important factor in promoting nitrogen processing (Jansson et al. 1994). For example, when water naturally filters through Delmarva bays (a category of geographically isolated wetlands) instead of being circumvented through drainage canals to a navigable water, it flows through groundwater pathways to the Chesapeake Bay with much of its nitrogen having been removed (Laney 1988; Shedlock et al. 1991; Bachman et al. 1992; Fretwell et al. 1996). Nitrogen is one of the principal pollutants of concern in the waters of the Chesapeake Bay, and in many other waters that supply domestic, municipal, irrigation and commercial needs. In Michigan, Whitmire and Hamilton (2005) concluded that a remarkably small area of wetland can strongly influence water quality relative to nitrate and sulfates. Some of their study wetlands were connected to the groundwater system. In Lake Michigan and Lake Huron, the biota associated with wetlands near outlets from agricultural drainage systems was different than that of coastal wetlands not close to such outlets (Schock et al. 2014). These differences were associated with increased levels of nitrates, turbidity, and other chemical characteristics of the drainage water, thereby providing another example of the impacts related to upstream drainage of "other waters" that could have intercepted and improved water quality.

Lin and Terry (2003) demonstrated that wetlands in California were able to remove an average of 69% of the selenium contained within agricultural runoff they received, thereby providing a natural mechanism for reducing the availability of this trace element which becomes toxic if bioaccumulated in the food chain. Weller et al. (1996) demonstrated that riparian wetlands of all types in eight watersheds of Lake Champlain were important in reducing phosphorus loading of surface waters.

With increased flows being a direct result of wetland drainage and artificially increased connectivity with downstream waters, those increased flows in turn increase stream incision, the rate and nature of channel evolution, and the rate of erosion and sediment transport (e.g., Simon and Rinaldi 2006). Bellrose et al. (1983) and Mills et al. (1966) also described how sedimentation and stream bank erosion have created navigation and ecological problems on the Illinois River. One group of researchers stated that "discharge is a master variable that controls many processes in stream ecosystems" (Doyle et al. 2005). While recognizing the variability in response to increased or decreased flows, they categorized the impacts as affecting (1) transport,

(2) habitat, (3) process modulation, and (4) disturbance. Thus, again, unregulated wetland losses that alter discharges and flow regimes of receiving waters would in turn result in alter the integrity of downstream navigable waters.

Fennessy and Craft (2011) examined the relationships of Farm Bill wetland conservation programs to nutrient and sediment loads contributed by the entire Glaciated Interior Plains, (encompassing much of a seven-state area from Minnesota to Ohio) to the Mississippi River and Gulf of Mexico. Wetlands involved included about 260,000 acres of a variety of wetland types scattered throughout the region. They estimated that these wetlands reduced the region's contribution of nitrogen, phosphorus, and sediment to the Mississippi River by 6.8%, 4.9%, and 11.5%, respectively. Given that excess nitrogen is widely accepted as the primary cause of the hypoxic zone (Moreau et al. 2008), these wetlands clearly exhibit a significant nexus and provided significant benefit to the Mississippi River and Gulf of Mexico. However, it is important to recognize that if analyzed on the basis of only single point of entry watersheds, they would likely not have been determined to be jurisdictional wetlands, and this benefit to the Mississippi River and Gulf would be lost if those waters were significantly impacted by the draining or filling of the wetlands. A disproportionately high percentage of the nitrate load that the Mississippi River exports to the Gulf of Mexico comes from this region (Hey 2002), with the loss of wetlands and their cleansing role from across the landscape being a significant factor (Hey et al. 2012). Donner et al. (2002) stated that increased nitrate export to the Mississippi River between 1966 and1994 involved an increase in drainage and runoff from across the landscape. Wetlands falling into the "other waters" class in the proposed rule would have been able to intercept, retain, and process a significant portion of this water before it flowed to the Mississippi River had the wetlands been protected and retained on the landscape. In turn, the increased level of nutrients in the increased discharge from the river into the Gulf of Mexico is the major driver in the annual development of the hypoxic zone there, a process which is operating within the Chesapeake Bay, as well (Diaz and Rosenberg 2008).

In an analysis of USDA programs in California's Central Valley, Duffy and Kahara (2011) calculated that wetlands restored via the Wetland Reserve Program in the valley could improve the quality of incoming water by removing substantial amounts of nitrate-nitrogen, thereby benefiting and exhibiting a significant nexus with downstream receiving waters.

Human-induced eutrophication of lakes and rivers is a growing issue across the U.S., with total nitrogen and total phosphorus for all EPA nutrient ecoregions exceeding reference median values (Dodds et al. 2009). In light of the scientific evidence, it is evident that loss of wetlands in the "other waters" class, in the aggregate, has played a significant role in this long-term trend.

There is a vast body of scientific literature dealing with the relationship of wetlands (including many that are "other waters") and water quality, and the literature cited above is only a small sample of what is available on the topic. Many studies, as indicated above, also document widespread and direct physical linkages between the water contained in wetlands, groundwater,

and flowing waters and tributaries considered "waters of the United States." However, taken as a whole, it provides compelling evidence that to protect the Nation's water quality, as intended by the CWA and amendments, the aquatic resources that together comprise an interconnected system must be protected. Further, this body of information affirms that the definition of adjacency and significant nexus must be evaluated from within a context of wetland and water quality *functions*, not simply physical proximity. As Whigham and Jordan (2003) concluded in a review paper, from a water quality perspective, "so-called isolated wetlands are rarely isolated" from other "waters of the United States."

Human Health Issues: A few examples of pollution of waters are informative regarding the risks associated with failing to recognize the significant nexus that exists between "other waters," groundwater, and navigable waters, and failing to view them as a single system relative to determining CWA jurisdiction. Additionally, from the standpoint of interpreting these risks, some examples of "artificial" waters nevertheless serve as instructive surrogates for the potential water-borne pollution pathways for natural wetlands.
For example, Ryan and Kipp (1997) assessed the impact of liquid wastes discharged from an enriched uranium recovery plant to evaporation ponds in Rhode Island. They identified chemical and radioactive constituents that infiltrated from the ponds to the groundwater aquifer, creating a plume that ultimately discharged into the Pawcatuck River.

Superfund sites offer many examples of the hazards associated with the pollution of non-proximate waters, whether natural or artificial, to navigable waters. In Macomb County, Michigan, at a 100-acre site at which effluent from a waste oil reclamation facility was held in ponds (EPA Superfund ID No. MID980410823), groundwater was found to be contaminated with volatile organic compounds which flowed toward business and residences, causing residents to use bottled water for potable purposes. Fish collected in the nearby Clinton River had elevated PCB levels. The Vertac site in Arkansas (EPA RCRA ID No. ARD000023440) involved the contamination of an aquifer with dioxins, furans and other chemicals that eventually contaminated Bayou Meto, a traditionally navigable waterway. White and Seginak (1994) documented that as a result of the dioxins and furans in Bayou Meto, wood ducks breeding there experienced suppressed nest success, hatching success, and duckling production. Teratogenic effects, such as crossed-bills, were documented at the sites with the highest levels of contamination. Similar situations of contamination of navigable waters as a result of linkages to "other waters" and groundwater are unfortunately not uncommon.

More recently, concerns have arisen over coal ash settling ponds and their nexuses to navigable and other waters. At a site adjoining Lake Michigan and the Indiana Dunes National Seashore in northwest Indiana, Cohen and Shedlock (1986) noted elevated levels of boron, arsenic, and molybdenum in groundwater associated with a coal ash pond. Subsequent to the 1.1 billion-gallon ash release from holding ponds in Tennessee, the Gibson plant in Indiana came under increased scrutiny as a result of boron concentrations (reported to cause nausea and diarrhea,

among other potential adverse health effects) increasing in drinking water wells of East Mount Carmel (www.courier-journal.com February 23, 2009). Significantly elevated concentrations of selenium (teratogenic and toxic at high concentrations) in an associated cooling lake caused a closure to public fishing and raised concerns about nesting endangered least terns. Our understanding is that the EPA has been assessing the risks associated with coal ash more closely. While the question of the level of hazard associated with coal ash is not directly at issue with respect to the CWA, we encourage the EPA to look to those situations as examples of "artificial other waters" waters that can provide information and perspectives on the relevant question of the types and pervasiveness of avenues of significant nexus between "other waters" and downstream waters that exists across the country.

Finally, harmful algal blooms are an increasing water quality problem that clearly has significant human health and economic implications (Falconer 1999; Dodds et al. 2009). This problem has been exacerbated by the loss of the many, often small, isolated wetlands from across the landscape which, when protected, sequester nutrients (phosphorus and nitrogen) that lead to the unnatural blooms. High phosphorus loading is primarily responsible for the resurgence of algal blooms in Lake Erie (International Joint Commission [IJC] 2014). Much of the phosphorus input comes with runoff during spring snowmelt and heavy precipitation events (IJC 2014) draining agricultural areas south of the west end of the lake in Ohio. And perhaps not coincidentally, Ohio has lost more of its wetlands (90%) than any other state except California (91%; Dahl 1990). It is a reasonable presumption that many of those wetlands would have been classed as "other waters" and if they were still on the landscape they would have intercepted some of that runoff and processed the nutrients it contained, thereby benefitting the integrity of Lake Erie.

D. Biological Nexus

As is the case with respect to wetlands and water quality, there is also a vast literature regarding the significance of wetlands of the United States to fish, wildlife, amphibians, and other biota of the country and the continent. However, the primary question with respect to the draft guidance is to what extent biological information can be used to contribute to the establishment of a significant nexus between wetlands and jurisdictional waters. In addressing the issue from that perspective, we will continue to focus our attention on "other waters."

Leibowitz (2003) pointed to the need for examples of organisms that require both navigable waters and "isolated" wetlands, and we agree that additional effort should be placed on identifying such linkages. Nevertheless, even for "other waters," we can highlight a few important examples.

Changes to flow regimes of navigable waters that result at least in part from degradation and loss of "other waters" also have a direct impact upon the biota of navigable waters. Some species, for example, can be eliminated as a direct consequence of flows that are increased in magnitude

and/or frequency (Allan 2004). Conversely, lower base flows that result from wetland drainage and reduced infiltration to the subsurface water that discharges to navigable waters also have a direct effect on the habitability of the latter for many taxa.

Numerous studies of amphibians have documented that the loss and degradation of "other waters" can affect population size, distribution, and movement as a result of the cumulative impact of the loss of "other waters" (e.g., Rittenhouse and Semlitsch 2007; Schalk and Luhring 2010; Scott et al. 2013; McIntyre et al. 2014). Where these populations and effects occur in conjunction with navigable waters, the biological integrity of the navigable waters would therefore be impacted by the impacts to the "other waters."

In addition to the redhead and scaup example on the Texas Gulf Coast and other previously cited examples, other avian species spend significant time daily on saltwater (navigable) habitats and are similarly dependent upon the presence of regional freshwater wetlands for purposes of osmoregulation (Woodin 1994). We emphasize that these examples all apply to *within*-season, local/regional habitat use, and do *not* include the period of migration. Some examples of such species include: American black ducks (*Anas rubripes*) in the northeast and mid-Atlantic coast and Chesapeake Bay that also depend upon inland freshwater wetlands (see Morton et al. 1989); California gulls (*Larus californicus*) using hypersaline Mono Lake and freshwater wetlands in southern California (Mahoney and Jehl 1985); and white ibises (*Eudocimus albus*) using estuarine rookeries and requiring freshwater wetland-derived prey for osmoregulation (Bildstein et al. 1990).

Tens of thousands of waterfowl winter on and near the Great Salt Lake (Vest and Conover 2011), and some, such as northern shovelers (*Anas clypeata*) and green-winged teal (*Anas crecca*), feed on invertebrates (brine shrimp and brine flies) in the lake. However, both species are dependent upon the availability of freshwater wetlands for osmoregulatory purposes in order to use the food resources and habitats of the Great Salt Lake (Aldrich and Paul 2002). Thus, a diminishment or degradation of the freshwater wetlands in the vicinity of the lake would translate to a diminishment of the biological integrity of the navigable lake. Unfortunately, the research has not yet been conducted that would clearly show how distant those two species would fly daily to make use of freshwater wetlands.

We believe that, as shown clearly by the examples of the redheads and lesser scaup on the Gulf Coast, the dependence upon *both* navigable waters and "other waters" constitutes a significant nexus. In these cases, without the wetlands, the species would not occupy the region and the biological integrity of the navigable waters would therefore be impacted. Within-season use of both categories of waters as seen in the examples of other migratory (not migrating) birds demonstrates similar dependency and a similar nexus. This interdependence on both navigable and "other waters" should be given the same consideration for establishing a significant nexus as would the dependence upon adjacent wetlands and riverine habitats by an amphibian species, for example. Although the scale is different, they are scientifically and biologically analogous, and

there is nothing in the *SWANCC* or *Rapanos* decisions that would justify disallowing the use of this kind of situation (e.g., redheads) as a basis for the biological nexus that Justice Kennedy described.

V. Some Economic and Social Considerations

Although not directly linked to the issue of the technical substance of the draft guidance, the economic and social implications of restoring protection to wetlands and other waters and of striving *"to restore and maintain the chemical, physical, and biological integrity of the Nation's waters"* should provide important context within which the final rule is developed. There are significant economic and societal implications if protection of the Nation's water quality and wetland conservation continue to be compromised.

In the context of documenting connectivity between other waters and navigable waters, the discussions above essentially focus on some of the primary functions of wetlands, all of which provide valuable services to our society and the economy. Costanza et al. recently (2014) updated earlier estimates of the total global value of ecosystem services provided by a number of major ecosystems. They estimated that the value of those services for "inland wetlands" averaged $25,682/ha/yr, significantly higher than their 1997 estimates, in part because of the continued loss of those wetland habitats. Interestingly, the value of the services provided by the navigable waters themselves (included within "rivers and lakes") averaged only $4,267/ha/yr. In the U.S., every sector of the economy, and every individual person, is affected by the economy of water in various ways (EPA 2013). The water systems that supply 86% of the U.S. population with household water, for example, involves at least $53 billion a year (EPA 2012) even though domestic water supplies accounted for only 12% of off-stream use of water in 2005 (EPA 2013).

Focusing on economic issues more directly related to conservation interests, the outdoor industry contributes an estimated $730 billion to the Nation's economy, and fish and wildlife-related recreation (hunting, angling, and wildlife-watching) accounts for $122.3 billion in annual expenditures (U.S. Fish and Wildlife Service 2006), and is a major industry. A high percentage of that economy is associated with water resources. Waterfowl alone represents a tremendously valuable interstate and international economic resource. In 2006, more than 1.3 million waterfowl hunters expended approximately $900 million with a total related industry output of $2.3 billion (Carver 2008). This analysis also calculated that waterfowl hunting created approximately 28,000 jobs in 2006. Birding, much of it also water-related as evidence by waterfowl accounting for the type of bird observed by 77% of away-from-home birders, supported total trip-related and equipment expenditures of $36 billion in 2006 (Carver 2009). These direct expenditures resulted in a total industry output of $82 billion and created 671,000 jobs (with an average annual salary of $41,000; Carver 2009). The total economic contribution of fishing, obviously dependent upon water resources, is $61 billion (American Sportfishing Association 2002). These economic benefits of water resources simultaneously accrue to the states, as indicated by the example of Texas in which the expenditures by migratory bird hunters

and wildlife watchers totaled $1.3 billion in 2001 (U.S. Fish and Wildlife Service 2002), a level of expenditure that when compared to the state's agricultural commodities would rank second behind only cattle and calves (http://www.ers.usda.gov/statefacts/TX.htm).

The issue of the negative economic consequences of increased flooding associated with a reduction in the flood storage capacity of wetlands in the Nation's watersheds was touched upon earlier. Another indication of the economic implications of protecting the Nation's water resources is revealed in the example of the actions taken by New York City to initiate a $250 million program to acquire and protect up to 350,000 acres of wetlands and riparian lands in the Catskill Mountains (Daily et al. 1999). The city viewed this as a way to protect the quality of its water supply as an alternative to constructing water treatment plants which could cost as much as $6-8 billion. In South Carolina, a study showed that without the wetland services provided by the Congaree Swamp, a $5 million wastewater treatment plant would be required (www.epa.gov/owow/wetlands 2003). Thus, wetlands provide low cost services to society, as well as reducing costs of infrastructure and long-term maintenance.

The algal blooms that cause health problems also come at high economic costs. For example, Dodds et al. (2009) estimated that the total annual cost of the eutrophication of U.S. freshwaters was $2.2 billion. This estimate included recreational and angling costs, property values, drinking water treatment costs, and a conservative estimate of the costs of the loss of biodiversity. Polasky and Ren (2010) cited research that estimated that if two lakes (Big Sandy and Leech) in Minnesota had an increase in water clarity of three feet, lakefront property owners would realize a benefit of between $50 and $100 million. Southwick Associates (2006) estimated that the present value of Saginaw Bay coastal marshes for active recreational use was $239 million, or approximately $10,000 per acre.

Additionally, the vast majority of the citizens of the United States and our society place a high priority on conservation of wetlands and maintenance of high standards of water quality, for many reasons that go well beyond their direct economic values. A nationwide survey (Responsive Management 2001) documented that there were 15 times the number of citizens who believed there were too few wetlands compared to the number that thought there were too many. The same survey showed that 91% of the public thought that it was "very" (64%) or "somewhat" (27%) important to protect or conserve wetlands. Only 3% were neutral or considered it unimportant.

Furthermore, survey after survey has documented that the American public has a deep concern about water quality and high expectations for water conservation. For example: water pollution was identified as the most important environmental issue facing Florida (Responsive Management 1998a); 65% of Idaho residents thought more time and money should be spent on protecting Idaho's water resources (Responsive Management 1994); 89% of Indiana residents thought that improving water quality was very important (Responsive Management 1998b); 75% of West Virginia residents thought much more effort should be spent on restoring streams that

have been damaged by acid rain or acid mine drainage (Responsive Management 1998c). Kaplowitz and Kerr (2003) noted that 75% of Michigan residents viewed the flood control services provided by wetlands as very or extremely important, and 87% viewed the wildlife habitat functions provided by wetlands similarly. A recent survey of Minnesota residents found that 83% of the electorate is concerned about the pollution of drinking water (Fairbank, Maslin, Maulin, Metz and Assoc. and Public Opinion Strategies 2010). Duda et al. (2010) describes how survey after survey of sportsmen and of the general public shows significant concern regarding safe, abundant, high quality water resources.

Many additional studies could be cited that demonstrate the value of wetlands and other water resources to federal, state and local economies, and to the great majority of U.S. citizens. Although we understand that this issue is not directly relevant to the technical aspects of the draft guidance, we nevertheless believe that the available literature regarding the economic benefits of protecting the Nation's wetlands and other resources, and regarding the sentiment of the general public in support of clean and abundant water, provides valuable context for the overall direction that the final rule should take. Taken together, the overall message of the relevant economic and societal information supports the view, frequently shown to be shared by the vast majority of the public, that the conservation of wetlands and water resources is not and should not be viewed as a choice *between* economic and environmental benefits, but rather that long-term, shared economic benefits are *dependent upon* water resource protection.

VI. Balancing Science and Pragmatism in Fulfilling the Purposes of the Act

In our previous discussion of the fundamental criteria for a final rule, we encouraged the agencies to craft a rule that is scientifically and administratively efficient and pragmatic in fulfilling the purposes of the Act. An underlying assumption, of course, is that in seeking to apply the significant nexus test, there is an obligation to ensure that the scientific processes used produce valid results with which to make sound decisions. Unfortunately, these two objectives can be somewhat in opposition to one another. Good, valid science requires time and money, not only to gather the relevant facts but to do so over a spatial scale and time period sufficient to adequately account for the inherent temporal and spatial variability that exists within aquatic systems. However, an administratively efficient system seeks certainty and predictability, as well as timeliness, in the decision-making process. A final rule must balance these issues, but must do so in a way that is most likely to fulfill the purposes of the Act and be consistent with the weight of the scientific evidence.

The growing post-*Rapanos* case law is making it increasingly clear that a dependence upon case-by-case analyses of significant nexus is creating a growing expectation and burden to collect as complete a record of the science-based facts as possible (Kerns 2014). These analyses can be very costly and time-consuming, but as complete and sound as they might seek to be in documenting the facts within a short (at least one annual cycle) time frame, from a scientific standpoint their validity is nevertheless compromised by not assessing the inter-annual variation

that can lead to significantly different results and determinations. Thus, the extent to which a regulatory path emphasizes the use of case-by-case analyses, it will be more impractical and costly for all entities, and perhaps open the door to increased litigation to dispute science-based facts drawn and interpreted from various perspectives (e.g., short-term vs. long-term, small versus large spatial scale, variable interpretations of scientific and legal "significance"). In addition, there is inherently less clarity, certainty, and predictability associated with a broader emphasis on case-by-case analyses.

Also, as is seen in and exhaustive review of the literature such as the Connectivity Report, wetlands and other aquatic features exist along a continuum of multiple variables. Disputes between regulators over "facts," and even the variability with respect to perspectives on significant nexus among the perspectives of regulators, create additional uncertainty for all concerned, as well. The complexity of case-by-case analyses could be overwhelming in many respects and lead to "paralysis by analysis," or alternatively, to making decisions through a process that is neither scientifically valid nor as accurate as possible or necessary in a given situation.

Therefore, a reductionist approach to applying case-by-case analyses within the rule will not lead to a rule that accomplishes the agencies' stated objectives, such as maximizing clarity, while at the same time fulfilling the purposes of the Act to the maximum extent supported by the weight of the available and emerging science. These overall circumstances should lead the agencies to seek the more "simple truths," i.e., the generalizations that are valid in light of the overall weight of the scientific evidence, and that are as broadly applicable as possible. The science should be viewed broadly, focusing on scientifically valid commonalities and reasonable generalizations, and should not give undue weight to the exceptions and outliers. In light of the massive amount of science that demonstrates significant nexus of many classes of "other waters" within their regional contexts, designation as jurisdictional by rule will most often be more scientifically accurate than a designation as non-jurisdictional until determined to be so via a case-specific significant nexus assessment that would suffer from the inherent shortcomings addressed above.

In considering the scope and direction of the reasonable generalizations that can be made regarding the significant nexus between many "other waters" and navigable waters, the agencies should also consider the trends in the recent, emerging science and what the application of new technologies tells us about the inter-relationships of these classes of waters. Consideration of these issues has important ramifications for appropriate and scientifically justifiable application of jurisdiction in fulfillment of the Act's purposes.

For example, even the incremental advances in the remote sensing analysis that took place between each update of the national wetland status and trends by the U.S. Fish and Wildlife Service has led to the detection of more wetland acres than had been observed in the previous analysis. These changes simply reflected improvements in the accuracy and precision of the technology. Frohn et al. (2009) used remote sensing to identify and map geographically isolated

wetlands, and offer a number of recommendations to achieve high accuracy. However, their work highlights weaknesses associated with many existing datasets, indicating that underestimation of wetland acreage on the landscape and their level of connectivity is more the norm than not. Their recommendations also provide additional emphasis on the concerns regarding the time, cost, and considerations of scientific validity that are involved in conducting case-by-case significant nexus analyses. Based on an analysis of a Georgia landscape in which geographically isolated wetlands are common, Martin et al. (2012) demonstrated that improvements in techniques and technology can lead to improved accuracy and showed an increased detection of wetlands. However, it seems evident that application of these technologies at large spatial scales would be extremely costly, particularly at a time when the National Wetlands Inventory is being phased out due to fiscal constraints and federal agency budgets, in general, are under great pressure.

Further, the increasing use of LiDAR technology (e.g., Lane and D'Amico 2010; Lang et al. 2013) is dramatically affecting the detection of wetlands on the landscape and analyses of their connectivity. Lang et al. (2012) looked at Delmarva bays among the forested wetlands in the Choptank River watershed in Maryland and Delaware, and found that LiDAR was considerably more accurate than was the NHD high resolution data which underestimated wetland area by 15% and wetland number by 13%. This kind of difference could have an important and meaningful impact upon the outcome of any significant nexus analyses of watersheds such as this.

Overall, the trends in the wetland science being generated as a result of emerging technology, as well as the trends in the rapidly growing science related to the connectivity between wetlands and navigable waters, supports the general view that the emerging science far more often supports connectivity (in the aggregate) between "other waters" and downstream waters than it demonstrates a lack of connectivity. Regardless of the generalizations that the agencies use in the course of finalizing the rule and its determination of the classes of wetlands that will be jurisdictional by rule and those that will be subject to case-by-case significant nexus analyses, in light of the rate and importance of the emerging science relevant to science-based determinations of significant nexus, the final rule must incorporate a process whereby jurisdiction and related processes can be updated based on new science and data related to the actual observation of downstream impacts of wetland degradation and loss.

Summary

We summarize our primary conclusions and recommendations below, and provide the page numbers for other, related findings and recommendations, and a more complete articulation of the rationale and technical information in support of our comments.

- The touchstone for the final "Waters of the U.S." rule and future administration of jurisdiction must be the primary purpose of the Clean Water Act – *"to restore and maintain*

the chemical, physical, and biological integrity of the Nation's waters." Justice Kennedy's language in creating the "significant nexus test" in his pivotal opinion in the *Rapanos* case, his description of its key elements, and the state of the existing and emerging science, provides a firm foundation for moving toward that goal. (Page 4)

- Ducks Unlimited's review and comments on the proposed rule were developed with five primary criteria in mind, and we suggest that explicit consideration and balanced application of these five criteria would help guide the agencies toward an effective final rule. These key criteria are:
  - *Is it consistent with the preponderance of the available and emerging science?*
    - There is a wealth of scientific information indicating the extent to which connectivity exists between many wetlands across the U.S. and downstream waters. The final rule should not diverge from the science that broadly supports the existence and significance of these connections. In addition, we strongly recommend the use of a "weight of the evidence" approach to evaluating the massive amount of science available and applying it within the final rule. (Pages 5-7)
  - *Is it consistent with Justice Kennedy's language regarding the application of science to determining jurisdiction?*
    - Justice Kennedy's language not only seeks a limit to CWA jurisdiction, but it also provides significant deference to the agencies as long as their decisions and the final rule is based on the science of connectivity. The agencies should seek to reasonably apply that deference to protecting all waters necessary to achieve the purposes of the Act, based on the existing science, while addressing their limits to CWA jurisdiction. (Pages 7-8)
  - *Will it promote increased clarity, certainty, and predictability?*
    - We agree with the stated objective of the agencies, and the strongly expressed desire of most stakeholders, which is to have a final rule that provides as much clarity, certainty, and predictability as possible and that also addresses the other criteria listed here. (Pages 8-9)
  - *Is it scientifically and administratively efficient and pragmatic?*
    - While providing certainty and clarity and seeking to provide a science-based limit to jurisdiction, the final rule must also be pragmatic from both administrative and scientific perspectives. We suggest that this will be greatly aided by using a "weight of the evidence" approach to the science and processes incorporated within the final rule. (Pages 9-10)
  - *Is it consistent with the agencies' public statements that the new rule would not be an expansion of jurisdiction relative to the existing regulations, and that the agricultural and ranching sectors, in particular, would not be subject to increased permitting requirements?*
    - The language of the proposed rule has caused some concern, particularly among the farming and ranching communities, about how the final rule could affect their normal activities. The final rule must support the statements of agency representatives

that the longstanding exemptions for normal agricultural and ranching activities will be preserved, and that no new permitting requirements will be imposed upon farmers and ranchers in relation to such activities. (Pages 10-11)

- We agree that traditional navigable waters, interstate waters, and territorial seas should continue to be the foundation for assessing CWA jurisdiction. It is appropriate that the fundamental question of "significant nexus" for other categories of waters be viewed through the lens of assessing their impacts upon these (a)(1) through (a)(3) waters. We recommend that it be made clear that "international waters" are also included in this group of waters based on the same rationale as applied to interstate waters. (Pages11-12)
- Because traditional navigable waters, interstate waters, and the territorial seas ultimately provide the basis for designating by rule or assessing potential CWA jurisdiction for all other categories of waters, we strongly recommend that existing and readily available technology be used to map at least all (a)(1) through (a)(3) waters across the U.S. At the moment, it is extremely difficult if not impossible to find maps, even at the level of individual Corps districts, which clearly depict these waters. While there are limited maps available in some instances, and lists for some of these waters in some areas, there is by no means a cohesive, nationwide system of compiling and making this information available at this time. Although not an "emerging" technology, existing technology related to mapping and geographic databases could and should be used to develop this valuable, basic tool. (Pages 12-13)
- We agree with and support the relatively minor, clarifying changes made with respect to the issue of whether or not impoundments fall within the definition of "waters of the U.S." (Page 13)
- We agree that the literature "clearly demonstrates that streams, regardless of their size or how frequently they flow, strongly influence how downstream waters function." Therefore, the finding that all tributaries, as a class, have a significant nexus with and impact upon the physical, chemical and biological integrity of downstream (a)(1) through (a)(3) waters and therefore should be jurisdictional by rule, is scientifically appropriate and sound. However, we also agree with the Science Advisory Board's recommendation regarding reconsideration of the use of the "ordinary high water mark" as a part of the definition of "tributary." In addition, it should be made more clear that the treatment of ditches will not and cannot be used to expand the longstanding interpretation of jurisdiction as it applies to infrastructure used for normal agricultural activities. (Pages 13-14)
- We agree with the agencies' finding, based on the weight of the scientific evidence presented in the Report and the proposed rule's Appendix, that adjacent waters such as riparian and floodplain waters *"significantly affect the chemical, physical, and biological integrity of (a)(1) through (a)(3) waters"* due to the existence of a significant nexus. (Page 15)
- Based on the available science related to connectivity, however, we disagree with the almost exclusive emphasis placed on physical proximity to navigable waters within the definition of "adjacent." We strongly encourage that, in light of the abundant related science and the view of the SAB regarding the narrow view of adjacency applied within the proposed rule,

adjacency should be viewed from the more scientifically appropriate context of "functional adjacency." For example, while it might take years or even decades for water to travel through subsurface pathways from wetlands to navigable waters, the impact and importance of those connections are very often nevertheless significant and can affect not only the integrity of the receiving waters, but also the health and welfare of future generations of citizens. Thus, interpretation of "adjacency" must not be narrowly restricted based on physical proximity. (Pages 15-18)

- The science strongly indicates that riparian waters almost universally have a significant hydrologic connection and nexus with the jurisdictional waters that are usually adjacent, in the sense of both physical and functional proximity. Thus, the general goal of categorically incorporating riparian and floodplain waters as jurisdictional "adjacent waters" within the definition of "neighboring" is appropriate. However, the relationships between and definitions of "neighboring" and adjacent require additional clarification given some apparent inconsistencies among their definitions and conflicts with some important aspects of the science that supports the existence of a significant nexus in many cases. (Pages 18-19)
- We find the definition of "floodplains" scientifically reasonable but less clear than it should be. The heavy reliance on "best professional judgment" promotes uncertainty and decreases clarity and predictability, and could lead to significant administrative, non-scientific inconsistencies across the country. We suggest considering the use of more objective, science-based surrogate criteria such as soil classifications as the basis for defining "floodplain." We also believe that a 10 to 20 year flood zone is too narrow to reflect the actual floodplain in many circumstances, and that in light of the definition's use of the phrase *"is inundated during periods of moderate to high flows,"* we suggest that something more on the order of 100 years is a more reasonable approximation of "high flows." (Page 20)
- It must be clear in the final rule that agricultural areas such as rice fields will not be captured within the terms of these definitions as jurisdictional waters. In addition, some of the exclusions for waters such as irrigation reservoirs can also benefit from additional clarity of language. (Pages 20-21)
- However, we cannot agree with the proposed treatment of "other waters," and we believe that the underlying regulatory presumption that all "other waters," across the entire U.S., lack a significant nexus with traditionally navigable waters, interstate waters, or the territorial seas, and therefore have no impact on the integrity of these waters, is an inappropriate presumption in light of the strength, abundance, and diversity of the available and rapidly growing science. To make this presumption is to willfully exclude waters that science clearly demonstrates have a significant impact upon downstream waters and thus will result in degradation of the chemical, physical and biological integrity of the Nation's waters. (Pages 21-22)
- One of our most significant recommendations is that rather than require case-specific significant nexus analyses on the basis of single point of entry watersheds across the nation, we recommend that during the finalization of the rule the agencies should conduct

"significant nexus analyses" for these "other waters" on an ecoregional basis. Then, based on the available science and judgments of wetland and hydrologic experts for each ecoregion, it should be determined for which regions of the country the wetlands that exist therein should be designated as jurisdictional by rule. This process will help ensure that the final rule aligns most closely with the science and, in addition, will provide more clarity, certainty and predictability than the proposed rule. It will also be more scientifically and administratively efficient and pragmatic to apply. (Pages 21-24 and elsewhere)

- We recommend that when case-specific analyses of "other waters" are conducted, the required significant nexus should be able to be applied to any categorically designated "water of the U.S.", including not only (a)(1) through (a)(3) waters but also at least (a)(4) and (a)(5) waters. Waters that will be classed as "waters of the U.S." by virtue of their adjacency should likely also be included as a potential avenue of demonstrating significant nexus as those waters are clarified. (Page 22)
- The final rule should incorporate a process whereby, in addition to the ecoregional designations of wetland categories to be jurisdictional by rule, the results of future significant nexus analyses at all scales should be incorporated and used to build a science-based "case law." These findings should then be incorporated into the proposed database and otherwise made widely available for public and regulatory use. (Page 24)
- In regard to all significant nexus analyses, conducted either *a priori* or after finalization of the rule, we strongly agree with the SAB's statement in their letter that, "*The Board notes, however, that the science does not support excluding groups of "other waters" or subcategories thereof."* If the science currently available is not considered in certain cases to be sufficient to support a finding of a significant nexus at this time, it does not mean that such a nexus does not exist. Future science could emerge that could clearly demonstrate such a nexus. The final rule must allow for the continual emergence of new science and the incorporation of that science into the process of assessing jurisdiction. (Page 24)
- With respect to the definition of "significant nexus," we recommend that the final rule go further in terms of explaining with more clarity how Justice Kennedy's language should be used in the science-based context of the analyses of connectivity that will be conducted for "other waters." This would also allow the agencies to more thoroughly explain how a "weight of the evidence" approach could or would be used in the context of significant nexus analyses. The definition and explanation in the final rule should not only convey the legal perspective on the term, but also provide additional guidance regarding the science-based analyses required to satisfy the legal question of "significant nexus." (Pages 24-25)
- Regarding the question of whether or not a nexus is "significant," the agencies should consider the range of pollutants (or fill) that could be deposited in a non-jurisdictional wetland and their potential impacts on the integrity of downstream waters, as well as health and human welfare, now and in the future. (Page 26)
- With respect to determinations of whether "other waters" are considered "similarly situated," we believe that a scientifically valid and more clear and efficient method of aggregating

wetlands would be to evaluate them all in a simple, direct, comprehensive aggregation within the appropriate ecoregion or other scale. Justice Kennedy's language seems to allow or support such an approach, and does not specifically require a finer technical interpretation of "similarly situated." (Page 26)

- At a minimum scale, we can agree with aggregating wetlands for significant nexus analyses on the basis of the single point of entry watershed to the nearest (a)(1) through (a)(3) watershed. However, we strongly believe that in many, if not most instances regarding watersheds at this scale, a review of its topographic, soils, land use, and the many physical, chemical and biological characteristics reflected in the watershed's wetlands and other water bodies will be very similar, and in some cases almost indistinguishable, from neighboring watersheds. Therefore, combining adjoining watersheds to the extent scientifically appropriate and justifiable would lead to greater administrative efficiencies, and perhaps actually strengthen the results and validity of the scientific evaluation of significant nexus by expanding the "sample size." (Pages 27-29)
- We strongly agree with the SAB that some subcategories of "other waters" could be determined to be jurisdictional by rule. It is clear that the breadth and depth of the available science warrants conducting significant nexus analyses for wetlands, in the aggregate, for a number of significant regions of the country to determine which regions contain wetlands that warrant designation as jurisdictional by rule with a positive finding of significant nexus. That would also advance the objective of increased clarity, certainty, and predictability, and promote greater efficiency through a reduced reliance on costly and time-consuming case-specific analyses. However, choosing to evaluate the regions for which the scientific evidence is strongest should not imply that "other waters" in other regions would have to "be determined to not be similarly situated." (Pages 29-30)
- The selection and use of the appropriate scale of regions for such analyses is a critically important part of the scientific rationale for taking the above approach to aggregation. We agree with the agencies' suggestion that Level III ecoregions represent an appropriate scale for such analyses. We agree with and strongly support the use of Alternative 1 (FR 22215), which is to *"determine by rule that 'other waters' are similarly situated in certain areas of the country."* (Pages 30-31)
- We concur with the proposed list of 25 regions as a starting point, although based on the available wetland science and context of "other waters" and navigable waters we also recommend the addition of several ecoregions. We strongly agree with the SAB's statement that*, "there is also adequate scientific evidence to support a determination that certain subcategories and types of 'other waters' in particular regions of the United States (e.g., Carolina and Delmarva Bays, Texas coastal prairie wetlands, prairie potholes, pocosins, western vernal pools) are similarly situated (i.e., they have a similar influence on the physical, biological, and chemical integrity of downstream waters and are similarly situated on the landscape) and thus are waters of the United States."* Thus, we suggest ecoregions 6,

7, 9, 34, 42, 46-48, 63, and 65 as the highest priorities for initial region-wide significant nexus evaluations of other waters contained therein. (Pages 31-33)

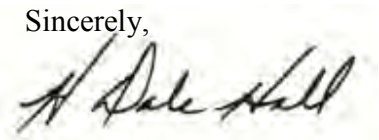
- We do not agree with the portion of alternative 2 (FR 22216) that would result in the "other waters" in those ecoregions considered to not have a demonstrated significant nexus to be designated as non-jurisdictional. We support the comment in the SAB's draft report in which they state that *"the Board notes, however, that the science does not support excluding groups of 'other waters' or subcategories thereof."* (Page 33)
- We strongly recommend that the agencies incorporate into the final rule a process by which "other waters" within ecoregions, or single point of entry watersheds, can be subject to scientific assessment, and/or re-assessment as necessitated by emerging science, and the findings incorporated into the cumulative body of scientific "case law." (Page 34)
- We agree with the inclusion of the list of waters that would be explicitly excluded from jurisdiction. Codification of the agricultural and other exclusions, direct and clear communications, and follow up CWA administration that is fully consistent with those communications, will be important for increasing certainty and predictability on the part of farmers, ranchers, landowners, and other affected parties. (Page 34)
- In section III of our comments we focus on highlighting and augmenting some of the existing science to support a finding that the "other waters," in the aggregate and across broad ecoregions or significant portions thereof, possess a significant nexus with downstream jurisdictional waters and therefore could be designated as jurisdictional by rule. (Page 35-37) Our detailed, science-based, technical contributions to an understanding of the basis for the existence of a significant nexus between "other waters," in the aggregate, and downstream jurisdictional waters are focused on the following regions and/or wetland subcategories:
  - Prairie potholes (Pages 37-50)
  - Texas and Southwest Louisiana Coastal Prairie Wetlands (Pages 50-54)
  - Nebraska's Sandhill Wetlands (Pages 54-55)
  - Playa Wetlands, Rainwater Basins, and Platte River Region Wetlands (Pages 55-58)

  However, this list merely reflects the landscape priorities of DU and should in no way imply that the "other waters" in some other ecoregions do not rise to a similar level of connectivity based on existing science. We are aware that other organizations are submitting detailed technical comments with similar focus on other regions, and we strongly encourage the agencies to consider all such science with a view to assessing and applying it as we suggest.
- Our technical contributions focus primarily on synthesizing the science that demonstrates that prairie potholes, in the aggregate, and some other wetland subcategories, have the required significant nexus to warrant being declared jurisdictional by rule. However, as is evident from the Connectivity Report and the SAB response, the scientific literature clearly documents that many other wetlands and wetland subcategories falling within the proposed rule's "other waters" classification have similar types of significant nexuses with downstream navigable waters. We therefore also highlighted some of the science bearing upon the existence, geographic extent, and general pervasiveness of the avenues of

significant nexus as they apply to wetlands broadly and based on science from other regional contexts. We organized and presented such contributions in the four categories of:
  - surface water storage and flood abatement (Pages 59-61)
  - groundwater recharge and base flow maintenance (Pages 61-63)
  - water quality relationships (Pages 63-67)
  - biological nexus (Pages 67-68)
- We provide an overview of some socioeconomic data and information relating to the importance of continuing to seek progress in achieving the goals and purposes of the Clean Water Act. Clean, abundant water resources not only supports the economically important outdoor recreation industry and desires of the sportsmen and sportswomen, but also avoids the economic burdens associated with the increasing frequency of damaging floods and harmful algal blooms, for example. Additionally, scientific surveys of the public from all across the country continue to show that very large majorities support wetland conservation and clean water goals. (Pages 68-71)
- A final rule must balance science and pragmatism, but in a way that is most likely to fulfill the purposes of the Act and be consistent with the weight of the scientific evidence. The extent to which the final rule relies upon case-by-case analyses will be more impractical and costly for all entities, and perhaps open the door to increased litigation to dispute facts drawn and interpreted from various perspectives (e.g., short-term vs. long-term, small versus large spatial scales, variable interpretations of scientific and legal "significance"). In light of the massive amount of science that demonstrates significant nexus for many classes of "other waters" within their regional contexts, designation as "jurisdictional by rule" will most often be more scientifically accurate than a designation as "non-jurisdictional until determined to be so" via a case-specific significant nexus assessment that would suffer from the inherent shortcomings imposed by scientific and administrative realities. (Pages 71-72)

We appreciate the opportunity to provide our comments on this important rulemaking. If you have any questions about Ducks Unlimited's comments, please do not hesitate to contact Dr. Scott Yaich at syaich@ducks.org, or 901-758-3874.

Sincerely,



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Paul Bonderson, First Vice President, DU
Bill D'Alonzo, Chair, Conservation Programs Committee
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Figure 1. Wetlands and waters in the Prairie Pothole Region. Note particularly high densities of wetlands in many areas. (Only wetlands and other waters are colored, with colors representing various classes of wetlands and other waters.)

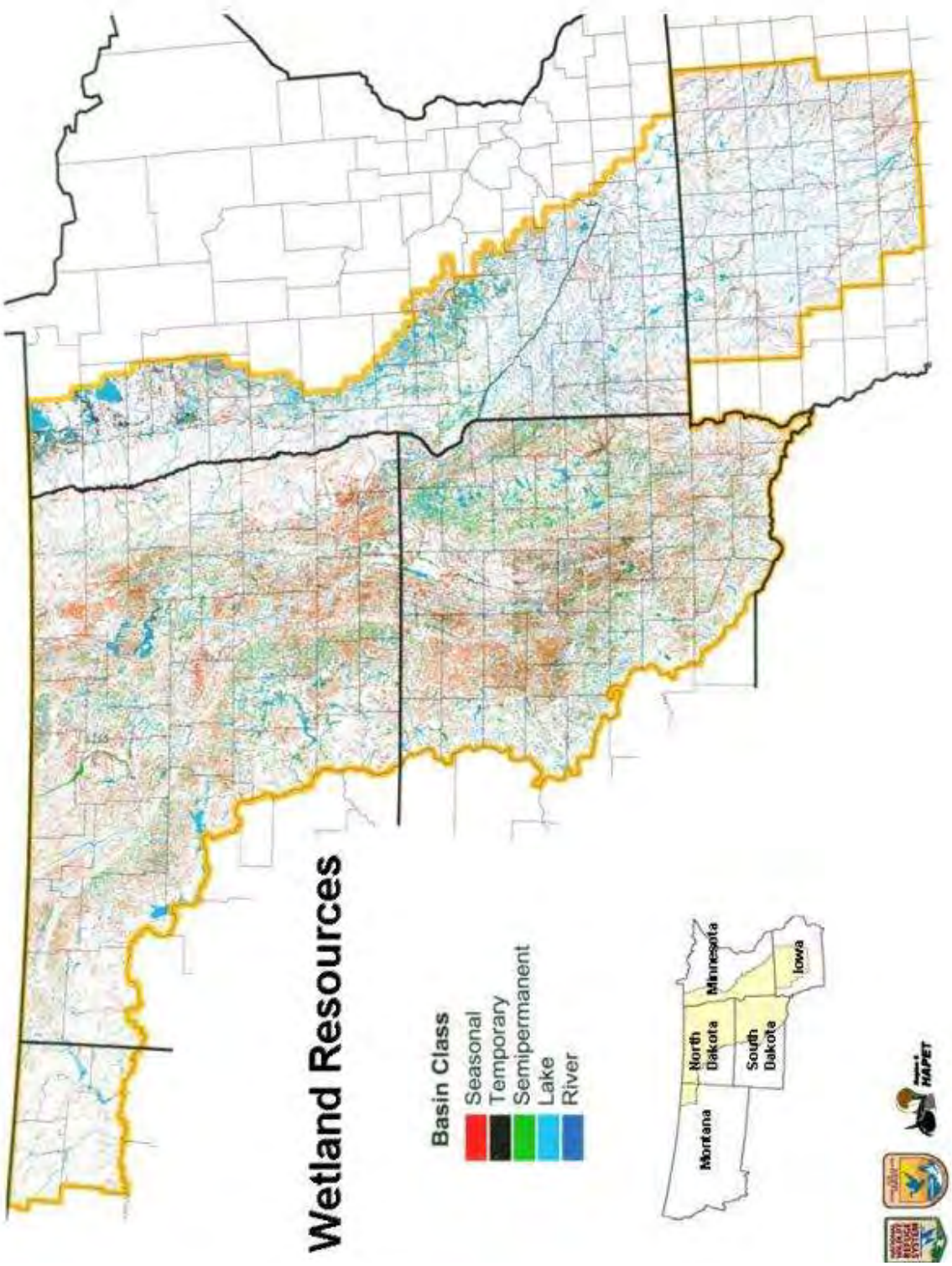


Figure 2. Aerial photograph of high density of prairie potholes ("other waters") in the Missouri River watershed, common in many areas of the Missouri Coteau of North Dakota, South Dakota, and Montana. The water storage capacity is evident in these and the following images.



Figure 3. Aerial photograph of an area with a high density of prairie potholes ("other waters") in Cavalier County, northeast North Dakota, in the Red River watershed (image approx. four miles by three miles) .

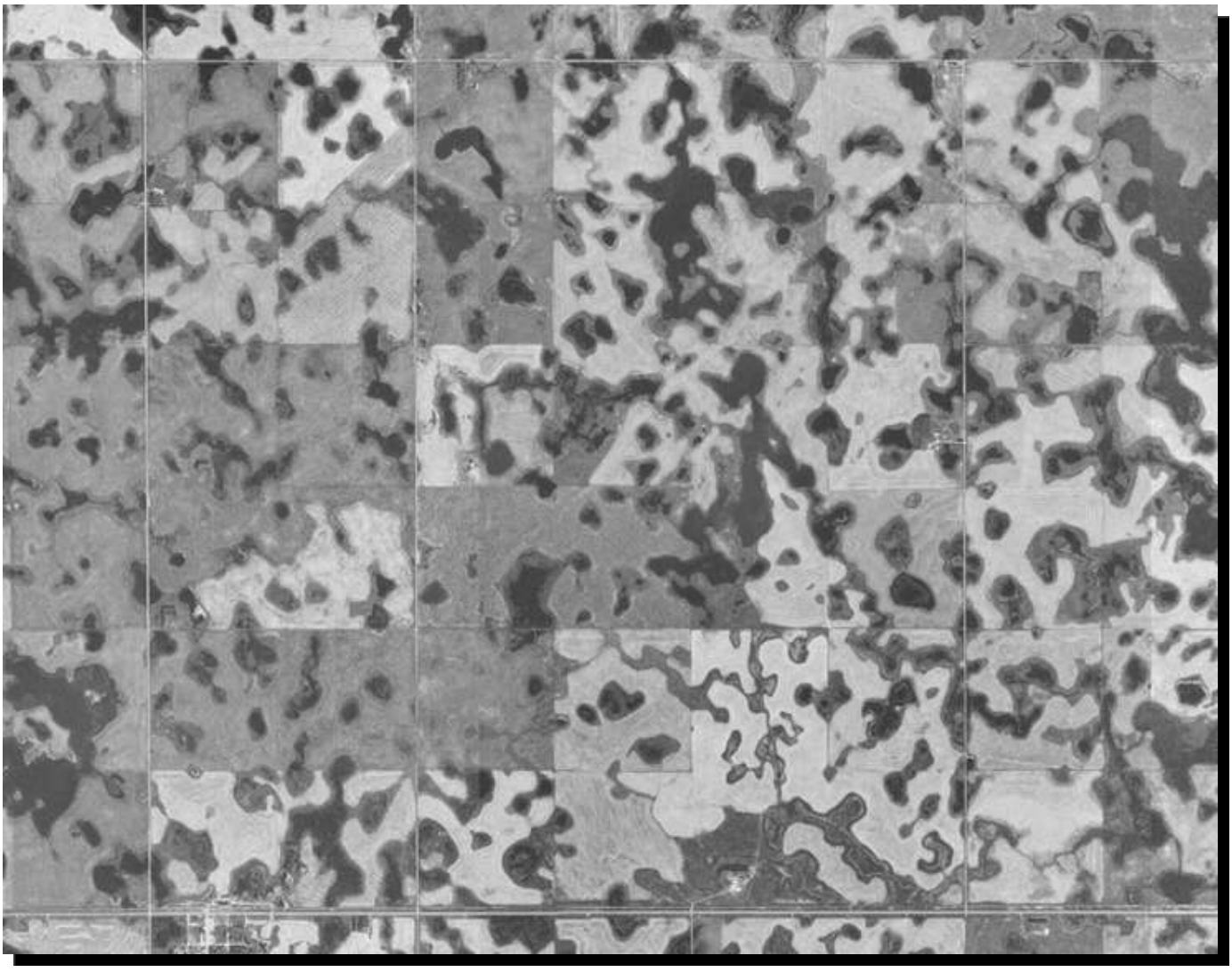


Figure 4. High density of prairie potholes in Souris River watershed, south (upstream) of Minot, North Dakota (Ward County).



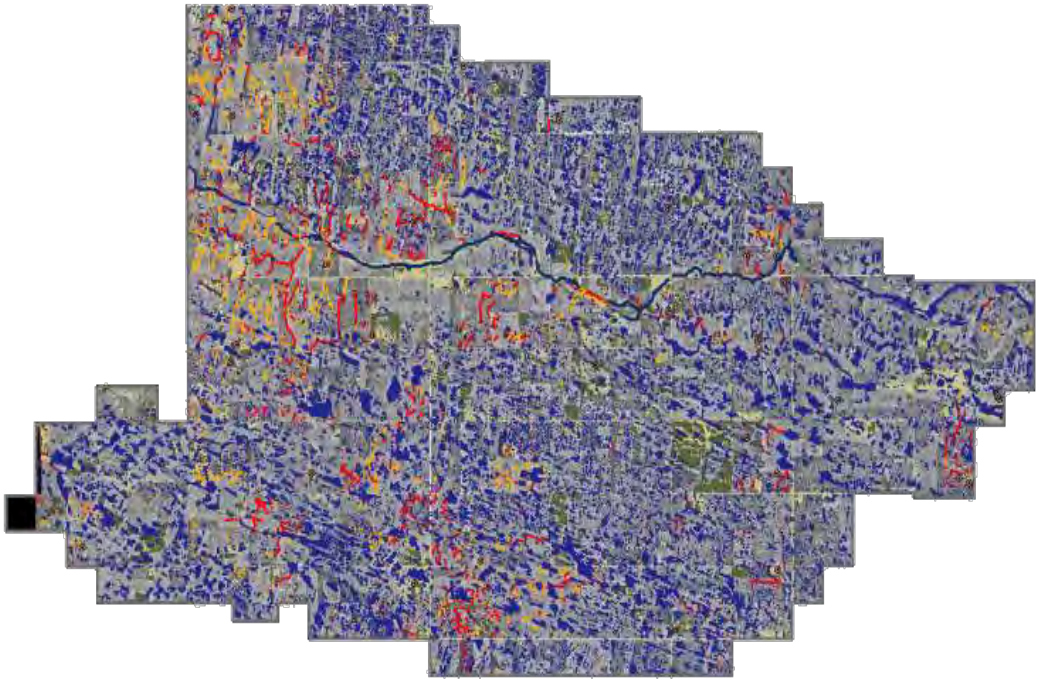
Figure 5. High density of prairie potholes in the Missouri and James River watersheds of North Dakota (Stutsman County).



Figure 6. A high density of "other waters" in the vicinity of Lake Sakakawea, North Dakota (Missouri River), a traditional navigable water (McLean County).



Figure 7. Wetland loss in vicinity of St. Gregor, Saskatchewan (Red River Valley), illustrating the extent of loss of water storage capacity across the landscape.



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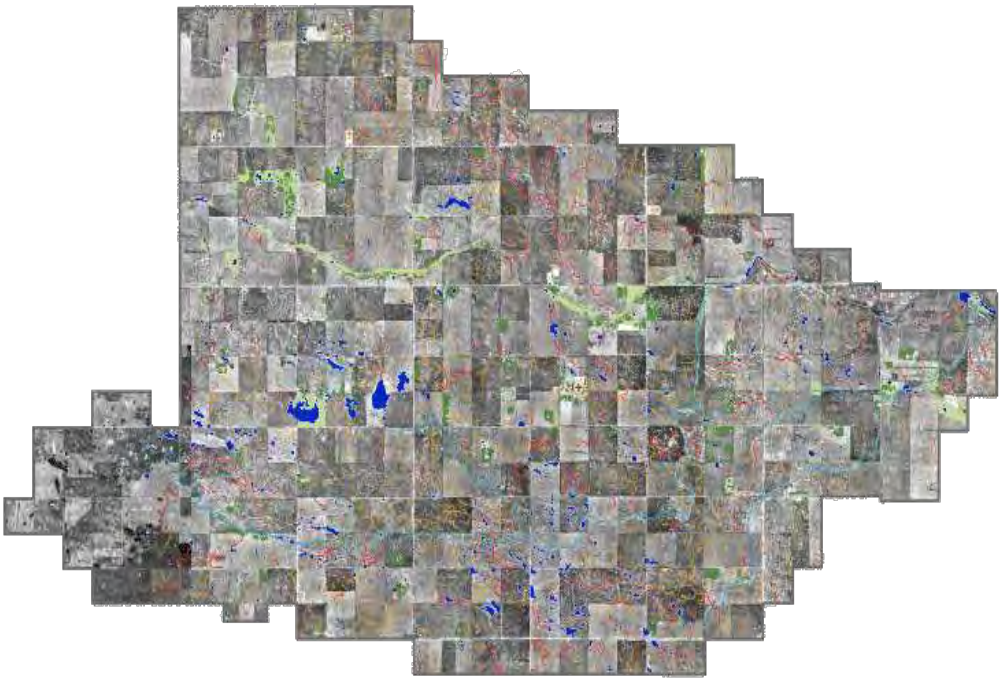


2002

Figure 8. Wetland status and drainage in the Smith Creek watershed, Saskatchewan, illustrating the increased level of connectivity and associated decrease in water storage capacity associated with loss of prairie pothole wetlands. The typically high density of pothole wetlands is also evident.



Figure 9. Aerial photographs (U.S. Fish and Wildlife Service) in the Red River Valley in the vicinity of Munich, ND that illustrate original wetland densities and the extent of loss between 1954 and 2010. The loss of water storage capacity results in water flowing more rapidly and directly to the downstream navigable waters rather than being stored in the wetlands.

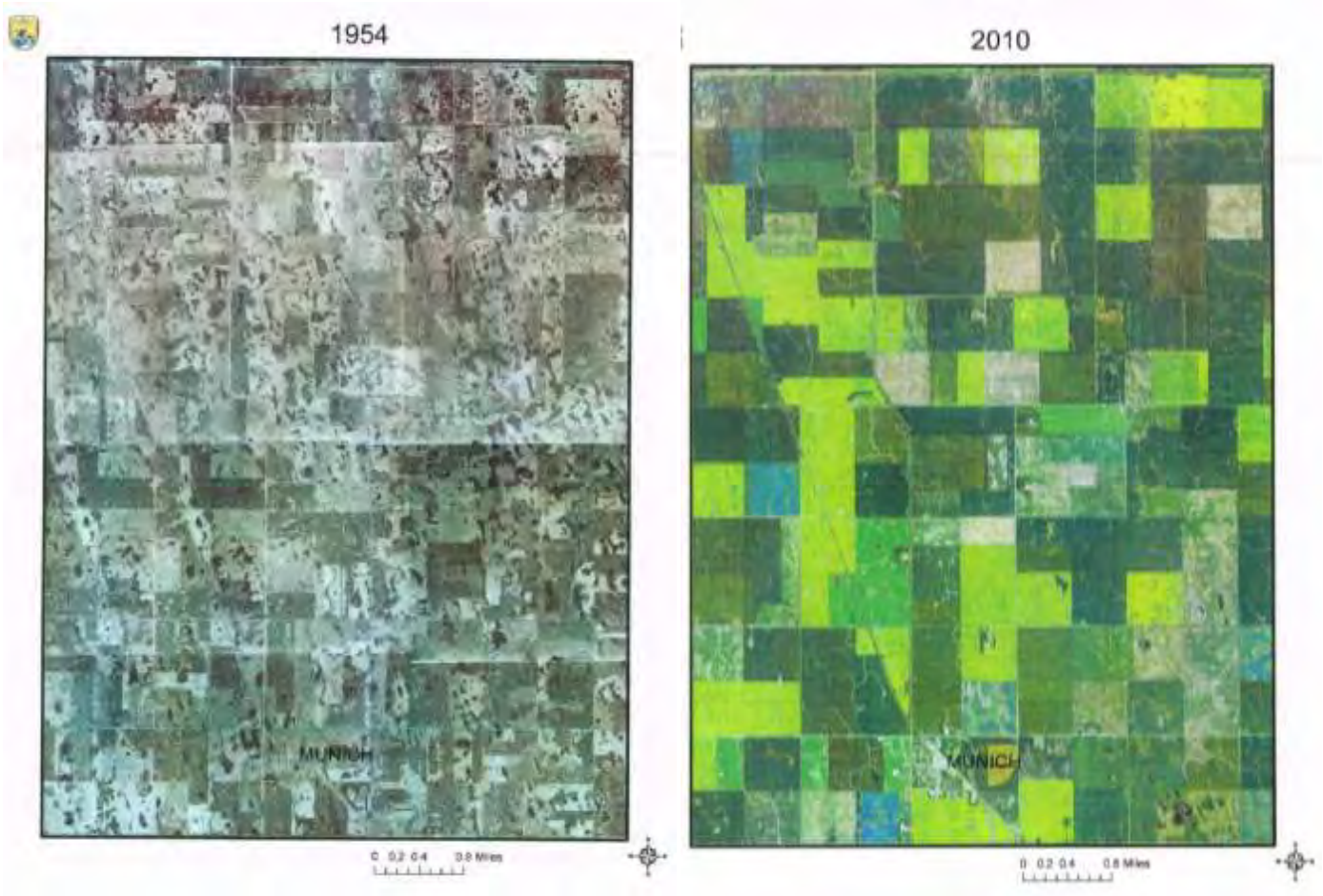


Figure 10. "Before" and "after" photos of wetlands and drainage in Smith Creek watershed, Saskatchwan, showing increased surface connectivity with downstream waters associated with wetland loss due to drainage and decreased water storage capacity (Pomeroy et al. 2014).

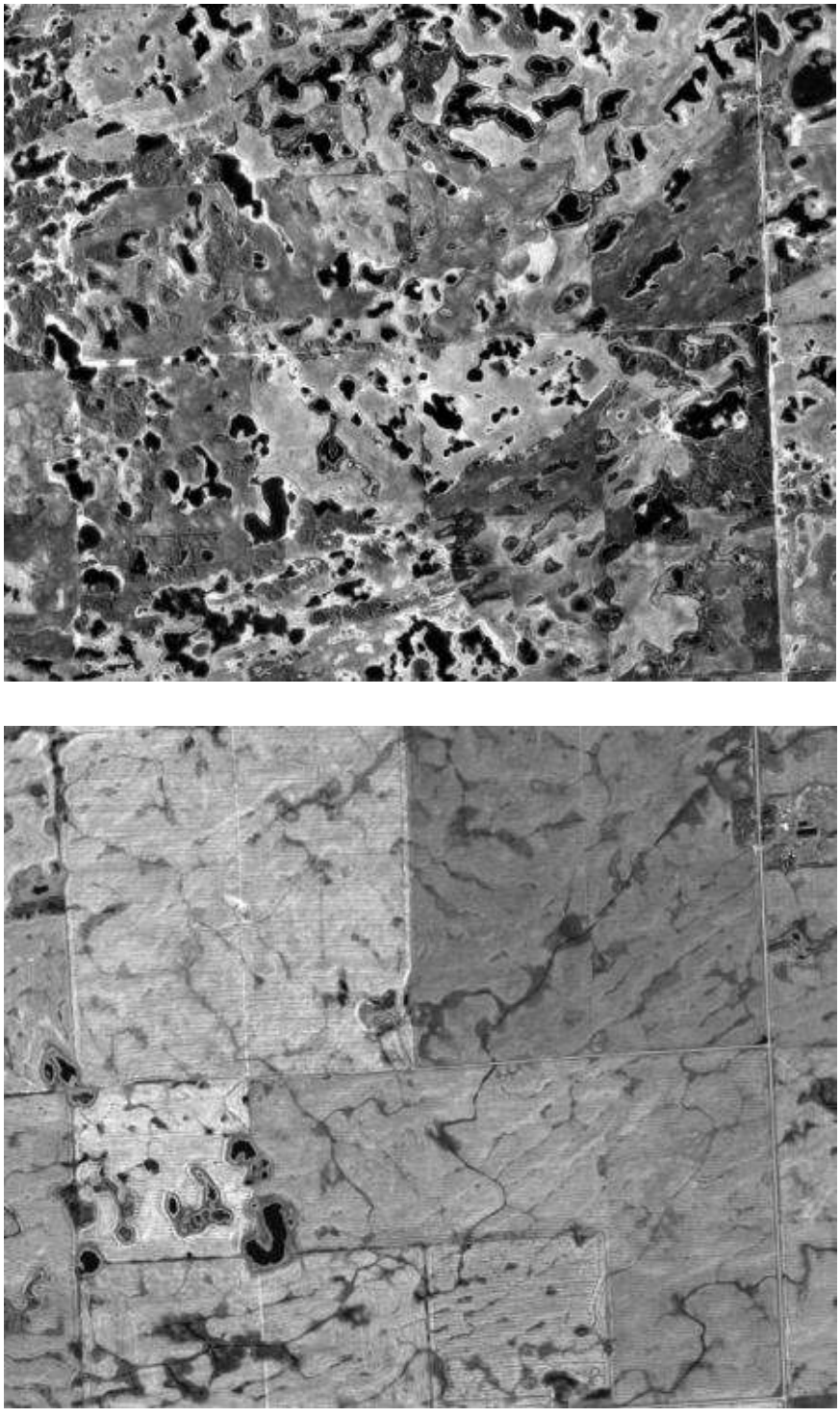


Figure 11. Oblique aerial photographs comparing a portion of the Prairie Pothole Region with intact wetlands with a recently drained portion of the region. The implications to the integrity of downstream navigable waters of draining these "other waters" is apparent.

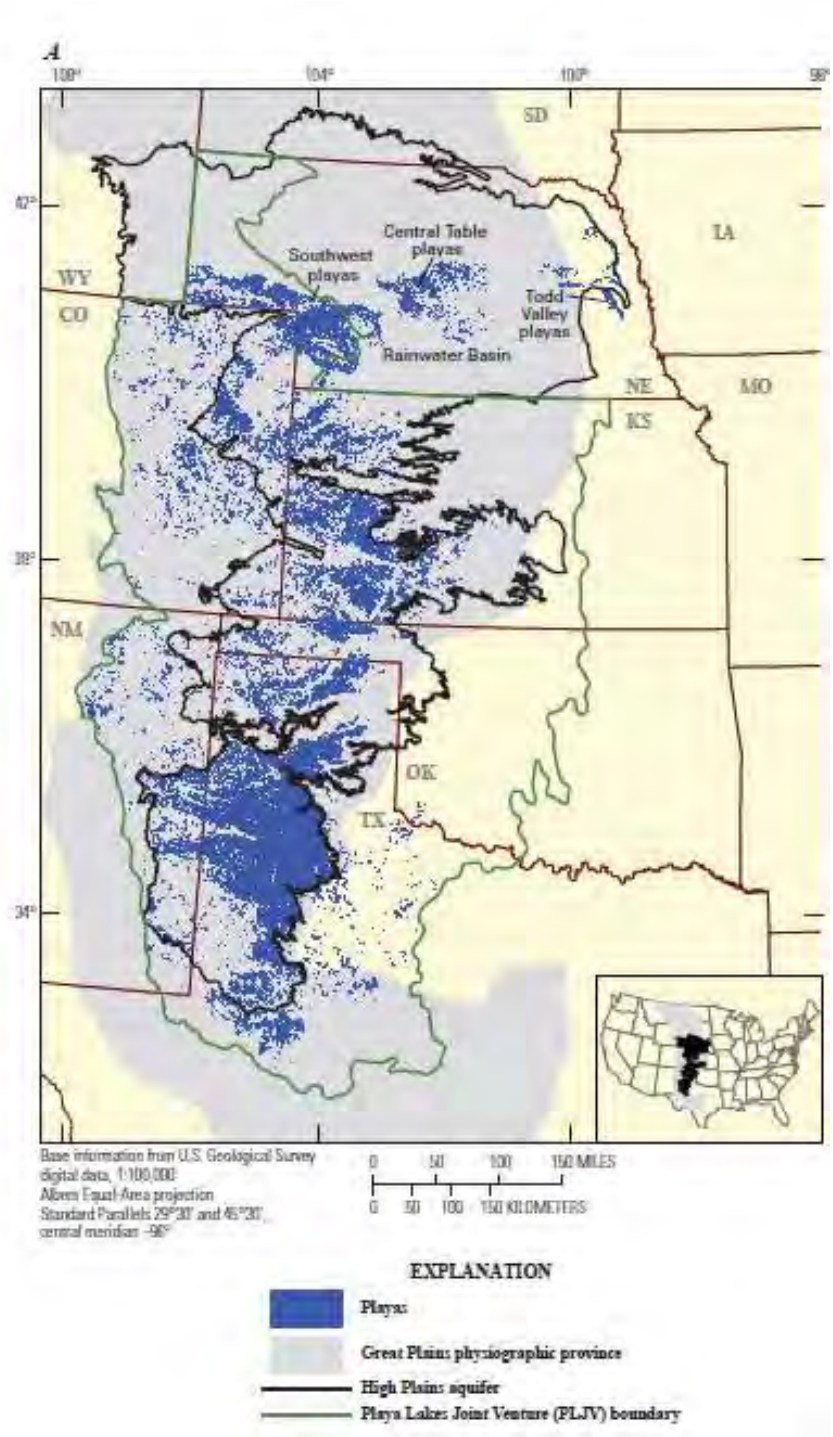




Figure 12. Aerial photograh of playa wetlands. (Photograph taken from cover of Gurdak and Roe 2009)



Figure 13. Distribution and abundance of playas in relation to the High Plains (or Ogallala) aquifer. Approximately 92 percent of the more than 66,000 playas of the southern Great Plains and Playa Lakes Joint Venture (PLJV) region are located on the High Plains aquifer. Playas in southeastern Wyoming are not shown because these playas are not within the PLJV boundary. (Map from Gurdak and Roe 2009)



EARTHJUSTICE

ALASKA CALIFORNIA FLORIDA MID-PACIFIC NORTHEAST NORTHERN ROCKIES
NORTHWEST ROCKY MOUNTAIN WASHINGTON, DC INTERNATIONAL

Nov. 13, 2014 *submitted electronically and by U.S. mail*

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue NW
Washington, DC 20460

Re: (Proposed) Definition of Waters of the United States Under the Clean Water Act
Docket ID No. EPA-HQ-OW-2011-0880
Comments of Earthjustice

To Whom it May Concern:

These comments on the proposed Definition of Waters of the United States Under the Clean Water Act are submitted by Earthjustice.

Earthjustice generally supports much of the Environmental Protection Agency's ("EPA") proposed definition, particularly the strong scientific grounding in parts of the rule that identify categories of waters that are, by definition, waters of the U.S. or that have a "significant nexus" to waters of the U.S. Earthjustice urges EPA to strengthen those definitions in accordance with comments from members of the EPA Science Advisory Board ("SAB") and as detailed below. Earthjustice is also, however, very concerned about EPA's efforts to categorically exclude a large number of waters, often with little grounding in the science and law. Earthjustice believes categorical exclusions are not dictated by the statute or the case law and are likely to lead to waters being subject to pollution that should be protected. In particular, EPA's approach to groundwater is plainly not warranted by the science as demonstrated by the many comments on this point by individual members of the SAB. Finally, Earthjustice objects to EPA continuing to allow mining and coal interests to use our precious water resources as dumping grounds for their wastes through the so-called "waste treatment" exclusion from waters protected by the Clean Water Act.

INTRODUCTION

The Federal Water Pollution Control Act (a/k/a the Clean Water Act) is one of our nation's most important and prescient environmental laws. Congress enacted the protections in the Federal Water Pollution Control Act at a time when news reports of horrific pollution incidents highlighted the fact that our waters were in trouble and we could not continue to allow their use as dumping grounds for pollutants without wreaking havoc on entire ecosystems and jeopardizing our drinking water, food sources, commerce and recreation. To that end, Congress' stated purpose and intent was to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). Congress did not say that only those waters navigable in fact or with a significant nexus, would receive those protections. Rather, it

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defined "navigable waters" as generally as "waters of the United States" 33 U.S.C. § 1362(7). The Legislative History of the 1972 Federal Water Pollution Control Act further demonstrates that Congress intended broad application of the law and its jurisdictional reach in order to foster the critical protective and remedial purposes of the law. Statements from both House Members and Senators in policy and conference committees make clear that the term "navigable" as used in the Act was not intended to constrain the reach and jurisdiction of the Act to protect against and clean up pollution in all our nation's waters. Members pointedly stated that they were concerned that inclusion of the word navigable *not* be read as limiting the Act's application in any way. Rather, their stated intent was for the Federal Water Pollution Control Act to have as broad an application as possible to protect all waters of the U.S. In particular, members noted that the intent was to move away from the constrained notions of jurisdiction and in particular notions regarding navigation, in order to ensure that waters are protected in a full and comprehensive way. *See* A Legislative History of the Water Pollution Control Amendments of 1972 (Cong. Res. Serv.), at 178-79, 250-51, 327, 818, 1495.

Further, the Act's core concern is plainly water pollution, navigation being secondary. See §1313(c)(2)(A) (water quality standards must take into consideration waters' "use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and also taking into consideration their use and value for navigation"). The Army Corps of Engineers early in the life of the Federal Water Pollution Control Act, made an unsuccessful effort to impose strict navigation constraints on its obligations by construing its jurisdiction very narrowly under the new laws to match its jurisdiction under navigational laws such as the Rivers and Harbors Act of 1899. In *Natural Resources Defense Council, Inc. v. Callaway*, 392 F. Supp. 685 (D.D.C. 1975) the court soundly rejected the Corps' attempt, finding that the Federal Water Pollution Control Act dictated a wider sweep in order to address pollutants to the nation's waters.

While the Supreme Court has recently sought a more precise definition of waters of the U.S., the fact remains that the science and the intent and purpose of the Act support broad application of protections to our nation's waters. Prior to the *Rapanos* decision, the Supreme Court agreed that the Clean Water Act broadly protected all waters. *Int'l Paper Co. v. Ouellette*, 479 U.S. 481, 492 (1987); *U.S. v. Riverside Bayview Homes, Inc.*, 474 U.S. 121, 136-37 (1985). In *Rapanos v. EPA*, 547 U.S. 715 (2006), the Supreme Court failed to produce a majority opinion or applicable precedent dictating otherwise. While a plurality of the justices agreed in the result, a remand, all three of the opinions directly disagree with some aspects of one another. However, a majority of eight justices agreed that the Act protects "relatively permanent, standing or flowing bodies of water," including the plurality led by Justice Scalia and the four dissenters led by Justice Stevens. *Id.* at 732, 810. A majority of five justices interpreted the Act as protecting waters, including wetlands, that "possess a 'significant nexus' to waters that are or were navigable in fact or that could reasonably be so made," including Justice Kennedy and the four dissenters. *Id.* at 759, 810.

Even applying the court's *Marks* doctrine[1] (which is itself questionable) the *Rapanos* ruling provides no support for *excluding* waters from the definition of waters of the U.S. The decision sets a precedent only as to which waters are included as waters of the U.S. No single justification for categorically excluding certain waters, even a narrow one, is agreed to by a majority of the justices. While EPA and a few circuit courts have coalesced around Justice Kennedy's opinion, this appears to be for convenience and an attempt to formulate some statement about Clean Water Act jurisdiction from the case. But the fact remains that no other justice subscribed to the notion that "significant nexus" is the only appropriate method of determining Clean Water Act jurisdiction. Any attempt to claim that the Kennedy approach is the exclusive controlling test is legally suspect. The *Rapanos* decision essentially provides no precedent for adopting a narrow interpretation of the definition of waters of the U.S. in the Clean Water Act. With the exception of the court's ruling striking down the application of the rule based on migratory birds in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001) ("*SWANCC*"), the previous decisions supporting broad application of the Act remain controlling precedent.

As EPA research and reporting repeatedly shows year after year, we still have a long way to go in applying the Clean Water Act and meeting its directives. Toxics are still discharged into our waters; agricultural discharges are almost wholly unregulated, account for almost half of the pollution entering waterways, and account for a very significant portion of the waters that are currently failing to meet basic standards of cleanliness (including the hypoxia problem in the Gulf and toxic algae blooms in lakes throughout the Midwest). *See, e.g.,* EPA, *Nat'l Rivers and Streams Assessment 2008-2009* (Feb. 2013) where EPA reports that well over 50% of the waters assessed exhibited *poor* conditions and only 21% were classified as "good." The results by region were even more disappointing with 63% of the waters in the east classified as poor and 58% in the plains states. *See also*, EPA summary of states' reported water quality data at http://ofmpub.epa.gov/waters10/attains_nation_cy.control, showing that states have a poor record of assessment, but of the waters assessed, 53% of assessed rivers and streams, 68% of assessed lakes, reservoirs and ponds, and 78% of assessed bays/estuaries are *failing* to meet one or more water quality standards. Discharges of pollutants into our nation's water have not been eliminated and in many respects are not even controlled. Lake Erie, once a ray of hope for positive change under the Act, has descended once again into a cesspool of algae blooms and dead fish due to unabated and increasing nutrient runoff from farms and development. *See* reporting regarding City of Toledo's closure of water supply due to toxic algal blooms and extent of toxic bloom for 2014, "Behind Toledo's Water Crisis, a Long-Troubled Lake Erie," New York Times, August 4, 2014; "Lake Erie's algae explosion blamed on farmers," CBC News, August 7, 2014.

Development and agriculture continue to decimate our wetlands—ecosystems critical to wildlife, but also critical as nature's water-cleaning and flood control mechanisms. As of five

[1] The *Marks* doctrine states that the holding of a fragmented court ruling is determined by identifying the position taken by the justices who concurred in the judgment on the narrowest grounds. *Marks v. United States*, 430 U.S. 188, 193 (1977).

years ago, agencies reported that we had lost over 50% of our wetlands nationwide; but in parts of the Midwest and coastal areas the figure is as high as 90% or more with attendant disastrous results for clean water. *See, e.g.,* EPA, Wetlands – Status & Trends, water.epa.gov/type/wetlands/vital_status.cfm; Dahl T.E., *Status and trends of wetlands in the coterminous United States 2004-2009, Report to Congress*, U.S. Dep't of Interior, Fish and Wildlife Service ("USFWS"), at pp. 16 and 89-90 (2011). While the USFWS reports the *rate* of wetland loss has slowed, losses still outdistance gains as recently as 2009, the last year USFWS reported. *Id*. And even when wetland acres are not lost, they are often degraded, losing functions and values as wildlife habitat, natural flood control and natural water quality control. Development also continues to contribute to stormwater runoff and hugely-altered hydrographs and erosion by eliminating wetlands and natural riparian areas and covering the landscape with impervious surfaces.[2] Plainly, the protections of the Federal Water Pollution Control Act are still needed and still on a broad scale as we are very far from reaching its goals and directives. The greatest and most sustainable Clean Water Act success stories are directly attributable to strict application of the Act's controls.

Because the Act's comprehensive protections are so critical to the well-being of the nation and its citizens, and obviously still sorely needed, Earthjustice supports EPA's science-based efforts, within the law, to ensure that all waters that are or can be affected by pollution be protected consistent with the intent and purpose of Congress in passing the Act but urge EPA to strengthen the rule as set forth below and to abandon the ill-conceived and unsupported categorical exclusions portion of the rule.

COMMENTS

I. EARTHJUSTICE GENERALLY SUPPORTS THE PROPOSED DEFINITIONS IN 40 C.F.R. § 230.3(s).

A. Subsection (s) Generally.

Earthjustice believes that subsection (s) is a generally sound, science-based effort to define waters of the U.S. that are subject to Clean Water Act jurisdiction. While Earthjustice does not necessarily agree that the EPA must conform its definition to the "significant nexus" discussion in *SWANCC* and *Rapanos* (a non-scientific concept as pointed out repeatedly by members of the SAB), to the extent that EPA believes it must do so, subsection (s) meets those requirements. Plainly, the waters described in subsections (s)(1)-(3) are navigable waters or they affect interstate commerce in that the waters themselves are interstate, are actually used in interstate commerce, or are the territorial seas. Including these waters within the scope of the Act is consistent with clearly expressed congressional intent as required under Step One of *Chevron,*

[2] The attached memorandum entitled, "The *Rapanos* Plurality: 'Mobile' § 402 Pollutants and 'Stationary' § 404 Pollutants," shows that dredged and fill material governed by §404—like pollutants governed by §402—can travel from the point of discharge and harm waters located elsewhere.

U.S.A., Inc. v. Natural Res. Def. Council, 467 U.S. 837, 842-43 (1984), and—assuming the issue were governed by *Chevron* Step Two—is also a reasonable interpretation of the Act. Conversely, excluding these waters would not be a reasonable interpretation—nor would it be reasoned decisionmaking supported by the record. *See Transactive Corp. v. U.S.*, 91 F.3d 232, 236 (D.C. Cir. 1996); *Association of Data Processing Service Organizations v. Board of Governors*, 745 F.2d 677, 683-84 (D.C. Cir. 1984)... Earthjustice will concentrate its comments on subsection (s), parts (4)-(7).

B. Subsection (s)(4)—Impoundments.

Subsection (s)(4) provides that all impoundments of waters identified in paragraphs (s)(1)-(5) are defined as waters of the U.S. *See also,* "Compilation of Preliminary Comments from Individual Panel Members on the Scientific and Technical Basis of the Proposed Rule Titled 'Definition of "Waters of the United States" Under the Clean Water Act'" (August 14, 2014) (hereinafter "Member Comments")[3] Rains at 70. This is consistent with the clearly expressed intent of Congress, and with case law, and is also reasonable.

Earthjustice, however, strongly disagrees with the failure to include impoundments of adjacent waters, subpart (s)(6), and impoundments of "other waters," including similarly situated waters located in the same region, subpart (s)(7). If a waterbody is defined as a water of the U.S. by operation of (s)(6) or (7) there is no reason, scientific or legal, why an impoundment of that water is not also a water of the U.S. For example, if a wetland is adjacent to the Missouri River or San Francisco Bay and is thereby considered a water of the U.S., the fact that the wetland has been impounded, in whole or in part, with a dike, or a corner of the wetland has been excavated and impounded to created a pool, should not suddenly result in that portion of the adjacent wetland losing protection under the Clean Water Act. Such a result is plainly contrary to the statute and does not even comport with EPA's efforts to apply the "significant nexus" test. Similarly, if a water has been identified, case by case, as a water of the U.S. because it has a significant nexus, then impounding that waterbody should not alter its status and it should remain protected by the Clean Water Act. In addition to lacking a basis in science or law, omitting adjacent waters and other waters with a significant nexus from the inclusion in the impoundment provision creates incentives for impounding those waters in order to weaken the protections over them.

EPA must address this issue and amend subpart (s)(4) to include impoundments of all of the identified waters in subpart (s). At a minimum, protecting impoundments of adjacent waters is a permissible and reasonable interpretation of the Act that satisfies Step Two of *Chevron*—and indeed, excluding such impoundments would not be a reasonable interpretation. Moreover, given the clear scientific support for including these impounded waters, and the absence of any basis for excluding them, a final decision to exclude them would not constitute reasoned decisionmaking supported by the record.

[3] The Compilation of Preliminary Comments is attached hereto.

C. Subsection (s)(5)—Tributaries.

Subsection (s)(5) identifies tributaries and it makes the same error as (s)(4). Again, there is no scientific or legal reason to exclude tributaries of any water that is identified as a water of the U.S. through this rule. Tributaries plainly affect downstream waters and if the downstream water is a water of the U.S. then its tributaries must be protected under the Clean Water Act. Indeed, a predecessor to the Clean Water Act recognized over a century ago that tributaries must receive federal protection from pollution. 33 U.S.C. §407. In enacting the comprehensive Clean Water Act, designed in part as a successor to that prior law, 33 U.S.C. §1342(a)(4) and (5), Congress clearly did not intend to cut back on the prior law's safeguards for tributaries. In short, including these tributaries is required under *Chevron* Step One and would, at least, be a permissible and reasonable interpretation of the Act that comports with Step Two of *Chevron*. Conversely, given the Act's broad protective scope and the scientific evidence that these tributaries have a hydrologic connection with covered waters and significantly affect them, excluding them would fail under Step Two—and would not constitute reasoned decisionmaking supported by the record.

Subsection (s)(5) must be read in conjunction with the definition of tributaries in subsection (u)(5). While the definition is a good start, as noted in EPA's Connectivity Report and by a number of the individual members of the SAB review panel, it is too limiting and therefore not fully in keeping with the science of tributaries and how/when they affect downstream waters. *See* USEPA Office of Research and Development, "Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence," External Review Draft (Sept. 2013) at 1-6 ("All tributary streams, including perennial, intermittent, and ephemeral streams, are physically, chemically, and biologically connected to downstream rivers via channels and associated alluvial deposits where water and other materials are concentrated, mixed, transformed, and transported") and 1-7 to 1-8 (and related chapters) (hereinafter "Connectivity Report"). In particular, the limitation requiring bed, banks and an ordinary high water mark (unless it is a wetland, lake or pond) may exclude some waters from protection that plainly affect downstream waters and that could then result in pollutants to downstream waters. One SAB member comment suggests, for stream (lotic) tributaries, that it should state "bed and bank, and sometimes an [ordinary high water mark]" in order to capture groundwater fed streams that are temporally stable. Member Comments, Aldous at 3. *See also,* Member Comments Kolm at 31 and 32; Rosi-Marshall at 81 ("Indeed, scientific research has shown that flows that occur intermittently, e.g. during a flood or spring snowmelt, can exert a strong influence on downstream systems. A definition of tributary that includes these small but extremely important systems…..is necessary" and "These chains of aquatic habitats can be thought of as beads on a string that can act in concert to influence the biological integrity of downstream waters"); and Sullivan at 85.

EPA also asked for comment on the potential exclusion of wetlands from the definition of tributary because, as EPA argues, they lack a bed, bank, or ordinary high water mark. 79 Fed. Reg. at 22206. Earthjustice strongly opposes this suggestion as it is not supported by the science or simple facts on the landscape. In fact, wetlands are often tributaries to water of the U.S.—for

example, the large wetland complexes like those that used to exist across the U.S., and still do to a lessened degree in the Red River area between Minnesota and North Dakota (the ancient Lake Agassiz plain), are tributaries. The large flat wetlands complex, on its western edge, would begin to form small streams draining to the Red River in the west, once the topography started to become less flat. The wetlands complex was clearly a tributary to the Red River and contributed flow to the river. *See also* discussion of Red River in the Connectivity Report. Similarly, peatlands in the northern Great Lakes states and in some areas of the east and northeast plainly demonstrate flow in their topography (e.g. teardrop shapes of vegetated "islands" within the peatlands), *see e.g., Patterned Peatlands of Minnesota*, H.E. Wright Jr. and Norman Aaseng, eds. (1992), and are the headwaters of numerous streams and rivers including the St. Louis River in Minnesota that originates in the Hundred Mile Swamp then flows through Partridge River and enters Lake Superior at Duluth's harbor. *See EPA Reg. 5*, Comment on NorthMet Project - Draft Environmental Impact Statement CEQ# 20090387 (Feb. 18, 2010). There is no scientific support for the removal of wetlands from the definition of tributary (and indeed there is scientific evidence directly contrary to doing so.) *See also,* Connectivity Report at 1-8 (nutrient removal and cycling) and Member Comments Rosi-Marshall at 81, and Sullivan at 85.

D. Subsection (s)(6)—Adjacent Waters.

Earthjustice generally supports the inclusion of "adjacent waters" (and neighboring waters) as waters of the U.S. as consistent with the science and the mandate of the Clean Water Act. *See, e.g.,* Connectivity Report at 1-9 to 1-10; Member Comments, Brooks at 17. However, the proposed rule primarily limits "adjacent" waters to those that are close in terms of distance. As the SAB members point out, this is too limiting and not supported by the science. In keeping with the scientific assessment, it is more scientifically accurate to provide that adjacency is the outer extent of the floodplain and includes all riparian areas. Members Comments, Kolm at 34 ("Distance to water body frequently is not the story"); Rains at 71; Rosi-Marshall at 82 ("River ecologists have known for a *long time* that it is more appropriate to think of rivers as part of a larger landscape or 'riverscape' comprised of a river's mainstem and adjacent floodplain or wetland habitats") (emphasis added); Sullivan at 86 ("…the scientific literature unequivocally supports the finding that floodplains and waters and wetlands in floodplain and riparian settings support the physical, chemical and biological integrity of downstream waters" and "[a]lthough distance can be one measure to help ascertain the degree of hydrological connectivity, biological and chemical connectivity should also be considered"). Adopting a more scientifically grounded interpretation of adjacency is required by the Act, and is also a permissible and reasonable interpretation. Conversely, excluding these waters would not be a reasonable interpretation—nor would it be reasoned decisionmaking supported by the record.

Earthjustice disagrees with EPA's treatment of groundwater and urges EPA to better clarify the situation with respect to groundwater—both generally and as it applies to adjacent waters—in keeping with the science regarding the functioning and connectivity of groundwater and surface water. In particular, Earthjustice refers EPA to the many comments of individual members of the SAB on this point. *See also* section II.A. below. EPA's discussion of when or why groundwater is included in the definition of adjacent waters is confusing and somewhat in

conflict with its later attempt to categorically exclude groundwater from the definition of waters of the U.S. Both of these attempts to strictly circumscribe the protections afforded by the Clean Water Act will leave important groundwater resources that affect surface waters unprotected.

Earthjustice urges EPA to incorporate a more full definition of adjacency that is defined by the outer extent of riparian and floodplain areas and to include surface and subsurface connections and hydrology in a manner discussed by members of the SAB that focuses on actual connections and effects to downstream waters as opposed to the less specific descriptions offered.

E. Subsection (s)(7)—"Other Waters."

Earthjustice generally supports EPA's proposed rule with respect to the inclusion of "other waters" as consistent with the law and with science.[4] *See, e.g.,* Connectivity Report at 1-13. As recognized and discussed by individual members of the SAB, EPA's approach is important for the protection of clean water overall in the U.S. and in its recognition of the importance of similarly situated waters within regional ecosystems. Connectivity Report 1-11 to 1-12 ("[I]n some cases, wetland types such as vernal pools and coastal depressional wetlands are …incorrectly [] referred to as geographically isolated…[f]urthermore, 'geographic isolation' should not be confused with functional isolation, because geographically isolated wetlands can still have hydrological and biological connections to downstream waters"), 1-13 ("Absence of channels does not, however, mean that a wetland or open-water is isolated or only infrequently connected to downstream waters…[s]uch wetlands and open-waters also can reduce flood peaks by storing flood waters, filter large amounts of sediment and nutrients from upland areas, influence stream geomorphology by providing woody debris and sediment, and regulate stream temperature.")

However, again, as with EPA's definition of adjacency, EPA must ensure that its inclusion of "other," "similarly-situated" waters is adequately inclusive and based on sound hydrologic and biological principles, not just a physical proximity measure. *See* Member Comments, Aldous at 4, Kolm at 33 ("The flowpath framework should highlight the four-dimensional nature of connectivity, because four-dimensional connectivity scaled in a habitat-to-catchment context is a foundational aspect of freshwater ecology") and 34 (noting that "these flowpaths are inherently four-dimensional (*i.e.*, longitudinal, lateral, vertical, and through time"), Rains at 73, and Sullivan at 87. Moreover, EPA, in providing that similarly-situated waters are properly included in the definition of waters of the U.S., must ensure consideration of aggregate function, connections, and effects, even if they are severed or altered by humans. *See* Member Comments Kolm at 49, Rosi-Marshall at 81-83, Sullivan at 84 and 88. Finally, as urged by the SAB members, Earthjustice presses EPA to include connectivity of "other waters" that are

[4] Again, as noted by almost every member of the SAB, the term "significant nexus" is *not* a scientific term and should therefore be used with the utmost care to ensure it does not result in waters being damaged and/or left unprotected contrary to the intent and purpose of the Clean Water Act. *See, e.g.,* Member Comments, Josselyn at 28.

similarly-situated through groundwater connections. Member Comments, Kolm generally, especially 41 and 43.

Relatedly, Earthjustice also agrees with comments from SAB members that EPA should ensure that "similarly-situated" waters be identified once where they plainly meet these requirements and that the determination and inclusion of those waters as waters of the U.S. should encompass all such similarly-situated features in the same watershed, and that determination should then apply to future decisions. For example, SAB member Rains, at 72, points out that springs at the toe of slopes in a number of western states should be properly identified as other waters as a whole or in the aggregate, as they plainly are connected to the same aquifer, have a similar surface connection to a single water of the U.S. (e.g. a single river) and therefore should all be identified as a water of the U.S. to be protected by the Clean Water Act in a *single* administrative decision. Similarly, the Connectivity report uses an example of depressional wetland complexes on the Texas coastal plain to point out that other waters similarly situated should be evaluated as a unit and defined as a unit. Connectivity Report at 1-12. It is neither cost-effective nor scientifically supported to force citizens and the agency to make a decision on each and every spring or seep that is so connected on the case-by-case basis described by EPA. Earthjustice asks EPA to provide in the rule that similarly-situated waters that are waters of the U.S. shall be identified as a group and as an ecological whole because to do so is dictated by the science and by administrative efficiency. As appropriate, EPA should follow up with guidance further clarifying how that requirement applies in particular regions and areas.

As with adjacent waters, Earthjustice also urges EPA to be cautious regarding its use of geographic limitations on identifying "other waters," particularly those that are similarly situated and that affect waters of the U.S. As pointed out by several SAB members, geography can be an accurate measure or proxy for waters affecting downstream waters, but caution must be observed because there can be "significant nexus" between waters that might not be considered geographically proximate.

Finally, Earthjustice is concerned about EPA's deletion of the existing provision covering certain waters where "the use, degradation or destruction of" such waters "could affect interstate or foreign commerce." 79 Fed. Reg. at 22192. EPA includes very little discussion or explanation of this proposal other than the conclusory assertion that this change is needed "[t]o comport with the *SWANCC* and *Rapanos* decisions." *Id*. at 22212. This change is not compelled by either decision. In fact, as the proposed rule notes, the Court in *SWANCC* only held that the use of "isolated" nonnavigable intrastate ponds by migratory birds was not by itself a sufficient basis for the exercise of Federal regulatory authority. It did not discuss, much less rule out, the other facts upon which EPA might find that "the use, degradation or destruction of" certain waters "could affect interstate or foreign commerce," and that those waters are thus properly considered waters of the U.S. This basis for jurisdiction therefore remains a reasonable and permissible interpretation of the scope of the Act. Earthjustice asks EPA to retain rather than delete this provision, and in any event to clarify in the final rule that this deletion is not compelled by the Supreme Court's rulings.

F. Inclusion of Additional Waters.

EPA has also requested comment regarding inclusion, or categorical exclusion, of particular types of waters—prairie potholes, vernal pools, Delmarva and Carolina bays, pocosins and playas—in the definition of in waters of the U.S. Earthjustice urges inclusion of all these waters as they, sometimes alone, but definitely in the aggregate, play critical roles in the quality of all waters of the U.S. This conclusion is amply supported by the Connectivity Report and individual SAB member comments.[5] As such, their inclusion as waters of the U.S. is required under the Clean Water Act, or at a minimum is a reasonable and permissible interpretation. Exclusion of these waters would not be a reasonable interpretation, nor would it constitute reasoned decisionmaking supported by the record.

As the Connectivity Report notes, when considered in the aggregate and from a biological perspective, waters that appear isolated on the landscape are not isolated at all from a biological and hydrological perspective. Connectivity Report at 1-11 and 1-12. In particular, the Connectivity Report unequivocally concludes in section 5.8.3.1. that generalization of "isolation" for prairie potholes has been in many instances "measurably false". As noted by SAB member Sullivan, at 88, "the science is currently available [summarized in the proposed rule notice] to demonstrate that sufficient connectivity exists without a case-specific analysis for certain subcategories of 'other waters'… (e.g., prairie potholes, Carolina and Delmarva bays, pocosins, Texas coastal prairie wetlands, western vernal pools)." At a minimum, playas should absolutely not be categorically excluded but allowed to be determined waters of the U.S. on a case-by-case basis, and prairie potholes, Carolina and Delmarva bays, pocosins, Texas coastal prairie wetlands, and western vernal pools should be *categorically included*. This result is a reasonable interpretation amply supported by the science. Exclusion of these waters would not be a reasonable interpretation, nor would it constitute reasoned decisionmaking supported by the record.

II. EARTHJUSTICE OBJECTS TO EPA'S PROPOSAL TO CATEGORICALLY EXCLUDE CERTAIN WATERS FROM THE PROTECTIONS OF THE CLEAN WATER ACT.

Earthjustice objects to EPA's proposal to exclude whole categories of water from receiving Clean Water Act protections. Such a result is not dictated by Supreme Court case law nor the language of the Clean Water Act. While some members of the Supreme Court expressed concern over ensuring that certain waters, specifically wetlands, had a connection to waters of the U.S., at no time has the Court addressed wholesale exclusion of certain types of waters. While EPA may desire to categorically exclude some waters for the sake of convenience, such a result is not driven by case law. Because it is also contrary to the intent and purpose of the Clean Water Act, categorically excluding certain types of waters on the basis of administrative

[5] With the one small exception of playas, where the experts conclude that the science is not adequately developed but that it should simply mean that they be decided on a case-by-case basis, not categorically excluded. *See* Sullivan at 88 and Connectivity Report.

convenience would fail both tests under *Chevron*: it would violate clearly expressed congressional intent under Step One, and it is an unreasonable and impermissible interpretation of the Act under Step Two. Moreover, such an exclusion would not constitute reasoned decisionmaking supported by the record.

A. Groundwater Should Not Be Categorically Excluded.

Earthjustice strongly objects to EPA's categorical exclusion of groundwater from Clean Water Act protection. EPA's proposal will leave important waters exposed to pollution. The groundwater exclusions are unsupported from a scientific perspective and may lead to regulatory confusion. The better-supported approach would be to identify groundwater as a subcategory of "other waters" for which jurisdictional status will be determined on a case-by-case basis. In that fashion, EPA will ensure that the full purpose and intent of the Clean Water Act is realized and that it will not leave waters unprotected.

As noted by various individual members of the SAB, groundwater connections to surface water do not separate along ill-defined and fairly unscientific lines such as "shallow" or "deep." Rather, connections occur as a result of topography, geology, geography, and time. In late summer and fall, many western rivers are almost entirely dependent upon groundwater. Sometimes connections through geographic features such as lava tubes or karst formations are very deep, but nonetheless very direct between groundwater and surface waters. *See* Member Comments Aldous at 3 (must definitely include shallow unconfined aquifers as providing connections between wetland types and open waters; pointing out that inclusion of groundwater in connectivity should not simply be a function of distance; and questioning exclusion of shallow subsurface flows); Brooks at 17 (exclusion of groundwater "seems ill-advised because of the likely connectivity" through different features with a potential to contaminate drinking water and connections with surface water a reasonable distance away); Gooseff at 21 (strongly questioning exclusion of groundwater and giving examples of significant connectivity between surface and subsurface waters and problems with EPA's definitions); Kolm at 31-32 ("regional ground water flows commonly interact with the surface environment at sinks and springs"; giving examples in the Floridian aquifer), at 33 ("In general, the role of regional groundwater systems in neighboring systems is not addressed by this Rule and leaves the waters of the US vulnerable"), at 34 ("Care should be taken not to imply that bedrock is impermeable because ground water flows through bedrock are important flowpaths that connect hydrologic landscapes over long distances and often across watershed boundaries"), at 39 ("as indicated with the Karst references, deep groundwater should be included as well for connectivity and include not only Karst, but certainly sedimentary systems, fractured rock systems, and volcanic systems as well…[t]he real issue is both temporal and spatial as the SAB has clearly and thoroughly discussed"), at 43 (pointing out that the role of regional groundwater is inappropriately ignored in the proposed rule), and at 46; and Sullivan at 87 (ensuring the mechanism of connectivity is protected—even if that is groundwater—is critical). Plainly, EPA's categorical exclusion of groundwater from the protections of the Clean Water Act (or its general exclusion with the ill-defined "shallow subsurface connection" exception) is not supported by the science and the science advisors.

EPA should therefore revise the proposed rule to provide that groundwater shall be protected as a water of the U.S. where it is hydrologically connected to surface water in a way that is not de minimis. This approach makes sense given the decision in *Hawai'i Wildlife Fund v. County of Maui*, __ F.Supp.2d __ (D. Ha. 2014) 2014 WL 2451565, where the court found "[t]here is nothing inherent about groundwater conveyances and surface water conveyances that requires distinguishing between these conduits under the Clean Water Act. *Id.* at *13. The court found that where treated effluent was injected into groundwater and months later emerged from seeps into the ocean, the groundwater aquifer served as a conduit for discharges of pollution into the ocean and the discharge required a National Pollutant Discharge Elimination Systam ("NPDES") permit. *Id.* at *18. At the same time, the court understood that the groundwater aquifer would also meet the significant nexus test being used by EPA here, because it has a hydrologic connection with the ocean, and the groundwater "significantly affects the physical, chemical, and biological integrity of the ocean water." *Id.* at *21-23.

While a discharge of pollutants into groundwater may be regulated under the "conduit" approach, it makes more sense, consistent with the approach advocated by members of the SAB, that the groundwater itself be protected as a water of the U.S. because of its hydrologic connection with the ocean. *See, e.g.* Member Comments, Aldous at 4, Brooks at 17, Kolm at 49. The water is plainly hydrologically connected to and affects another water of the U.S. and should be protected in its own right both for human consumption and for the obvious ultimate impact to aquatic ecosystems. It is nonsensical to protect water in a stream, then not protect it if the water molecules change to a subsurface flow, and then protect it again when those molecules surface in the ocean or a spring-fed stream. And, as the court noted in *Hawai'i Wildlife Fund,* "[n]either logic nor case law supports distinguishing between 'shallow' and 'deep' groundwater." 2014 WL 2451565 at *17.While groundwater might not in every instance be a water of the U.S., excluding groundwater from ever being considered a water of the U.S. would not be a reasonable interpretation of the Act, nor would it be reasoned decisionmaking supported by the record. EPA should revise the rule accordingly.

Earthjustice urges EPA to conform the groundwater sections of the proposed rule to the existing law and science to ensure that waters of the U.S. are fully protected as intended under the Clean Water Act. EPA should revise the rule to remove groundwater as a categorical exclusion and either fully include it in the "other waters" analysis of subsection (s) or create a new subpart in subsection (s) to ensure that groundwater that is connected to surface water, regardless of its "depth," is protected as a water of the U.S.

B. Ditches, Swales, Gullies, Constructed Ponds.

In addition to the wholesale exclusion of groundwater, the exclusions for certain ditches, and for swales, gullies and constructed ponds is problematic as it is broader than necessary, thereby exposing to pollution waters that should be protected. EPA also creates definitional problems by attempting to broadly exclude these categories of waters.

With respect to ditches, EPA should refer to individual SAB member comments on this

topic. Many commenters rightly point out that ditches, whether constructed in upland or some other type of landscape, can be significant sources of pollutants to downstream waters. *See* Members Comments, Allan at 14 (mentioning, in particular, the delivery of significant nutrient pollutants to Lake Erie); Harvey at 22; Kolm at 49 and 50; and Rodewald at 78. During periods of snow-melt or significant rains, the amount of flow and pollutants they can carry can be very significant. Moreover, many ditches, including those in uplands, originally were developed as agricultural drainage are now used by stormwater managers in urbanizing areas. *See, e.g.,* Maryland Public Drainage http://mda.maryland.gov/resource_conservation/Pages/pda_pwa.aspx. As a result, those ditches are significant conduits for pollution and must be recognized as such. A municipality's discharge of stormwater to those ditches should not escape attention under the Clean Water Act.

EPA also categorically excludes gullies, rills, and non-wetland swales. This is far too broad as noted by some members of the SAB. Gullies, rills, and swales are in many instances features on the landscape that carry significant flows and amounts of pollutants to downstream waters. Instead of categorically excluding these features and waters, it is more scientifically supportable to examine their role relative to connections to waters of the U.S. under the "other waters" category of subsection (s) and determine whether they should be protected on a case-by-case basis. *See* Members Comments, Kolm at 50; Sullivan at 89 ("to exclude these and other variable source areas (e.g., swales) from jurisdiction is not fully supported by the available science as they can be important components of integrated aquatic systems with measurable impacts to downstream systems. . .the agencies should maintain the right to classify specific gullies, rills, and swales (either separately or in the aggregate) as jurisdictional when warranted.")

Again, categorical exclusions are not warranted under the law or science and Earthjustice urges EPA to revise the proposed rule to ensure that waters that should be protected, at least on a case-by-case basis, are not automatically excluded from Clean Water Act protection.

C. Subsection (t)(5)(i), (ii)—"Artificially" Irrigated or Created Areas.

This part of the rule is simply unclear. What is meant by "artificially" irrigated areas that would return to upland? This implies that there are areas that are so heavily irrigated they turn into wetland or other bodies of water that might be considered a water of the U.S. It is unclear what fact pattern this language is trying to address. The next subsection specifically refers to rice growing, so it appears (t)(5)(i) does not refer to the kind of flood irrigation that might occur in a rice operation.

This exclusion (and the exclusion for ditches) also raises a question with respect to point sources and protected waters. EPA knows that many of the categorical exclusions are also significant sources of pollutants to water of the U.S. Artificial irrigation, rice growing operations (that fill and then later drain fields) and other "artificially" created areas such as settling basins, flush huge amounts of sediments, nutrients and chemicals such as pesticides into our waters. If they are not themselves protected waters subject to meeting water quality standards or protected

by permit requirements if someone is to discharge to them, then EPA must ensure that the pollutants that the artificial areas contribute to waters of the U.S. do not escape regulation and continue to jeopardize downstream waters, currently severely polluted with agricultural runoff wastes. If they are not waters of the U.S. and they are not regulated as discrete point source conveyances of pollutants, then a very large problem for our waters will be unaddressed and wholly unregulated.

III. WASTE TREATMENT EXCLUSION

Earthjustice strongly objects to the proposal to retain the "waste treatment system" exclusion, particularly given that EPA has never allowed for public notice and comment on the current version of this section of the rule. EPA lacks authority to exempt waters of the U.S. from the protections of the Clean Water Act. This exclusion is a major affront to the Clean Water Act and should be deleted. If not, at a minimum EPA must add a proviso in the text of the rule explicitly barring its application to waters of the U.S. If this exclusion is retained, it can only be applied to manmade waste treatment systems constructed in uplands that are not waters of the U.S. As it stands, the waste treatment system exclusion contravenes the clearly expressed congressional intent to protect all waters of the U.S., including impounded waters, and it therefore fails Step One of *Chevron.* Moreover, it is an unreasonable and therefore impermissible interpretation under Step Two, and also does not represent reasoned decisionmaking supported by the record.

In various parts of the country—mountainous regions of Appalachia, Iron Range states in the Great Lakes, mining and agricultural areas of the west and in Alaska—the "waste treatment system" exclusion is routinely invoked by federal and state agencies to allow the impoundment of natural streams or wetlands, or the filling or excavation of lakes and wetlands, to drain runoff from surface mines and/or to hold tailings or overburden from mining operations.[6] Playa lakes have been used as animal waste retention ponds for confined animal feeding operations.[7] Generally (almost always) the natural stream, lake, or wetland would be considered a water of the U.S. under the existing or proposed rules.

Under current practice and the so-called "waste treatment system" exception, the now impounded/excavated/filled waterbody loses its status as a protected water under the Clean Water Act, meaning that it does not have to meet basic water quality standards and the mining or coal or utility is free to dump pollutants into the stream or lake or wetland without the basic protections and requirements of a Clean Water Act NPDES permit. These waste treatment ponds

[6] *See* Bernhardt and Palmer, *The Environmental Costs of Mountaintop Mining Valley Fill Operations for Aquatic Ecosystems of the Central Appalachians*, Ann. N.Y. Acad. Sci. 1223, 39–57, at 43 (2011).

[7] *See* EPA Region 6, *National Pollutant Discharge Elimination System General Permit and Reporting Requirements for Discharges From Concentrated Animal Feeding Operations*, 58 Fed. Reg. 7610, 7620-21 (February 8, 1993).

are often filled with things like toxic coal ash, acid-leaching mine tailings or overburden from sulfide ore deposits that will also leach acid, selenium, and other toxic metals. The ponds are often filled with sediment that can decimate spawning areas and that can affect light and temperature necessary for aquatic life. The impounded wastes typically *are not* isolated from waters of the U.S., and in most cases are designed to discharge directly into protected waters. The "treatment" that occurs in these impoundments is frequently a farce, and often consists of nothing more than allowing the heaviest sediments in the discharges to settle to the bottom of the pond while the remaining untreated effluent is discharged into downstream waters. This practice causes serious water quality degradation downstream, even when discharges from the waste ponds are covered by permits. Usually water quality constituents such as hardness, conductivity, chlorides, sulfates, temperature and pH are adversely affected. This practice and result is utterly absurd and plainly contrary to law.

First, EPA and the Corps lack authority to adopt a regulation that empowers the agencies to exclude waters that qualify as "waters of the U.S." from statutory coverage under § 502(7), as well as from all of the safeguards that would otherwise protect that water under the Clean Water Act. *National Ass'n of Manufacturers v. Dept. of Labor*, 159 F.3d 597, 600 (D.C. Cir. 1998) ("There is, of course, no such 'except' clause in the statute, and we are without authority to insert one."). This exclusion goes well beyond EPA's authority to interpret and apply the Act. *Cf. Natural Res. Def. Council, Inc. v. Costle*, 568 F.2d 1369, 1372 (D.C. Cir. 1977) (striking down an EPA rule that attempted to exempt certain categories of point sources from the permit requirements of Clean Water Act section 402). Since EPA cannot exempt categories of point sources from NPDES permit requirements, EPA lacks the authority to do so here by creating an artificial exclusion from the definition of waters of the U.S. Furthermore, the exclusion is breathtakingly broad, with no apparent limit on the use of our nation's waters as waste dumps. This is unlawful. *See Nat'l Treasury Emps. Union v. Chertoff*, 452 F.3d 839, 861 (D.C. Cir. 2006) (rejecting reading of a statute where "there is no stopping point"); *Valdes v. United States*, 475 F.3d 1319, 1328 (D.C. Cir. 2007) (rejecting a legislative interpretation that "appears to lack a limiting principle").

This exclusion is particularly arbitrary in light of the fact that, in almost all other circumstances, impoundments are assiduously guarded within the definition of waters of the U.S. under subsection (s)(4). Earthjustice agrees that the inclusion of impoundments under (s)(4) is justified because "as a legal matter an impoundment of a 'water of the United States' remains a 'water of the United States'…." 79 Fed. Reg. at 22201 (discussing *S.D. Warren Co. v. Maine Bd. of Envtl. Prot.*, 547 U.S. 370, 379 n.5 (2006) and *U.S. v. Moses*, 496 F.3d 984 (9th Cir. 2007)). The only difference between the impoundments that are covered under subsection (s)(4) and those that are excluded through the artifice of the "waste treatment system" exclusion is the fact

that the latter are *intended to be filled with waste*.[8] This is not a reasonable or permissible interpretation of the Act, and it therefore also fails Step Two of *Chevron*. Nor does it constitute reasoned decisionmaking supported by the record.

Second, the proposal to retain the so-called waste treatment system exclusion in its current form violates the notice-and-comment requirements of the Administrative Procedure Act. 5 U.S.C. § 553. The history of the current rule shows that this exclusion was not originally intended to allow the current practice of using the nation's waters as waste dumps. The 1980 regulatory definition of waters of the U.S. clearly provides that the waste treatment exclusion "applies only to manmade bodies of water which neither were originally created in waters of the United States (such as a disposal area in wetlands) nor resulted from the impoundment of waters of the United States." Several months later, EPA published notice purporting to "suspend" the operation of this language, but not replacing it with anything else or further explanation. The omission of the language was never the subject of a notice and comment public rulemaking process despite the fact that it plainly significantly alters the law with respect to application of the protections of the Clean Water Act. Now the proposed rule specifically discourages members of the public from commenting on the proposal to retain the exclusion without the limiting language, stating that because the agencies "do not address" this and other exclusions they "do not seek comment" on them. 79 Fed. Reg. at 22190. Even assuming for the sake of argument that this exclusion is lawful under the Clean Water Act (and it is not), a decision to exclude natural bodies of water from the definition of waters of the U.S. must be subject to public process. EPA and the Corps' retention and application of this disastrous and unauthorized exclusion must be suspended pending proper process.

Third, it is simply ludicrous that this brazen give-away to some of the most polluting industries is allowed. Providing this exclusion violates the very fundamentals of the Act to eliminate toxic discharges and to preserve and protect the physical, chemical and biological integrity of the nation's waters. As noted repeatedly by the SAB members, even small tributaries, including wetlands and lakes that are in headwaters of watersheds, provide critical function and value in protecting downstream waters. Indeed, the proposed rule acknowledges that "scientific literature demonstrates that impoundments continue to significantly affect the chemical, physical, or biological integrity of downstream waters[,] traditional navigable waters, interstate waters, or the territorial seas." 79 Fed. Reg. at 22201. To allow them to be obliterated by polluting industrial activity and then polluted further with wastes based on the fiction that they are no longer waters of the U.S. is completely contrary to every single comment regarding tributaries, wetlands, and waters of the U.S. submitted by the members of the SAB and the general conclusions of the Connectivity Report. (Moreover, it does not appear that the SAB was given sufficient, or any, information about this exclusion and the way it is applied in practice to enable

[8] The impoundments themselves are also sources of pollution. Regardless of whether impoundments and the pollutants therein (including heavier sediment) are intended to 'stay put,' runoff and overflow from these areas can pollute traditional navigable waters. *See* attached memo ("The *Rapanos* Plurality: 'Mobile' § 402 Pollutants and 'Stationary' § 404 Pollutants"), at 15-20.

the SAB to advise EPA on the scientific merit or lack of merit underlying the waste treatment exclusion.) This further illustrates why the waste treatment system exclusion is unreasonable and therefore fails Step Two of *Chevron*, and does not constitute reasoned decisionmaking supported by the record.

Earthjustice presses EPA to eliminate this exclusion entirely. At a minimum, EPA must provide full opportunity for notice and comment rulemaking for this polluting and damaging practice.

CONCLUSION

Earthjustice supports a broad, science-based definition of the waters of the U.S. and urges EPA to heed the advice and comments of the SAB to strengthen the rule to ensure full protection of the nation's waters. Further, Earthjustice requests that the EPA revise the rule to remove most of the categorical exclusions, most especially the exclusion of groundwater, from the definition of waters of the U.S., preserving the ability to more fully protect our nation's waters, again consistent with the advice and counsel of the SAB.

Earthjustice appreciates the opportunity to submit comments and looks forward to working with EPA to strengthen the rule. Please feel free to contact the undersigned should you have any questions.

Sincerely,



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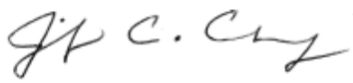

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TO: Administrator Gina McCarthy, U.S. Environmental Protection Agency

RE: Proposed Definition of "Waters of the United States" Under the Clean Water Act (Docket ID EPA-HQ-OW-2011-0880-0001)

DATE: November 13, 2014

Dear Administrator McCarthy,

Eco-Justice Ministries affirms the proposed definition of "waters of the United States" under the Clean Water Act as an important and helpful clarification of the currently ambiguous language. We strongly encourage definitions that are inclusive of headwaters and wetlands.

Eco-Justice Ministries is an ecumenical non-profit agency that guides Christian churches toward "creation care." We provide information, resources and advocacy dealing with the overlapping religious mandates toward social justice and ecological sustainability. We have direct and ongoing relationships with over 1,000 church leaders across the country, and we are considered an authoritative voice on matters of environmental theology and ethics. The proposed definitions for the Clean Water Act are a matter of great interest to us, and to our constituency.

In our work with churches, we consistently affirm that God's creation as an ecological, interconnected system – a scientific principle as well as religious truth. In this ecological world, the effects of pollution can be very far-reaching. The Clean Water Act must protect human health and environmental integrity through definitions that cover ***all*** waters which are tied to the primary waters of the U.S.

As we have interpreted to our constituency the importance of inclusive CWA definitions, we have referred to a Colorado situation from seven years ago. During the winter of 2007-8, Garden Gulch, just north of Parachute, Colorado, was the site of four spills and leaks from oil and gas drilling. In the most prominent "discharge" (the drilling company said it was not a "spill"), a million gallons of fluids seeped into the ground on the mesa top, then oozed out of a cliff, where it formed a gigantic frozen waterfall. When the frozen waterfall was first discovered, there was no surface water in Garden Gulch. But when the weather warmed up, the waterfall melted into Garden Gulch and added to the spring runoff. The gulch started to carry "milky gray water" down to Parachute Creek, which in turn flows into the Colorado River. Clearly the intermittent flow of Garden Gulch is part of a "significant nexus" of waterways connected to the Colorado River. In the dry land of the western United States, intermittent and ephemeral streams are significant contributors to water quality.

In our agency's home state of Colorado, these headwaters streams account for 52% of the total stream miles. 68% of streams in Colorado do not flow year round. 3.8 million Coloradans – 75%

of the population – get their drinking water from public sources that rely on headwater or seasonally-flowing streams. 98% of Colorado's public surface water system customers rely on a water supply that is feed by these small streams. These small and occasional streams must be included in the protected waters of the Clean Water Act.

The proposed definitions have been carefully and thoughtfully formulated to describe the characteristics of intermittent streams, and to exclude geographic features that cannot be considered waterways. We appreciate the difficulty of creating such definitions, and we agree that headwaters and occasional streams must be included in the definitions.

Eco-Justice Ministries strongly supports the proposed definitions of "waters of the United States" under the Clean Water Act. We urge the EPA to be expansive and inclusive in providing CWA protection to headwater streams, intermittent and ephemeral waters, and wetlands.

Sincerely,

Peter S. Sawtell

Rev. Peter S. Sawtell
Executive Director



November 14, 2014

Re: Draft "Waters of the U.S." Proposed Rule, Docket ID No. EPA-HQ-OW-2011-0880

The Environmental Defense Fund (EDF) respectfully submits the following comments in support of the April 21, 2014 proposed regulatory definition of "Waters of the United States" under the Clean Water Act (CWA) with requested clarifications.

The draft rule provides much needed clarification of the scope of CWA jurisdiction over waters of the United States. The Supreme Court's decisions in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (SWANCC)*[1] and *Rapanos v. United States*[2] have created substantial confusion for the public, the regulated community, and state and federal agencies over the scope of regulated waters. Further, they rolled back protection for many wetlands and seasonal or headwater streams that play a vital role in maintaining and protecting the chemical, physical and biological integrity of the Nation's waters. The draft rule does *not* restore jurisdiction over all waters formerly protected by the CWA; rather, it restores jurisdiction over *some* formerly protected waters based on an extensive record of peer reviewed science that is consistent with the Clean Water Act and the case law.[3]

The draft rule does not overturn or diminish any of the existing agricultural Clean Water Act exemptions. To the contrary, part (b) of the draft rule actually broadens existing agricultural exemptions.

EDF urges the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (the Corps) (collectively referred to as the agencies) to:

> 1) Finalize the proposed rule as expeditiously as possible after due consideration of public comments;

[1] 531 U.S. 159 (2001).

[2] 547 U.S. 715 (2006).

[3] The Farm Bill conservation compliance provisions ("Swampbuster") and Farm Bill conservation programs demonstrate a national interest in and continuing commitment to restore and protect different kinds of small wetland systems, including wetland buffers along small streams, ditches that drain agricultural lands, and small, so-called isolated, intrastate waters such as prairie pothole wetlands. Over the life of the 2014 Farm Bill, American taxpayers will invest millions of dollars in these wetland restoration and in their long-term or permanent protection. 7 CFR Part 12; National Wildlife Federation, 2014 Farm Bill Conference Report Analysis 4 (2014).

2) Finalize the proposed rule to continue to restore protection for all intrastate waters that have a significant nexus to navigable waters;

3) Include in the final rule categorical protection for waters on an ecoregional or hydrologic-landscape basis, consistent with the legal, technical and scientific administrative record;

4) Ensure the final rule, like the proposed rule, continues to maintain existing agricultural exemptions; and

5) Ensure that the final rule does not broaden the scope of exempted ditches beyond existing policy without a sound scientific basis.

EDF discusses each of these recommendations in greater detail below, particularly focusing upon our strong support for the agencies' legal and scientific analysis for restoring protections for categories of waters with a significant nexus to navigable waters.

1) In light of the need for clarity on the scope of the waters of the U.S., we urge the agencies to finalize the rule as expeditiously as possible. EDF and a broad array of other stakeholders and stakeholder groups—including developers, energy companies, water utilities, agriculture, manufacturing and extraction industries, conservationists and environmentalists, state, local and tribal government officials, and members of Congress—urged the agencies to conduct a rulemaking to provide clarity on the scope of waters of the U.S. in the wake of confusion caused by the Supreme Court decisions in *SWANCC* and *Rapanos*.

The current uncertainty threatens to leave many headwater and seasonal streams and wetlands unprotected, thereby crippling efforts to achieve the Clean Water Act goal of restoring and maintaining the chemical, physical and biological integrity of the Nation's waters. Like the capillaries in the human body's circulatory system, the vast networks of headwater and seasonal streams comprise the majority of stream miles in this country, and play a critical role in maintaining the chemical, physical and biological integrity of downstream navigable waters. They help regulate flooding and river baseflow, filter and process pollutants, provide food and habitat for aquatic life, and, in many cases, play a critical role in protecting drinking water. More than 110 million Americans rely at least in part on these streams for their drinking water.[4] Many wetlands that are not adjacent to navigable waters protect and maintain the chemical, physical and biological integrity of downstream waters by helping to regulate flooding and river baseflow, recharging aquifers, filtering and processing pollutants, and providing critical wildlife habitat supporting threatened and endangered species as well as downstream fisheries and shellfish.

In the wake of *SWANCC* and *Rapanos*, the CWA permitting programs have become more complicated, resource-intensive, uncertain and slow. Making case-by-case determinations of whether individual waters have a significant nexus to downstream navigable waters is 8 to 10 times more resource intensive than the permitting process was pre-*SWANCC* and

[4] http://water.epa.gov/type/rsl/streams.cfm

Rapanos.[5] This also has had a significant chilling effect on CWA enforcement. EPA has declined to pursue hundreds of enforcement actions due to "jurisdictional uncertainty."[6]

A further source of urgency for finalizing the rule is the strain and constraints the current uncertainty regarding the scope of waters protected by the Clean Water Act imposes on state water quality programs. A recent study by the Environmental Law Institute reveals that at least 36 states have legal restrictions that could impair the ability of state water quality agencies to protect waters left unprotected by the CWA in the wake of *SWANCC* and *Rapanos*.[7] In fact, many states have predicated their state water quality laws upon the federal CWA, providing that the state laws be "no more stringent than" the CWA.

EDF recognizes that the draft rule is of great interest to many, and the agencies will likely receive many public comments. We urge the agencies to expedite consideration of these comments and publish the final rule as expeditiously as possible.

2) The final rule *must* protect all intrastate waters that have a significant nexus to navigable waters to achieve the goals of the CWA.[8] The objective of the CWA is to "restore and maintain the chemical, physical and biological integrity of the Nation's waters."[9] This cannot be achieved if the CWA fails to protect upstream waters that have a significant nexus to downstream navigable waters. In holding that intrastate adjacent wetlands are protected by the CWA, the Supreme Court observed "Congress recognized" that "[p]rotection of aquatic ecosystems" required "broad federal authority to control pollution for '[w]ater moves in hydrologic cycles and it is essential that the discharge of pollutants be controlled at the source.' "[10]

In *SWANCC*, the Supreme Court reversed the "Migratory Bird Rule" as a test of which intrastate waters could be protected by the CWA. The Court observed that, in *Riverside,* it had upheld the agencies' authority to protect intrastate, adjacent wetlands because "Congress' concern for the protection of water quality and aquatic ecosystems indicated its intent to regulate 'wetlands inseparably bound up' with the 'waters of the United States'" and because "the *significant nexus* between the wetlands and 'navigable waters'"

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[5] R. Meltz, C. Copeland, "The Wetlands Coverage of the Clean Water Act (CWA): *Rapanos* and Beyond", at 11 (Congressional Research Service, September 2014) http://nationalaglawcenter.org/wp-content/uploads/assets/crs/RL33263.pdf

[6] Id.

[7] "State Constraints: State-Imposed Limitations on the Authority of Agencies to Regulate Waters Beyond the Scope of the Federal Clean Water Act" (An ELI 50-State Study, May 2013), http://www.eli.org/sites/default/files/eli-pubs/d23-04.pdf

[8] The proposed rule does not, and should not, change the long-standing protection of navigable waters which include traditionally navigable waters (33 CFR 328.3(a)(1)), interstate waters (33 CFR 328.3(a)(2)), and the territorial seas (33 CFR 328.3(a)(3)). Accordingly, EDF does not address the regulation of these (a)(1)-(3) waters in our comments, but we fully support their continued protection.

[9] 33 U.S.C. 1251(a).

[10] United States v. Riverside Bayview Homes, 474 U.S. 121, 133 (1985) (citing S.Rep No. 92-414, p.77 (1972), U.S. Code Cong. & Admin. News 1972, pp. 3668, 3742.

influenced the Court's interpretation of the Clean Water Act.[11] In *Rapanos*, Justice Kennedy noted that "to constitute 'navigable waters' under the Act, a water or wetland must possess a '*significant nexus*' to waters that are or were navigable in fact or that could reasonably be so made."[12] A four-justice plurality agreed that the CWA extends beyond traditional concepts of navigable waters, but relied upon whether these waters were "relatively permanent, standing or continuously flowing bodies of water" connected to navigable waters and wetlands with "a continuous surface connection" to navigable waters.[13] However, they clarified that "relatively permanent" waters could include, for example, "*seasonal* rivers."[14] In the wake of these decisions, the U.S. Courts of Appeals have either relied solely upon Justice Kennedy's significant nexus test or upon this test plus the four justice plurality test. None have relied only on the plurality test.

The agencies employed a sound reading of the case law in restoring CWA protection to those intrastate waters that have a significant nexus to navigable waters. The agencies reasonably define "significant nexus" as a water, including wetlands, that, alone or in combination with other similarly situated waters in the watershed that drains to the nearest navigable water, significantly affects the chemical, physical or biological integrity of the navigable water. For an effect to be significant, it must be "more than speculative or insubstantial."[15] This exactly comports with J. Kennedy's language in *Rapanos.*[16]

The agencies rely upon strong evidence of connectivity impacting the chemical, physical and/or biological integrity of navigable waters.[17] This clearly extends beyond a finding of mere physical connection. The agencies have grounded protection of adjacent intrastate waters and tributaries—including seasonal, headwater streams and wetlands—on extensive, peer reviewed, scientific documentation of chemical, physical and biological connections between these waters and navigable waters.[18]

The proposed rule also clarifies the meaning of adjacency and tributaries by providing definitions of "neighboring," "floodplain," and "tributary." It is quite clear that waters, not land within floodplains, are protected. The agencies have reasonably declined to

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[11] 531 U.S. at 167 (emphasis added).

[12] 547 U.S. at 759 (emphasis added).

[13] Id. at 742.

[14] Id. at 732 n.5

[15] Id. at 780.

[16] Id. at 779 ("The required nexus must be assessed in terms of the statute's goals and purposes. Congress enacted the law to 'restore and maintain the chemical, physical, and biological integrity of the Nation's waters"); 780 ("if the wetlands, either alone or in combination with other similarly situated [wetlands] in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as 'navigable.'")

[17] See e.g., 79 Fed. Reg. 22195-22198, 22201-22217, 22222-22252 (Appendix A).

[18] Id.

adopt an arbitrary definition of floodplain (such as a 100-year floodplain). Conditions vary too much throughout this country to adopt the same flood interval for the entire nation. It is much more accurate and faithful to the best scientific understanding of connectivity to leave the determination of which flood interval to use to best professional judgment. We support the agencies' broad definition of tributaries consistent with the science that tributaries contribute flow, directly or indirectly through another water, to a navigable water or impoundment of navigable water, that tributaries can be natural, man-made, or artificial, and can include ditches, canals, ponds, wetlands and impoundments.

Finally, like the proposed rule, the final rule should protect as many of these waters with a significant nexus to navigable waters through bright line per se categories as is consistent with the science and the law, including, as we discuss below, at the ecoregional or other hydrologic landscape level.

3) The final rule should include categorical protection of waters at the ecoregional or other hydrologic landscape level where justified by the legal, technical and scientific record. EDF strongly supports the agencies' recognition of the importance of protecting "other waters"[19] and their resulting request for comment and scientific, technical and scientific data to support categorical protection of similarly situated waters in an ecoregional or hydrologic landscape scale that have a significant nexus to downstream navigable waters. EDF urges the agencies to include protection in the final rule for as many types of waters, such as prairie potholes, at the ecoregional or other hydrologic landscape level as the administrative record supports for compliance with the significant nexus test on a categorical basis at the ecoregional or hydrologic landscape level.[20] This is critical to achieving the goals of the Clean Water Act as well as the agencies' goals to provide clarity, transparency, and predictability. We further suggest that, as new scientific information comes to light, the agencies periodically amend the rule to include additional categories of waters protected at the ecoregional or hydrologic landscape scale.

4) Like the draft rule, the final rule should continue to maintain the existing CWA statutory exemptions for agriculture. The draft rule does *not* cut back the existing Clean Water Act exemptions for agriculture. Statutory exemptions for agricultural *activities*—such as the exemption in CWA Section 404(f)(1)—and statutory exemptions for agricultural *discharges*—such as the exemptions for agricultural stormwater discharges and agricultural return flows in CWA Sections 502 and 402—continue to apply under the draft rule whether the underlying waters are determined to be jurisdictional or not.[21]

[19] "Other waters" are waters that do not fit into any of the proposed categories of waters of the U.S. in the proposed rule (79 Fed. Reg. 22189, 22211).

[20] As discussed above, see supra at footnote 3, Swampbuster applies to prairie potholes, and the Farm Bill conservation programs incentivize farmers to restore and protect these wetlands because of the important functions and values they provide. This reflects a connection to interstate commerce.

[21] 79 Fed. Reg. 22189, 22193-4.

Similarly, "The rule …. does not change regulatory exclusions for … prior converted cropland."[22] Like the current regulations, the draft rule (328.3(b)(2)) expressly excludes prior converted cropland from the definition of waters of the U.S.

5) The final rule should not broaden the scope of exempted ditches beyond current policy without a sound scientific basis. The draft rule *expands* the scope of some existing agricultural exemptions by providing that many waters that the agencies have typically not regulated as a matter of policy will now be *always* exempt under section (b) of the rule, regardless of whether future science proves that these waters have a significant impact on and nexus with downstream waters. This extends beyond the scope of agency authority. The agencies may not bind what EPA and the Corps may do in the future in terms of reformulating these regulations if future scientific developments justify a revision(s) that is/are consistent with statutory mandates. Nor may they bind what a future Congress may do. Further, removing these waters permanently from Clean Water Act jurisdiction regardless of what future science may prove, frustrates the central goal of the Clean Water Act to "restore and maintain the chemical, physical and biological integrity of the Nation's waters."

This is a particularly significant environmental concern with regard to drainage ditches. In many areas of the country, such as the Midwest, it can be difficult to discern the difference between ditches dug in uplands and channelized headwater streams. Moreover, the pertinent question from a Clean Water Act perspective should be whether the ditch or channelized stream has a significant nexus to downstream navigable waters, not whether it was excavated in uplands and receives only upland flow. The pertinent issue is the nature of the connection between the upland ditch and the downstream water, not whether the water came from upland flow.

This concern is further heightened by the shift in the proposed rule from current policy, which is generally to abstain from regulating ditches dug in uplands that receive less than intermittent flow, to the proposed rule language to abstain from regulating ditches dug in uplands that receive less than perennial (year round) flow.[23] This is potentially an enormous expansion of the exemption. EDF has worked in many on the ground projects in the Midwest. In our experience, there are many small streams, channelized headwater streams and ditches that convey water much of the year but are dry or cease flowing in August. Dr. David Kovacic (University of Illinois), one of the nation's foremost experts on the use of constructed wetlands to reduce nitrogen and phosphorus export from agricultural tile drainage,[24] reports:

> "In the wet prairie region of the Midwest the landscape was characteristically wet in the spring (so wet that it required tile drainage to successfully farm the land)

[22] Id. at 22193.

[23] 79 Fed. Reg. 2219.

[24] See e.g., David A. Kovacic, David, M.B, Gentry, L.E, Starks, K.M., and Cooke, R.M., *Effectiveness of Constructed Wetlands in Reducing Nitrogen and Phosphorus Export from Agricultural Tile Drainage*, Journal of Environmental Quality Vol. 29, no.4 (July-August 2000).

> but extremely dry in the late summer and early fall. Nearly every year the headwater streams dry up and become a series of more or less stagnant pools. Over the last 25 years this is a phenomenon that I have observed with regard to our wetland areas and adjacent headwater streams, only during the wettest summers do streams in the region flow all year. While I don't have specific data, I have seen headwater streams flow year round perhaps 3 out of 25 years."[25]

EDF staff and consultants have observed these conditions in late summer while working on our central Illinois, Mackinaw River Drinking Watersheds Project. Moreover, our colleague, Krista Kirkham, at The Illinois Chapter of The Nature Conservancy, noted her observations from her many years of experience monitoring and mapping subwatersheds of the Mackinaw River:

> "[F]rom tromping around these tiled, headwater ditches for the last 11 years, it's very common for these creeks to run quite low in the summer/fall when the tiles stop running (typically sometime in late July, August-September, sometimes through October). It's rare that a stream would dry up completely; *usually they stop flowing and become isolated pools of water that get fouled quickly with algae and other decaying things.*[26]

She further reports that during drought years, the creeks had completely dried up due to lack of flow from the tiles. We urge the agencies to reject this expansion of the scope of this drainage exemption; it is unwarranted, unsupported by the science, and not in accordance with achieving the goals of the Clean Water Act.

Unlike the discussion in the preamble regarding the voluminous scientific record in support of protecting headwater streams, there is no discussion in the preamble to the proposed rule of any science supporting this potentially dramatic expansion of waters not protected by the CWA.

In summary, EDF appreciates the opportunity to comment on this tremendously important draft rule and we urge the agencies to:

> 1) Finalize the proposed rule as expeditiously as possible after due consideration of public comments;
>
> 2) Finalize the proposed rule to continue to restore protection for all intrastate waters that have a significant nexus to navigable waters;
>
> 3) Include in the final rule categorical protection for waters on an ecoregional or hydrologic-landscape basis, consistent with the legal, technical and scientific administrative record;
>
> 4) Ensure the final rule, like the proposed rule, continues to maintain existing agricultural exemptions; and

[25] November 7, 2014 e-mail from Dr. David Kovacic.

[26] November 6, 2014 e-mail from Krista Kirkham.

5) Ensure that the final rule does not broaden the scope of exempted ditches beyond existing policy without a sound scientific basis.

Thank you for your consideration of our comments on this important rulemaking.

Sincerely,



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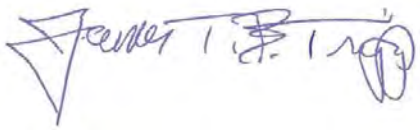

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
DEPARTMENT OF DEFENSE, DEPARTMENT OF THE ARMY,
CORPS OF ENGINEERS

Definition of "Waters of the United States" Proposed Rule 78 Fed. Reg. 34,432 (Apr. 14, 2013)	Docket ID No. EPA–HQ–OW– 2011-0880

COMMENTS OF THE ENVIRONMENTAL INTEGRITY PROJECT, WATERKEEPER ALLIANCE, BLACK WARRIOR RIVERKEEPER, CHESAPEAKE CLIMATE ACTION NETWORK, CITIZENS COAL COUNCIL, AND LITTLE BLUE REGIONAL ACTION GROUP

Submitted electronically: www.regulations.gov and ow-docket@epa.gov

Submitted on behalf of the commenters listed above by:

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Introduction

The Environmental Integrity Project, Waterkeeper Alliance, Black Warrior Riverkeeper, Chesapeake Climate Action Network, Citizens Coal Council, and Little Blue Regional Action Group (collectively, Commenters) strongly object to EPA's proposal to retain the waste treatment system exclusion and refusal to accept public comments. EPA's refusal to follow notice and comment procedures violates the Clean Water Act and Administrative Procedures Act. Further, the exclusion itself directly conflicts with clear Congressional intent that our nation's rivers, lakes, and streams not be used as private dumps for industrial operations and decades of case law establishing that waters of the U.S. retain this status in perpetuity. Thus, the exclusion as written, fails Step One of Chevron. In the alternative, the waste treatment system exclusion is an impermissible construction of the Clean Water Act under Step Two of Chevron. EPA must follow through on the promise it made more than three decades ago to publish a revised waste treatment system definition that complies with the Clean Water Act or terminate the suspension of the sentence that made clear that waste treatment systems created in, or by impounding, waters of the U.S. are not eligible for the exemption. At a minimum, EPA must provide notice and comment rulemaking for the proposed waste treatment system exclusion.

I. Background

A. History of Waste Treatment System Exclusion

On May 19, 1980, EPA issued a final rule that made clear that waste treatment systems created by impounding "waters of the U.S." are not exempt from regulation under the Clean Water Act. Specifically, the rule stated:

> [w]aste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 C.F.R. § 423.11(m) which also meet the criteria of this definition) are not waters of the United States. *This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States.*

45 Fed. Reg. 33,290, 33,424 (May 19, 1980) (emphasis added). In response to industry pressure, however, EPA suspended the final sentence of the regulation, which states that "[t]he exclusion applies only to manmade bodies of water which neither were original created in waters of the Unites States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States," just a few months later. 45 Fed. Reg. 48,620, 48,620 (July 21, 1980).

EPA expressly cited the utility industry's concern that they would now have to obtain an NPDES permit to discharge into existing coal ash dumps that were created by impounding "waters of the U.S." as part of its justification for suspending this part of the rule. *Id.* At that time, EPA claimed that this was a temporary suspension and promised to "promptly [] develop a

revised definition and to publish it as a proposed rule for public comment. At the conclusion of that rulemaking, EPA [stated] it w[ould] amend the rule, or terminate the suspension." *Id.*

EPA never followed through on its promise to address this important issue, allow the public an opportunity to provide comments, and finalize a new regulation or terminate the suspension. EPA, along with the Army Corps of Engineers, is now proposing to formally codify the waste treatment system exclusion without providing notice and comment. *See* 79 Fed. Reg. 22,188, 22,189 (Apr. 21, 2014) In the current proposed rule, the agencies state that they are not accepting public comment on the waste treatment exclusion because they maintain they have proposed no changes to the waste treatment system exclusion. *Id.* 79 Fed. Reg. at 22,190. Instead of making good on the promise it made over thirty years ago, EPA is now attempting to evade compliance with the Clean Water Act and Administrative Procedures Act by bootstrapping the impermissible exclusion onto the "Waters of the United States" rule without notice and comment.

B. Coal Ash Surface Impoundments

This exclusion has had and will continue to have serious consequences for our nation's waters if EPA finalizes the proposed waste treatment exemption. For example, it has been a common practice for the utility industry to impound streams and rivers to create waste dumps for coal ash[1] and other wastes associated with coal-fired power plants. In fact, EPA cited the utility industry's concern about coal ash impoundments as one of the primary reasons EPA suspended the sentence making clear that permits are required for discharges into a waste treatment system created by impounding waters of the U.S. 45 Fed. Reg. at 48,620. Coal-fired power plants generate millions of gallons of wastewater loaded with toxic pollutants like arsenic, boron, cadmium, chromium, lead, mercury, and selenium into our rivers, lakes, and streams each year. This pollution is discharged directly from the power plant; flows from old, unlined surface impoundments or "ponds" that many plants use to store toxic slurries of coal ash and smokestack scrubber sludge; and seeps from unlined ponds and landfills into ground and surface waters. EPA estimates that *at least 5.5 billion pounds* of pollution are released into the environment by coal-burning power plants every year.[2] Coal-burning power plants are responsible for at least 50 to 60 percent of the toxic pollutants discharged into waters of the U.S—more than the other nine top polluting industries *combined*.[3]

Coal combustion wastewaters contain a slew of toxic pollutants that can be harmful to humans and aquatic life in even small doses. Due to the bio-accumulative nature of many of these toxins, this pollution persists in the environment, and even short-term exposure can result in long-term damage to aquatic ecosystems. In short, coal plant water pollution has serious public health consequences and causes lasting harm to the environment. According to EPA, power plant pollution has caused over 160 water bodies not to meet state water quality standards,

[1] Coal combustion waste or coal ash are wastes "from the combustion of coal in power plants and captured by pollution control technologies, like scrubbers." U.S. Envtl. Prot. Agency, Coal Combustion Residuals – Proposed Rule, http://www.epa.gov/osw/nonhaz/industrial/special/fossil/ccr-rule/ (last visited Nov. 12, 2014).
[2] EPA, Environmental Assessment for the Proposed Effluent Limitation Guidelines and Standards for the Steam Electric Power Generating Point Source Category 3-14 (Apr. 2013), Docket No. EPA-HQ-OW-2009-0819-2260 [hereinafter EA].
[3] *Id.* at 3-13.

prompted government agencies to issue fish consumption advisories for 185 waters, and degraded 399 water bodies across the country that serve as public drinking water supplies.[4]

Yet utilities have effectively been allowed to steal our nation's waters to create these toxic lagoons in some cases. For example, an analysis of coal ash disposal units in seven southeastern states by Waterkeeper Alliance[5] shows that *113 dumps* of 405 dumps were created by impounding or burying a waters of the U.S. Of those 113 dumps, 85 are currently classified as surface impoundments, 26 as landfills, and 2 as Flue Gas Desulfurization (FGD) waste disposal units. The Waterkeeper Alliance analysis identified more than 140 stream segments that have been impounded or otherwise obstructed by coal ash disposal units, with a combined length of 113 miles. The estimated volume of toxic coal ash in the dumps built on top or in a waters of the United States in these eight states alone is 132 billion gallons.

Utilities in other states have also created coal ash dumps by impounding or burying a waters of the U.S. For example, the FirstEnergy Little Blue Run impoundment in Pennsylvania, the nation's largest coal ash impoundment, was created by damming Little Blue Run stream. The Pennsylvania Department of the Environment took enforcement action for widespread pollution caused by this leaking impoundment and recently ordered a $169 million dollar cleanup and closure of Little Blue Run. Pa. Dep't of the Env't, DEP Issues Permit Requiring Closure of FirstEnergy's Little Blue Run Impoundment (Apr. 3, 2014), *available at* http://www.portal.state.pa.us/portal/server.pt/community/newsroom/14287?id=20442&typeid=1.

Although EPA claims that the waste treatment exclusion is not a wholesale exemption from compliance with the Clean Water Act because they interpret it to apply only to impoundments that had been in existence for many years at the time it first suspended the final sentence of the definition, the plain language of the regulation includes no grandfather provisions or other limiting language related to the age of the impoundment. Further, EPA appears to be backtracking on this interpretation to allow new impoundments to claim the exemption so long as they obtain a § 404 permit. In short, EPA is proposing to codify a regulation that creates a gaping hole in the Clean Water Act and authorizes utilities and industrial operators to use our nation's waters as their own private sewers—all while refusing to follow notice and comment requirements of the Clean Water Act and the Administrative Procedures Act.

II. EPA is prohibited from codifying the waste treatment exclusion without providing notice and an opportunity for public comment.

EPA may not codify the waste treatment exclusion without following notice and comment requirements. The Clean Water Act requires that "[p]ublic participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established by the Administrator any State under this Act *shall be provided for, encouraged, and assisted* by the Administrator and the States. 33 U.S.C. § 1251(e). Under the

[4] http://water.epa.gov/scitech/wastetech/guide/steam-electric/proposed.cfm.

[5] Waterkeeper Alliance performed a geospatial analysis by overlaying coal ash disposal sites on historical topographical maps published by the U.S. Geological Survey, allowing the identification of coal ash ponds and landfills that were constructed by impounding or burying one or more preexisting blue-line streams. The analysis examined known coal ash sites in Alabama, Georgia, Florida, North Carolina, South Carolina, Tennessee, and Virginia.

Administrative Procedures Act, EPA must provide for public participation for agency actions that create law (i.e. legislative rules or substantive rules). *See, e.g.*, *Gibson Wine Co. v. Snyder*, 194 F.2d 329, 331 (D.C. Cir. 1952). Courts at all levels have stressed the importance of public participation in rulemaking, and the D.C. Circuit has determined that notice and comment works "(1) to ensure that agency regulations are tested via exposure to diverse public comment, (2) to ensure fairness to affected parties, and (3) to give affected parties an opportunity to develop evidence in the record to support their objections to the rule and thereby enhance the quality of judicial review." *International Union, United Mine Workers of Am. V. Mine Safety & Health Admin.*, 407 F.3d 1250, 1259 (D.C. Cir. 2005). Yet thirty-four years after promising to promptly publish a proposed rule setting forth a revised definition of "waste treatment system," EPA and the Army Corps are attempting to circumvent the Administrative Procedures Act and Clean Water Act by codifying the illegal waste treatment system exclusion without notice and comment rulemaking.

A. EPA's proposed waste treatment system exclusion and codification of the suspension is a legislative rule.

There can be no doubt that the proposed waste treatment system exclusion and codification of the suspension is a legislative rule subject to notice and comment under the Clean Water Act and the Administrative Procedures Act. "To determine whether a regulatory action constitutes promulgation of a regulation, [courts] look to three factors: (1) the Agency's own characterization of the action; (2) whether the action was published in the Federal Register . . . .; and (3) whether the action has binding effects on private parties or on the agency." *Iowa League of Cities v.* EPA, 711 F.3d 844, 862 (8th Cir. 2013) (citing *Molycorp, Inc. v. EPA*, 197 F.3d 543, 545 (D.C. Cir. 1999)).

In the proposed rule, EPA expressly identified the action as a regulation (as opposed to an interpretive rule or general statement of policy). 79 Fed. Reg. at 22,217 ("The agencies' longstanding regulations exclude waste treatment systems designed to meet the requirements of the CWA . . . ."). The action was published in the Federal Register. *Id.*at 22,188. Finally, the action has had and will continue to have a binding effect on both dischargers and the EPA. Industrial operators will arguably have a right to discharge into waste treatment impoundments created by impounding waters of the U.S. without a NPDES permit so long as the impoundments are "designed to meet the requirements of the Clean Water Act." *Id.* at 22,268. Accordingly, the regulation will confer rights or obligations on private parties and the agency. Thus, the waste treatment system exclusion is subject to public review and comment.

Notably, EPA must follow public notice and comment procedures under the Administrative Procedures Act not only when it enacts a rule, but when it repeals a rule as well. *Nat'l Parks Conservation Ass'n v. Salazar*, 660 F. Supp. 2d 3, 5 (D.D.C. 2009). As discussed previously, in spite of its promise, EPA has never provided notice and comment on the suspension even though the suspension of the last sentence alters the definition and is akin to an actual repeal of a portion of the final rule. *See* 45 Fed. Reg. at 48,620. Thus, EPA must follow public participation requirements for the waste treatment system exclusion.

B. The waste treatment system exclusion is not an interpretative rule or general statement of policy exempt from notice and comment requirements.

The proposed regulation is not an interpretative rule or general statement of policy exempt from notice and comment requirements. *See* 5 U.S.C. § 553(b)(3)(A) (stating that notice and comment is not required for interpretative rules or a general statement of policy). First, the regulation is not an interpretative rule because it grants substantive rights to private parties. *See, e.g.*, *Brown Exp., Inc. v. U.S.*, 607 F.2d 695,700 (5th Cir. 1979) (noting that rules that grant substantive rights are not interpretative rules). As discussed, the exclusion arguably works to allow persons to discharge into waters of the U.S. without a permit so long as it is a waste treatment system designed to meet the requirements of the Clean Water Act. *Id.* at 22,268.

Further, the mere fact that an agency action amends an existing legislative rule may disqualify it from qualification as an interpretative rule. *Gunderson v. Hood*, 268 F.3d 1149, 1154 (9th Cir. 2001) ("If a rule is inconsistent with or amends an existing legislative rule, then it cannot be interpretive."). EPA's suspension of the limits to the waste treatment system exception, whether "temporarily" on July 21, 1980 or again on April 21, 2014, amends the legislative rule finalized on July 18, 1980. Thus, because it amends an existing legislative rule, the waste treatment system exclusion cannot be an interpretative rule.

EPA knows how to classify an action as an interpretative rule when it intends to do so. For example, in the current proposed rule, EPA included a section on "discharges of dredged or fill material associated with certain agricultural conservation practices . . ." and identified it as an interpretative rule. 79 Fed. Reg. at 22,194. EPA is unequivocal that it intends this latter section to be an interpretive rule rather than a substantive rule—mentioning "interpretive rule" five times over the course of a single paragraph. EPA never suggests the waste treatment system exemption is an interpretative rule in the proposal.

Second, the proposed regulation is not a general statement of policy. General statements of policy are "statements issued by an agency to advise the public prospectively of the manner in which the agency proposes to exercise a discretionary power. *Brown*, 607 F.2d at 701 (citing U.S. Department of Justice, Attorney General's Manual on the Administrative Procedure Act 30 n. 3 (1947)). In this case, it is clear the definition of the waste treatment system definition is not a general statement of policy. In conclusion, the waste treatment system exclusion is not an interpretative rule or general statement of policy.

For all of these reasons, EPA must follow the public participation requirements set forth in the Clean Water Act and Administrative Procedures Act. EPA cannot bootstrap a procedurally deficient regulation into the current rulemaking and evade public participation requirements.

III. EPA does not have the authority to exempt waters of the U.S. from coverage under the Clean Water Act.

The waste treatment system exemption is in direct conflict with the Clean Water Act and fails Step One and Step Two of the *Chevron* test. The plain language of the proposed waste

treatment system exclusion is that a waste treatment system designed to meet the requirements of the Clean Water Act is not a water of the U.S. even if it is created by impounding waters of the U.S. *See* 79 Fed. Reg. at 22,268. The proposed regulation states that "notwithstanding whether they meet the terms of paragraphs (a)(1) through (a)(3) of this definition," "[w]aste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act." *Id.* Without the second part of the waste treatment system definition—"This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as a disposal area in wetlands) nor resulted from the impoundment of waters of the United States."—the broad exclusion for waste treatment systems from Clean Water Act jurisdiction is directly contrary to the Clean Water Act and decades of law holding that once a body of water is a waters of the U.S., it is always a waters of the U.S.

A. It is unambiguous that EPA lacks the authority to exclude a waters of the U.S. from coverage under the Clean Water Act.

While "waters of the United States" itself may be an ambiguous term that EPA is charged with promulgating regulations to define, it is clear from legislative history and decades of case law that Congress did not intend for EPA to allow our nation's rivers, streams, and lakes to be used as private sewers for the utility industry and other polluters. Under *Chevron v. Natural Res. Def. Council*, courts examine "the intent of Congress" in creating the statue. 467 U.S. 837, 842 (1984). If the intent is clear, a court "gives effect to the unambiguously expressed intent of Congress." *Id.* at 842-43. If, however, the statute is ambiguous, a court will defer to an agency's interpretation of the statute if it is a "permissible construction." *Id.* at 843.

Here, senate reports speak directly to this issue and the general common law rule prior to the enactment of the Clean Water Act was that a body of water forever remains a waters of the U.S. once it has been identified as a waters of the U.S. *See, e.g.*, *United States v. Appalachian Elec. Power Co.*, 311 U.S. 377, 408 (1940) ("When once found to be navigable, a waterway remains so."). Thus, the waste treatment system exclusion fails Step One.

1. The waste treatment system exclusion is directly contrary to the statute.

There is no doubt that Congress intended the broadest possible reach of the Clean Water Act. The original conferees stated that "the term 'navigable waters' be given the broadest possible constitutional interpretation unencumbered by agency determinations which have been made or may be made for administrative purposes." S. Rep. No. 92-1236, at 45 (1972) (Conf. Rep.), *reprinted in* 1972 U.S.C.C.A.N. 3776, 3822. The Senate Committee on Public Works, in approving the Federal Water Pollution Control Act Amendments of 1971 explicitly found that "[t]he use of any river, lake, stream or ocean as a waste treatment system is unacceptable." S. Rep. No. 92-414, at 7 (1972), *reprinted in* 1972 U.S.C.C.A.N. 3668, 3674. Several years later, another Senate Report stated that the Clean Water Act "stipulated that the Nation's fresh and marine waters would not be an element of the waste treatment process. That continues to be national policy." S. Rep. No. 95-370, at 4 (1977) *reprinted in* 1977 U.S.C.C.A.N. 4326, 4330. There appear to be no contrary statements in the legislative history.

2. The waste treatment system exclusion is directly contrary to decades of judicial decisions reviewing the scope of "waters of the U.S.".

In addition to legislative history that makes clear that the waste treatment system exclusion is contrary to Congressional intent, it is settled law that once a body of water is found to be waters of the U.S., it always remains waters of the U.S. *See* Scott Snyder, Note, *The Waste Treatment Exclusion and the Dubious Legal Foundation for the EPA's Definition of "Waters of the United States"*, 21 N.Y.U. Envtl. L.J. 504, 522-23 (2014) (providing overview of federal cases prior to the enactment of the Clean Water Act holding that once a body of water has been classified as a waters of the U.S., it remains a waters of the U.S. forever).

While some of these decisions examined the term "navigable waters" as opposed to "waters of the U.S.", the Clean Water Act defines "navigable waters" as "the waters of the United States . . . ." 33 U.S.C. § 1362(7). "'[W]here Congress borrows terms of art in which are accumulated the legal tradition and meaning of centuries of practice, it presumably knows and adopts the cluster of ideas that were attached to each borrowed word in the body of learning from which it was taken and the meaning its use will convey to the judicial mind unless otherwise instructed. In such case, absence of contrary direction may be taken as satisfaction with widely accepted definitions, not as a departure from them.'" *Carter v. United States*, 530 U.S. 255, 264 (2000) (*quoting Morissette v. United States*, 342 U.S. 246, 263 (1952); *See also* Scott Snyder, Note, *The Waste Treatment Exclusion and the Dubious Legal Foundation for the EPA's Definition of "Waters of the United States"*, 21 N.Y.U. Envtl. L.J. 504, 523, 523 n. 95 (2014)

In this case, there is no evidence Congress intended to depart from well settled law to allow EPA to remove bodies of water that fall squarely within the definition of waters of the U.S. from the reach of the Clean Water Act, especially where those waters of the U.S. are impounded to create a private dump for a utility or other industrial operation. *Id.* at 523. Further, it is difficult to justify a claim that navigable waters retain a protected status forever, while waters of the U.S.—by definition also "navigable waters"—can be excluded from protection when they are impounded for the purposes of creating a dump. *Id.* at 522-23.

B. The waste treatment system exclusion is arbitrary, capricious, and directly contrary to the Clean Water Act.

Even if a court did find that the issue is ambiguous, EPA's charge to define waters of the U.S. is not without bounds. EPA's definition of waters of the U.S. is permissible so long as it is not "arbitrary, capricious, or manifestly contrary to the statute." *Chevron v. Natural Res. Def. Council*, 467 U.S. 837, 844 (1984). In this case, the broad waste treatment system exclusion is directly contrary to the statute, and is arbitrary and capricious because the legislative history and decades of common law make clear that EPA cannot carve out waters of the U.S. from the scope of the Clean Water Act to create waste disposal sites, which is precisely what the waste treatment system exclusion does. *See* discussion *infra.*

C. EPA's interpretation of the proposed waste treatment exclusion does not make it a permissible construction of the Clean Water Act.

EPA has asserted that the waste treatment system exemption is not really as broad as the plain language suggests because it interprets the regulation to exclude only older waste treatment systems constructed from waters of the U.S. Generally, an agency's interpretation of its own regulations is subject to judicial deference unless it is "plainly erroneous or inconsistent with the regulation." *Auer v. Robbins*, 519 U.S. 452, 461 (1997). In this case, the agency's interpretation conflicts with the plain language of the regulation, and EPA has also advanced a second interpretation that does exclude newly created waste treatment systems in some circumstances.

When it first finalized the waste treatment system definition in 1980, EPA stated that Congress did not intend for the Clean Water Act to exempt waste treatment systems created by impounding waters of the U.S. 45 Fed. Reg. at 33,298. Specifically, EPA said

> [b]ecause CWA was not intended to license dischargers to freely use waters of the United States as waste treatment systems, the definition makes clear that treatment systems created in those waters or from their impoundment remain waters of the United States. Manmade waste treatment systems are not waters of the United States, however, solely because they are created by industries engaged in, or affecting interstate or foreign commerce.

Id. Even when the agency suspended the final sentence of the regulation, it reiterated its purposes, noting that "[t]he Agency's purpose in the new last sentence was to ensure that dischargers did not escape treatment requirement by impounding waters of the United States and claiming the impoundment was a waste treatment system, or by discharging wastes into wetlands." 45 Fed. Reg. at 48,620.

After promulgating a rule that reflected the intent of Congress that our nation's rivers, lakes, and streams not be used as private dumps and then backtracking, EPA came up with a new spin on how to treat coal ash and other industrial impoundments instead of following through on its promise to revisit the suspension. In a 1986 memorandum, EPA stated that it evaluates what is an exempt waste treatment system on a case-by-case basis, treating "newly created impoundments of waters of the U.S. as 'waters of the U.S.,' not as 'waste treatment systems designed to meet the requirements of the CWA,' whereas impoundments of 'waters of the U.S.' that have existed for many years and had been issued NPDES permits for discharges from such impoundments as 'wastewater treatment systems designed to meet the requirements of the CWA' and therefore are not 'waters of the U.S." Memo from Marcia Williams, EPA Office of Solid Waste Director, to James H. Scarborough, EPA Region IV Residuals Management Branch Chief, attach. B at 7 (Apr. 2, 1986). EPA states that, in fact, it suspended the last sentence of the waste treatment system in order to allow for such case-by-case decisions.[6] *Id.* (noting that EPA suspended the sentence in order to "restor[e] the ambiguity of the earlier regulations, so that each

[6] This is, of course, contrary to the purpose EPA provided when it suspended the sentence. 45 Fed. Reg. at 48,620 (noting that EPA would re-examine the waste treatment system definition and "promptly . . . develop a revised definition and to publish it as a proposed rule for public comment").

case must be decided on its own facts"). EPA has echoed the interpretation articulated in the 1986 memorandum in various scenarios. Jon Devine et al., *The Intended Scope of Clean Water Act Jurisdiction*, 41 Envtl. L. Rep. News & Analysis 11,118, 11,125 (2011) (citing Letter from Lisa P. Jackson, Administrator, EPA, to Rep. James L. Oberstar at 1 (Apr. 30, 2010)). EPA has taken the same position in litigation. *See W. Va. Coal Ass'n v. Reilly*, 728 F. Supp. 1276, 1289-90 (S.D. W. Va. 1989), *aff'd*, 932 F.2d 964 (4th Cir. 1991).

The fact of the matter is that the proposed waste treatment exemption does not include any language limiting the exclusion to treatment systems created by impounding waters of the U.S. that have been in existence "for many years" or for any other time period. Further, it is illogical—and courts have held as much—to suggest that a waste impoundment created prior to the Clean Water Act has been designed to meet the requirements of the Clean Water Act. *See, e.g.*, *California Sportfishing Prot. Alliance v. Cal. Ammonia Co.*, 2007 WL 273847, *6 (E.D. Cal 2007) (noting that the fact that a waste treatment impoundment is created prior to the Clean Water Act is evidence that it is not "designed to meet the requirements of the Clean Water Act"). In any event, the plain language of the proposed regulation arguably exempts all waste treatment systems designed to meet the requirements of the Clean Water Act created by impounding waters of the U.S. regardless of when the treatment systems are constructed. 79 Fed. Reg. at 22,268.

In fact, EPA and the Corps have attempted to reverse this interpretation in recent years to exclude *newly* created waste treatment systems from waters of the U.S. *See, e.g.*, Jon Devine et al., *The Intended Scope of the Clean Water Act*, 41 Envtl. L. Rep. News & Analysis 11,118, 11,125 (2011) (noting that the agencies have advanced this broader interpretation in a 1998 Federal Register notice, a 2000 guidance document, and by the Corps in recent litigation.) "Under the agencies' revised interpretation, a new impoundment of waters of the United States is able to qualify for the waste treatment system exclusion if it is covered by a § 404 permit; that way, the system is 'designed to meet the requirements of the Act,' as required by the regulation." *Id.*

EPA's interpretation of the regulation does not make the proposed waste treatment system exemption a permissible construction of the Clean Water Act. EPA's interpretation is inconsistent with the language of the regulation itself, and EPA has advanced a broader interpretation that does exclude newly created impoundments. For all these reasons, the waste treatment system exclusion is illegal and fails Step One and Step Two of the *Chevron* test.

Conclusion

For all of the reasons set forth above, Commenters strongly urge EPA and the Army Corps to eliminate the exclusion or publish a revised definition of waste treatment system that complies with the Clean Water Act. At a minimum, EPA must provide full notice and comment rulemaking for the proposed waste treatment system exclusion.

Thank you for considering our comments. If you have any questions about these comments, please do not hesitate to contact Jennifer Duggan at (802) 225-6774 or jduggan@environmentalintegrity.org.

Sincerely,



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November 14, 2014

VIA Regulations.gov (electronic submission)

The Honorable Gina McCarthy
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
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The Honorable John M. McHugh
Secretary
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The Pentagon, Room 3E700
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Re: Comment on the Agencies' Proposed Rule Concerning the Definition of "Waters of the United States" under the Clean Water Act (Docket No. EPA-HQ-OW-2011-0880)

Dear Administrator McCarthy and Secretary McHugh:

Thank you for the opportunity to comment on the jointly proposed rule defining the scope of waters protected under the federal Clean Water Act (CWA). The Environmental Law Institute (ELI) is a leading non-profit research and educational organization dedicated to the improvement of environmental law, policy, and management, with a long history of working to provide information on Clean Water Act issues—including on CWA jurisdiction.

The proposed rule's text and preamble make clear that the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers understand the concept of significant nexus to be the touchstone for CWA jurisdiction.[1] The test set forth by Justice Anthony Kennedy in his pivotal concurring opinion in *Rapanos v. United States*[2] has become routinely accepted by the federal courts as a principal basis for determining whether a given wetland or stream is subject to the CWA. This comment is submitted to further inform the agencies' approach in the proposed rule to the phrase "significant nexus."

The presence or absence of a significant nexus (as determined on either a categorical or a case-by-case basis) may well depend on a range of scientific data and like information. But significant nexus is a legal term, not a scientific one. And previous case law, in the CWA context and elsewhere, does not compel the agencies to interpret the "significant nexus" test as requiring

[1] Definition of "Waters of the United States" Under the Clean Water Act, 79 Fed. Reg. 22188, 22192 (Apr. 21, 2014) (to be codified at 40 C.F.R. pts. 110, 112, 116, 117, 122, 230, 232, 300, 302, 401).
[2] *Rapanos v. United States*, 547 U.S. 715, 759 (2006) (Kennedy, J., concurring in the judgment).

a complex scientific decision-making framework or other formalized metrics to quantify "significance."

The Legal Term "Significant Nexus" Is Central to the Proposed Rule

Under the proposed rule, a water body can be demonstrated to have a significant nexus with a traditionally navigable water, interstate water, or territorial sea on either a categorical basis or a case-by-case basis. Tributaries and adjacent waters, as those terms are defined, would be categorically jurisdictional "... not based on the mere connection of a water body to downstream waters, but rather a determination that the nexus, alone or in combination with similarly situated waters in the region, is significant based on data, science, the CWA, and caselaw."[3]

The agencies also propose that the presence or absence of a significant nexus can be determined on a case-by-case basis for "other waters."[4] As stated in the preamble to the proposed rule,

> [t]he agencies do not propose absolute standards such as flow rates, surface acres, or a minimum number of functions for 'other waters' to establish a significant nexus. A determination of the relationship of 'other waters' to traditional navigable waters, interstate waters, and the territorial seas, and consequently the significance to these waters, requires sufficient flexibility to account for the variability of conditions across the country and the varied functions that different waters provide. The case-specific analysis called for in the proposed rule recognizes geographic and hydrologic variability in determining whether an 'other water' or group of 'other waters' possesses a 'significant nexus' with traditional navigable waters, interstate waters, or the territorial seas.[5]

The preamble also states that "significant nexus" is not a scientific term.[6] Instead, it is a determination made by the agencies "in light of the law and science."[7]

Current and Past Use of "Significant Nexus" by the Courts in a Number of Contexts Supports Interpreting the Term as a Holistic Legal Test

Significant Nexus as a Basis for Demonstrating Clean Water Act Jurisdiction

The Supreme Court's 2006 ruling in *Rapanos v. United States* marked the rise of the legal term "significant nexus" as a jurisdictional test under the Clean Water Act. The question in *Rapanos* was whether the CWA covers wetlands that do not contain, and are not adjacent to, waters that are navigable in fact.[8] *Rapanos* yielded two tests for CWA jurisdiction. Justice

[3] 79 Fed. Reg. at 22,188-89, 22,201, 22,209-10.
[4] *Id.* at 22,211.
[5] *Id.* at 22,198.
[6] *Id.* at 22,193.
[7] *Id.* at 22,195-96.
[8] Specifically, the Court faced two different factual scenarios arising out of two lower-court cases that had been consolidated for review. In the first (*Rapanos*), the wetlands in question shared a surface-water connection with non-navigable tributaries of traditional navigable waters; and, in the second (*Carabell*), the wetlands at issue were separated by a berm from non-navigable tributaries of traditional navigable waters. In a 4-1-4 ruling, a total of five justices agreed to overturn the lower court decisions, which had found jurisdiction over the wetlands in question, and to send the cases back for further consideration. *Rapanos*, 547 U.S. at 729-30, 758-59.

Antonin Scalia, writing for a plurality of four justices, concluded that jurisdiction is limited to circumstances where a wetland is both adjacent to, and has a continuous surface connection with, a "relatively permanent" body of water that is "connected to traditional interstate navigable waters."[9] Justice Kennedy's concurring opinion articulates the contours of a "significant nexus" test in the CWA context.[10] As authority for this test, Justice Kennedy relied on the Supreme Court's use of the words "significant nexus" in the 2001 ruling *Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers.*[11]

For Justice Kennedy in *Rapanos*, significant nexus is to be assessed in terms of the goals and purposes of the Act—namely, "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[12] Justice Kennedy recognized that a significant nexus might be assessed not only on a case-by-case basis, but also on a categorical basis, pursuant to agency regulation or adjudication.[13] There must be "some measure of the significance of the connection for downstream water quality,"[14] in the sense that when "wetlands' effects on water quality are speculative or insubstantial," there is no significant nexus.[15] Justice Kennedy made clear that he was articulating a "legal standard."[16]

As of April 2012, the *Rapanos* decision had been interpreted, applied, discussed, or cited in over ninety different cases, arising out of 35 states and Puerto Rico.[17] The U.S. Courts of Appeal that have addressed the issue have agreed that if a water satisfies Justice Kennedy's significant nexus legal test, that water is jurisdictional.[18] And many courts have found CWA jurisdiction when *either* the *Rapanos* plurality test *or* the Kennedy significant nexus test has been satisfied.[19] The post-*Rapanos* case law tends to take a holistic, all-facts-and-circumstances approach to the application of the significant nexus test.[20] This body of post-*Rapanos* precedent

[9] *Id.* at 742 (Scalia, J., plurality).
[10] *Id.* at 767 (Kennedy, J., concurring in the judgment).
[11] *Id.* at 759 (Kennedy, J., concurring in the judgment) (citing *SWANCC. v. Army Corps of Eng'rs,* 531 U.S. 159, 167, 172 (2001)). In *SWANCC*, the Court determined that an abandoned sand and gravel pit was not covered by the CWA. In so doing, the Court distinguished its unanimous 1985 decision in *United States v. Riverside Bayview Homes,* Inc., 474 U.S. 121 (1985), which held that the Corps had jurisdiction over wetlands that abutted a navigable waterway. The *SWANCC* majority explained that "[i]t was the significant nexus between the wetlands and 'navigable waters' that informed our reading of the CWA in *Riverside Bayview Homes.*" *SWANCC*, 531 U.S. at 167. This reference to "significant nexus" was the *SWANCC* Court's sole usage of that term, and the term does not appear in the *Riverside Bayview Homes* opinion. To date, the Supreme Court has used the exact words "significant nexus" only in the *SWANCC* and *Rapanos* decisions.
[12] 547 U.S. at 779 (Kennedy, J., concurring in the judgment) (CWA citation omitted).
[13] *E.g.*, *id.* at 780-82 (Kennedy, J., concurring in the judgment).
[14] *Id.* at 784-85 (Kennedy, J., concurring in the judgment).
[15] *Id.* at 780 (Kennedy, J., concurring in the judgment).
[16] *Id.* at 783 (Kennedy, J., concurring in the judgment).
[17] Environmental Law Institute, *The Clean Water Act Jurisdictional Handbook,* 46 (2d ed. May 2012) (Case Appendix containing a compendium of post-*Rapanos* federal court decisions and EPA administrative rulings). Since the *Handbook* was published, more than 40 additional federal court opinions have discussed or cited to *Rapanos*.
[18] *Id*.
[19] *Id*.
[20] The word "holistic" here is intended to be in contrast with an approach that separately examines the "nexus" and "significance" components of "significant nexus," which would essentially establish a two-part test.

in the federal courts suggests that the significant nexus legal test is susceptible to being satisfied by a wide range of scientific data and other kinds of information.[21]

As the Fourth Circuit explained in *Precon Development Corp. v. U.S. Army Corps of Engineers*, the significant nexus test "does not require laboratory tests or any particular quantitative measurements in order to establish significance."[22] The court did, however, recognize that Justice Kennedy in *Rapanos* "clearly intended for some evidence of both a nexus and its significance to be presented."[23] Similarly, in *United States v. Cundiff*, the Sixth Circuit stated that although laboratory analysis of soil samples or water samples, or other tests, could be persuasive evidence, there is nothing to indicate that this is the sole method by which significant nexus can be proved.[24]

Use of the Words "Significant Nexus" Outside of the CWA Context

The words "significant nexus" have been used as a legal term of art for many years prior to the *Rapanos* decision, in many different legal and factual settings by federal and state courts around the country.[25] Before Justice Kennedy articulated a significant nexus test in *Rapanos* in 2006, this phrase had appeared in over 250 published and unpublished opinions issued by federal and state courts in contexts other than the Clean Water Act. Full citations to the complete list of opinions using the words "significant nexus," prior to *Rapanos* and outside of the CWA context, are included in the annex to this comment.

This diverse case law using "significant nexus" dictates no particular approach for the agencies in applying the term post-*Rapanos* in the context of the CWA. Nonetheless, a survey of these cases is instructive. In short, none of these judicial opinions stands for the proposition that a "significant nexus" determination must be a technical, highly detailed, or otherwise formalistic inquiry. To the contrary, courts have often reviewed the various kinds of connections at issue

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[21] *See id.* at 47-104 (discussing, case by case, courts' use of scientific data and other information to make significant nexus determination); s*ee also id.* at 21-22 (surveying the wide array of scientific and other technical resources and tools that might be used to inform a jurisdictional determination for a body of water: textbooks and treatises; delineation manuals for wetlands and streams; scientific journals; assessment methodologies for wetlands and streams; technical reports issued by federal and state agencies; watershed plans and assessments; wetland and stream databases; total maximum daily load (TMDL) and water quality management documents; publications, online resources, and research reports produced by state and local agencies and other entities, such as information from natural heritage programs and state wildlife action plans, and by organizations such as The Nature Conservancy, the Association of State Wetland Managers, and the National Academy of Sciences; local and regional aerial photographs or satellite images, historical and current; maps, historical and current (*e.g.*, U.S. Geological Survey maps); land records, historical and current; historical evidence (*e.g.*, from books, newspapers, local histories, or testimony of residents) of how waters were used in the past; regional flood analyses; results of water tests that demonstrate downstream flow of pollutants; and results of flow measurements.).

[22] 633 F.3d 278, 294 (4th Cir. 2011).

[23] *Id.* The court further explained that while there must be evidence of both a nexus and wetlands' significance to downstream waters, documentation "need not take the form of any particular measurements" and can be either qualitative or quantitative. *Id.* at 293-94, 297.. The Fourth Circuit in *Precon* determined that the administrative record in that case contained insufficient information to assess the Corps' conclusion that a significant nexus was present. *Id.* at 297. On remand in *Precon*, the district court determined that the Corps has supported its determination of significant nexus. *Precon Dev. Corp. v. U.S. Army Corps of Eng'rs*, 984 F. Supp. 2d 538, 544 (E.D. Va. 2013).

[24] 555 F.3d 200, 211 (6th Cir. 2009).

[25] *See* Environmental Law Institute, *The Clean Water Act Jurisdictional Handbook* 18, n.72 (2007). Based on a sampling of these cases, ELI concluded that the case law did not support a reading of "significant nexus" that would have the effect of reducing it to a discrete, two-part determination of "nexus" and "significance."

(subject to the area of law and type of case) and reached their determination on the presence or absence of a significant nexus with little analysis.[26] The cases do not suggest that any particular type of evidence, quantitative or otherwise, is required for determining a nexus' significance.

The legal and factual contexts in which the words "significant nexus" are used vary widely. Pursuant to the Foreign Sovereign Immunities Act (FSIA),[27] a foreign state is not immune from U.S. court jurisdiction for its commercial activities that have a direct effect in the United States. This exception to immunity applies where there is a significant nexus between a particular cause of action in a lawsuit and the commercial activity carried on in the United States.[28] For example, in a tort action brought in a U.S. court on behalf of Mexican decedents killed on a crashed flight operated by the Mexican national airline, with tickets purchased in Mexico and points of departure and arrival in Mexico, no significant nexus existed. This was despite the fact that the airplane had been recently serviced in Chicago, and the particular flight was due to land eventually in Los Angeles.[29]

Pursuant to suits brought under 42 U.S.C. § 1983, a court may be asked to determine whether a private individual who actively conspires with an absolutely immune state official, with the intent to deprive another of Constitutional rights, is acting under "color of state law."[30] The question becomes whether there is a significant nexus or entanglement between the absolutely immune state official and the private party in relation to the steps taken by each to fulfill the objects of their conspiracy. The Tenth Circuit has said that "the resolution of such issues must, of necessity, be made on a case-to-case basis."[31]

In yet another context, a federal district court considering the transfer and centralization of various cases to a new Multi-District Litigation (MDL) docket noted that the Eastern District of Michigan had a significant nexus to the litigation, and was thus an appropriate forum.[32] This district was where many relevant documents and witnesses were likely to be found, as the defendant's principal place of business was located there. Also, the state was the situs of related state court actions, allowing for easy coordination of discovery between state and federal proceedings.[33]

Many more examples of how courts have made determinations of significant nexus outside of the CWA context can be found in the case citations contained in the annex to this comment.

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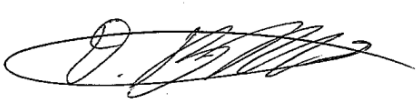
[26] In fact, in many of the cases "significant" is appended to "nexus" as a modifying adjective in a manner that could not be considered to have legal significance. *See*, *e.g.*, *State v. Schnoering*, No. 95CA006044, 1995 WL 678522, at *1 (Ohio Ct. App. Nov. 15, 1995) (in venue context, using "significant nexus" interchangeably with "sufficient nexus" in finding venue in any county where "the offense or any element of the offense was committed.").
[27] 28 U.S.C. §§ 1602-11.
[28] *See, e.g., Compania Mexicana de Aviacion, S.A. v. U.S. Dist. Ct. for the Cent. Dist. of Cal.,* 859 F.2d 1354, 1359-60 (9th Cir. 1988).
[29] *Id.* at 1360.
[30] *See, e.g., Norton v. Liddel*, 620 F.2d 1375, 1380 (10th Cir. 1980).
[31] *Id.*
[32] *In re Delphi Corp. Secs., Derivative & "ERISA" Litig.*, 403 F. Supp. 2d 1358, 1360 (J. P. M. L. 2005).
[33] *Id.*

In sum, courts looking for a significant nexus (or simply using the words "significant nexus"), both within and outside of the CWA context, have not employed a formalized or strictly quantitative approach to that determination.

Thank you for this opportunity to comment.



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ANNEX OF PRE-*RAPANOS*, NON-CWA OPINIONS USING "SIGNIFICANT NEXUS"

Antitrust
Loiterman v. Antani, No. 90 C 983, 1990 WL 91062, at *4 (N.D. Ill. June 28, 1990).

Bankruptcy
In re Barber, 266 B.R. 309, 318 (Bankr. E.D. Pa. 2001); *In re Merriweather*, 185 B.R. 235, 238 (Bankr. S.D. Tex. 1995); *In re Penrose*, No. 91-00882-7, 1991 WL 11002289, at *2 (Bankr. W.D. Wis. Oct. 10, 1991); *In re Marshall*, 118 B.R. 954, 962 (Bankr. W.D. Mich. 1990); *Acolyte Elec. Corp. v. City of New York*, 69 B.R. 155, 171 (Bankr. E.D.N.Y. 1986); *In re Arnold Print Works, Inc.*, 54 B.R. 562, 566 (Bankr. D. Mass. 1985); *In re Pied Piper Casuals, Inc.*, 50 B.R. 549, 551 (Bankr. S.D.N.Y. 1985); *In re Burch*, 34 B.R. 294, 294 (Bankr. W.D. Ky. 1983).

Black lung
Peabody Coal Co. v. Vigna, 22 F.3d 1388, 1393 (7th Cir. 1994).

Child neglect
In re Jesse W., 2005 WL 2650645, at *12 (Conn. Super. Ct. Sept. 22, 2005); *In re Christopher C.*, No. CP035929A, 2004 WL 3106190, at *18 (Conn. Super. Ct. Dec. 15, 2004).

Choice of law
Jaurequi v. John Deere Co., 986 F.2d 170, 176 n.10 (7th Cir. 1993); *State Trading Corp. of India v. Assuranceforeningen Skuld*, 921 F.2d 409, 417 (2d Cir. 1990); *N.Y. Protective Covering Indus. v. Stevens Technical Servs.*, No. 96 CV 0418, 1997 WL 104767, at *2 (E.D.N.Y. Feb. 18, 1997); *Great Am. Ins. Co. v. J. Aron & Co.*, No. 94 Civ. 4420, 1995 WL 495492, at *3 (S.D.N.Y. Aug. 18, 1995); *Newark Ins. Co. v. Blair*, No. 92 Civ. 1648, 1994 WL 4410, at *3 (S.D.N.Y. Jan. 3, 1994); *Contract Marine Carriers v. Abbott Labs., Int'l*, No. 91 Civ. 1401, 1993 WL 106374, at *5 (S.D.N.Y. Apr. 6, 1993); *Commercial Union Ins. Co. v. Horne*, 787 F. Supp. 337, 339 (S.D.N.Y. 1992); *In re Litig. Involving Alleged Loss of Cargo from Tug Atl. Seahorse, "Sea Barge 101" Between P.R. & Fla. in Dec. 1988*, 772 F. Supp. 707, 711 (D.P.R. 1991); *Ferens v. Deere & Co.*, 639 F. Supp. 1484, 1489 (W.D. Pa. 1986); *Healy Tibbitts Constr. Co. v. Foremost Ins. Co.*, 482 F. Supp. 830, 835 (N.D. Cal. 1979); *In re Maxwell Commc'n Corp.*, 170 B.R. 800, 807 (Bankr. S.D.N.Y. 1994); *In re Prudential Lines, Inc.*, 148 B.R. 730, 738 (Bankr. S.D.N.Y. 1992); *Sequa Corp. v. Aetna Cas. & Sur. Co.*, Civ. A. No. 89C-AP-1, 1995 WL 465192, at *1 (Del. Super. Ct. July 13, 1995); *N. Am. Philips Corp. v. Aetna Cas. & Sur. Co.*, Civ. A. No. 88C-JA-155-1-CV, 1994 WL 555399, at *7 (Del. Super. Ct. Sept. 2, 1994); *Hoechst Celanese Corp. v. Nat'l Union Fire Ins. Co. of Pittsburgh*, Civ. A. No. 89C-SE-35, 1994 WL 721651, at *5 (Del. Super. Ct. Mar. 28, 1994); *Munzer v. St. Paul Fire & Marine Ins. Co.*, 610 N.Y.S.2d 389, 391 (N.Y. 1994).

Civil rights
Vento v. Colo. Nat'l Bank, No. 98-1236, 1999 WL 314566, at *2 (10th Cir. May 19, 1999); *Sack v. Huggins*, No. 93-7108, 1994 WL 413271, at *5 (10th Cir. Aug. 1, 1994); *Cabututan v. Hunsaker*, No. 92-4086, 1993 WL 55945, at *2 (10th Cir. Mar. 1, 1993); *Johnson v. Kegans*, 870 F.2d 992, 1004 (5th Cir. 1989); *Hammond v. Bales*, 843 F.2d 1320, 1323 (10th Cir. 1988); *Shaffer v. Cook*, 634 F.2d 1259, 1260 (10th Cir. 1980); *Norton v. Liddel*, 620 F.2d 1375, 1380

(10th Cir. 1980); *Heffington v. Dist. Ct. of Sedgewick Cnty.*, No. 05-4028-SAC, 2005 WL 1421530, at *3 (D. Kan. June 17, 2005); *Jackson v. Univ. of New Haven*, 228 F. Supp. 2d 156, 162 (D. Conn. 2002); *Reil v. Clinton Cnty.*, 75 F. Supp. 2d 37, 40 (N.D.N.Y. 1999); *Church of Human Potential, Inc. v. Vorsky*, 636 F. Supp. 93, 96 (D.N.J. 1986); *Anderson v. Glismann*, 577 F. Supp. 1506, 1509 (D. Colo. 1984); *Whelehan v. Cnty. of Monroe*, 558 F. Supp. 1093, 1108 (W.D.N.Y. 1983).

Conflict of laws
Altadis USA, Inc. v. NPR, Inc., 308 F. Supp. 2d 1304, 1307 (M.D. Fla. 2004); *Howard v. Howard*, No. 2:02CV1192, 2004 WL 724372, at *3 (D. Utah Mar. 12, 2004); *Brentwood Investors v. Wal-Mart Stores, Inc.*, No. C-95-0856, 1998 WL 337968, at *7 (N.D. Cal. June 19, 1998); *Interface Flooring Sys., Inc. v. Aetna Cas. & Sur. Co.*, 804 A.2d 201, 204 (Conn. 2002); *Phelan v. Budget Rent A Car Sys. Inc.*, 699 N.Y.S.2d 568, 569 (N.Y. App. Div. 1999).

Constitutional law (federal)
United States v. Yang, 286 F.3d 940, 946 (7th Cir. 2002); *Phelps v. Wichita Eagle-Beacon*, 886 F.2d 1262, 1271 (10th Cir. 1989); *United States v. Rollings*, 494 F.2d 344, 345 (8th Cir. 1974); *Nat'l Tire Dealers & Retreaders Ass'n v. Brinegar*, 491 F.2d 31, 37 (D.C. Cir. 1974); Christie v. Borough of Folcroft, No. Civ. A. 04-5972, Civ. A. 04-5944, 2005 WL 2396762, at *10 (E.D. Pa. Sept. 27, 2005); *Good v. Bd. of Cnty. Comm'rs*, 209 F. Supp. 2d 1124, 1128 (D. Kan. 2002); *United States v. Kegel*, 916 F. Supp. 1233, 1237 (M.D. Fla. 1996); *Aleem v. Int'l Union of AFSCME*, No. 93-CV-70076-DT, 1994 WL 897987, at *6 (E.D. Mich. July 5, 1994); *United States v. Conley*, 813 F. Supp. 372, 378 (W.D. Pa. 1993); *Am. Fed'n of Gov't Emps., Council 33 v. Barr*, 794 F. Supp. 1466, 1475 (N.D. Cal. 1992); *In re Advisory Op. to the Governor*, 509 So.2d 292, 305 (Fla. 1987); *Strode v. Esmark, Inc.*, No. 79-CI-1590, 1980 WL 1905, at *11 (Ky. Cir. Ct. May 13, 1980); *RIO/Bill Blass v. Bredeson Assocs.*, No. C6-97-1386, 1998 WL 27299, at *4 (Minn. Ct. App. Jan. 27, 1998); *Settlement Funding, LLC v. Hunt*, No. 01CC-2247, 2002 WL 33006381, at *4 (Mo. Cir. Ct. Sept. 10, 2002); *Sharrock v. Dell Buick-Cadillac, Inc.*, 379 N.E.2d 1169, 1172 (N.Y. 1978); *Wernham v. Moore*, No. 193 NYLJ 71, 1985 WL 167849, at *2 (N.Y. App. Div. May 5, 1985); *Wernham v. Moore*, 432 N.Y.S.2d 711, 712-13 (N.Y. App. Div. 1980); *Cahill v. Pub. Serv. Comm'n*, 490 N.Y.S.2d 90, 94 (N.Y. Sup. Ct. 1985); *State v. Yuen*, 49 P.3d 819, 822 (Or. Ct. App. 2002); *Ettipio v. State*, 794 S.W.2d 871, 873 (Tex. Ct. App. 1990); *Cassidy v. Salt Lake Cnty. Fire Civil Serv. Council*, 976 P.2d 607, 614 n.5 (Utah Ct. App. 1999); *Commonwealth v. Lane*, No. 0318-99-2, 1999 WL 1133676, at *2 (Va. Ct. App. Aug. 3, 1999).

Constitutional law (state)
Guarisco v. City of Daphne, 825 So.2d 750, 758 (Ala. 2002); *Commonwealth v. Crider & Rogers, Inc.*, 929 S.W.2d 179, 180 (Ky. 1996); *State v. Woods*, No. C-950954, 1997 WL 602963, at *9 (Ohio Ct. App. Sept. 5, 1997); *In re Jessie A. Kirby Dorm., Lafayette Coll.*, No. 1992-C-1264, 1993 WL 485138, at *6 (Pa. Ct. Com. Pl. Sept. 22, 1993).

Contract
JAK Prods., Inc. v. Wiza, 986 F.2d 1080, 1086 (7th Cir. 1993); *Royal Ins. Co. v. Harbor Shuttle, Inc.*, No. CV-97-3828, 1999 WL 33236523, at *6 (E.D.N.Y. Jan. 25, 1999); *LaCorte Elec. Constr. & Maint. v. Centron Sec. Sys., Inc.*, 894 F. Supp. 80, 84 (N.D.N.Y. 1995);

Pinckney v. Tigani, No. Civ. A. 02C-08-129FSS, 2004 WL 2827896, at *5 (Del. Super. Ct. Nov. 30, 2004); *Thomas v. Zamberletti*, 480 N.E.2d 869, 872 (Ill. App. Ct. 1985); *Ohio Valley Commc'ns, Inc. v. Greenwell*, 555 N.E.2d 525, 528 (Ind. Ct. App. 1990); *Field v. Alexander & Alexander, Inc.*, 503 N.E.2d 627, 632 (Ind. Ct. App. 1987); *Lorusso Corp. v. Att'y Gen.*, No. 03-P-195, 2004 WL 3019523, at *3 (Mass. App. Ct. Dec. 30, 2004); *Papalas v. Ford Motor Co.*, No. 252470, 252527, 2005 WL 2994582, at *9 (Mich. Ct. App. Nov. 8, 2005).

Copyright
Le Moine v. Combined Commc'ns Corp., No. 95 C 5881, 1996 WL 332688, at *4 (N.D. Ill. June 13, 1996).

Criminal
United States v. Tashbook, 144 F. App'x 610, 614 (9th Cir. 2005); *United States v. Jolly*, 151 F. App'x 700, 703 (10th Cir. 2005); *United States v. Young*, No. 95-2626, 1996 WL 116820, at *4 (7th Cir. Mar. 14, 1996); *United States v. Holmquist*, 36 F.3d 154, 159 (1st Cir. 1994); *United States v. Miller*, 901 F. Supp. 371, 377 (D.D.C. 1995); *United States v. Buffington*, 879 F. Supp. 1220, 1223 (N.D. Ga. 1995); *United States v. Klingensmith*, 17 M.J. 814, 816 (A.C.M.R. 1984); *State v. Ross*, 646 A.2d 1318, 1332 (Conn. 1994); *Zacek v. Brewer*, 241 N.W.2d 41, 46-7 (Iowa 1976); *State v. Martin*, No. C9-02-2127, 2003 WL 230252152, at *4 (Minn. Ct. App. Dec. 30, 2003); *State v. Payne*, No. CA2003-02-019, 2004 WL 413349, at *2 (Ohio Ct. App. Mar. 8, 2004); *State v. Webb*, No. 80206, 2003 WL 1771668, at *4, (Ohio Ct. App. Apr. 3, 2003); *Commonwealth v. Fucci*, 380 A.2d 425, 427 (Pa. Super. Ct. 1977); *Commonwealth v. Funds in Merrill Lynch Account, Owned by Peart*, 777 A.2d 519, 521 (Pa. Commw. Ct. 2001); *Commonwealth v. Fraierson*, No. 1889-03-2, 2003 WL 22950272, at *3-4, (Va. Ct. App. Dec. 16, 2003); *Hill v. Commonwealth*, 438 S.E.2d 296, 300 (Va. Ct. App. 1993); *Brewer v. State Dep't of Motor Vehicles*, 595 P.2d 949, 951 (Wash. Ct. App. 1979); *State v. Hakes*, No. 91-1164-CR, 1991 WL 285903, at *3 (Wis. Ct. App. Nov. 6, 1991).

Employment
Constr. Indus. of Mass. v. Comm'r of Labor and Indus., 546 N.E.2d 367, 371 (Mass. 1989); *Cox v. T.S. Truck Servs.*, No. 991602, 2005 WL 2373865, at *6-7 (Mass. Super. Ct. Aug. 23, 2005).

Ethics
Steel v. Gen. Motors Corp., 912 F. Supp. 724, 734 (D.N.J. 1995); *Koch v. Koch Indus.*, 798 F. Supp. 1525, 1538 (D. Kan. 1992); *In re Conduct of Worth*, 82 P.3d 605, 619 (Or. 2003);
In re Reciprocal Discipline of Rokahr, 681 N.W.2d 100, 106 (S.D. 2004).

Evidence
United States v. Williams, 561 F.2d 859, 862 n.4 (D.C. Cir. 1977); *Computer Network Corp. v. Spohler*, 95 F.R.D. 500, 503 n. 2 (D.D.C. 1982); *State v. Alger*, 764 P.2d 119, 128 (Idaho. Ct. App. 1988); *State v. Baker*, 23 S.W.3d 702, 711 (Mo. Ct. App. 2000); *State v. Ashley*, 623 A.2d 984, 985 (Vt. 1993); *Baker v. Commonwealth*, No. 2875-97-1, 1999 WL 1126553, at *2, 3, 5 (Va. Ct. App. Mar. 9, 1999); *Blaylock v. Commonwealth*, 496 S.E.2d 97, 102 (Va. Ct. App. 1998).

Extraterritoriality
Guy v. IASCO, No. B168339, 2004 WL 1354300, at *5 (Cal. Ct. App. June 17, 2004).

Foreign Sovereign Immunities Act (FSIA)
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Oct. 14, 2003); *Ellis v. Costco Wholesale Corp.*, 372 F. Supp. 2d 530, 541 (N.D. Cal. 2005); *Sun Forest Corp. v. Shvili*, 152 F. Supp. 2d 367, 390 (S.D.N.Y. 2001); *Hyundai Space & Aircraft Co. v. Boeing Co.*, No. C 99-3255, 1999 WL 910131, at *4 (N.D. Cal. Oct. 12, 1999); *Millspaugh v. Atl. Recording Corp.*, No. Civ.A. 3:99-CV-0344, 1999 WL 740350, at *4 (N.D. Tex. Sept. 21, 1999); *Tischio v. Bontex, Inc.*, 16 F. Supp. 2d 511, 525 (D.N.J. 1998); *AHP Sys., Inc. v. Cullman Ventures*, No. 97 C 4947, 1997 WL 779108, at *4 (N.D. Ill. Dec. 10, 1997); *Wm. H. McGee & Co. v. United Arab Shipping Co. S.S.*, 6 F. Supp. 2d 283, 290-91 (D.N.J. 1997); *Venable v. Nat'l Car Rental Sys. Inc.*, No. Civ. A. 96-2564, 1997 WL 198113, at *2 (D.D.C. Apr. 15, 1997); *Studiengesellschaft Kohle MBH v. Shell Oil Co.*, No. 93 Civ. 1868, 1993 WL 403340, at *5 (S.D.N.Y. 1993); *Reeder v. Yamaha Motor Corp., U.S.A.*, No. 92 Civ. 5455, 1992 WL 370414, at *5 (S.D.N.Y. Dec. 2, 1992); *Herdlein Techs., Inc. v. Century Contractors, Inc.*, No. 91 C 6664, 1992 WL 22697, at *4 (N.D. Ill. Feb. 6, 1992); *Applied Web Sys. v. Catalytic Combustion Corp.*, No. 90 C 4411, 1991 WL 70893, at *3 (N.D. Ill. Apr. 29, 1991); *Irving Capital Corp. v. Serologicals Acquisition, Inc.*, No. 85 Civ. 6383, 1986 WL 2763, at *3 (S.D.N.Y. Feb. 27, 1986); *Zerda v. Mesa Petroleum Co.*, No. 85 Civ. 2812, 1985 WL 562, at *5 (S.D.N.Y. Apr. 23, 1985); *Kaiser Found. Health Plan v. Rose*, 583 A.2d 156, 156 (D.C. 1990); *Anderson v. Great Lakes Dredge & Dock Co.*, 309 N.W.2d 539, 542-44 (Mich. 1981); *Beall v. Ernst & Young LLP*, No. 192874, 1997 WL 33353682, at *1 (Mich. Ct. App. Feb. 25, 1997); *Hamann v. Am. Motors Corp.*, 245 N.W.2d 699, 701 (Mich. Ct. App. 1983); *Vercimak v. Vercimak*, 762 S.W.2d 529, 532 (Mo. Ct. App. 1988); *Varkonyi v. S.A. Empresa de Viacao Airea Rio Grandense (Varig)*, 239 N.E.2d 542, 546 (N.Y. 1968); *Chawafaty v. Chase Manhattan Bank*, 733 N.Y.S.2d 12, 12 (N.Y. App. Div. 2001); *Solid Transit Inc. v. Venture Opportunities Corp.*, 681 N.Y.S.2d 282, 282 (N.Y. App. Div. 1998); *Brunner v. Joubert*, 499 N.Y.S.2d 87, 87 (N.Y. App. Div. 1986); *SBA Network Servs. v. Fred A. Nudd Corp.*, No. 51706, 2005 WL 3079097, at *1 (N.Y. Sup. Ct. Jan. 25, 2005); *Daly v. Metro. Life Ins. Co.*, 782 N.Y.S.2d 530, 536 (N.Y. Sup. Ct. 2004); *Aboujdid v. Gulf Aviation Co.*, 437 N.Y.S.2d 219, 221 (N.Y. Sup. Ct. 1980); *State v. Headley*, 453 N.E.2d 716, 719, 721 (Ohio 1983); *State v. Draggo*, 418 N.E.2d 1343, 1346 (Ohio 1981); *State v. Copeland*, No. CA2003-12-320, 2005 WL 2937282, at *3 (Ohio Ct. App. Nov. 7, 2005); *State v. Meridy*, No. CA2003-11-091, 2005 WL 123993, at *3 (Ohio Ct. App. Jan. 24, 2005); *State v. Wellbaum*, No. 2000-CA-5, 2000 WL 1232773, at *2 (Ohio Ct. App. Sept. 1, 2000); *State v. Miller*, No. 97-CA-84, 1998 WL 401837, at *1-2 (Ohio Ct. App. Mar. 27, 1998); *State v. Sandoval*, No. 95CA006150, 1996 WL 107002, at *4-5 (Ohio Ct. App. Mar. 13, 1996); *State v. Schnoering*, No. 95CA006044, 1995 WL 678522, at *1 (Ohio Ct. App. Nov. 15, 1995); *State v. Hackworth*, 609 N.E.2d 228, 231 (Ohio Ct. App. 1992); *Tesauro v. Quigley Corp.*, No. 1011, Control 051340, 2002 WL 372947, at *9 (Pa. Ct. C.P. Jan. 25, 2002).

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Laker Airways v. Sabena, Belgian World Airlines, 731 F.2d 909, 953 n.173 (D.C. Cir. 1984); *Heartland By-Products v. United States*, 223 F. Supp. 2d 1317, 1334 (Ct. Int'l Trade 2002); *Biskos v. Clyde Seaways, S.A.*, No. Civ. A. 90-2316, 1992 WL 38440, at *3 (E.D. Pa. Feb. 25, 1992); *Anderson v. Conley*, 501 A.2d 1057, 1060 (N.J. Super. Ct. Law Div. 1985) *Scappoose Sand & Gravel, Inc. v. Columbia Cnty.*, 984 P.2d 876, 879 (Or. Ct. App. 1999); *Fence v. Jackson Cnty.*, 900 P.2d 524, 526 (Or. Ct. App. 1995).

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Please find our over 109,000 comments from 52,083 unique individuals. I am attaching the number of comments (who signed the petition), the petition language, the unique individuals and comments from our website through November 14 2014.

Alexei

Alexei N. Laushkin
Vice-President
Evangelical Environmental Network

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Creation Care: It's a Matter of Life

On the web: http://creationcare.org, http://christiansandclimate.org

As pro-life Christians, we believe that it is essential that the water we give our children is clean and pure. We urge the EPA and Congress to do everything you can to make sure that all of our waters, especially our headwaters, are protected.

Keep Our Water Safe

,



One Mom Shares What Clean Water Means to Her Family

"Could I have some water?" It's a question nearly every parent hears before bedtime or after an afternoon playing outside.

Keep Our Water Safe for Our Kids:Click here to Sign the Petition Below

Parents need to be able to trust that the water we give our kids is clean and healthy. That's why the Reagan administration put protections in place to keep pollutants out of the headwaters that serve as the source for our local water supplies.

Unfortunately, in recent years special interests have pushed to dismantle many of these protections that have kept our families safe for decades.



Join pro-life Christians across the country urging our leaders to keep our waterways clean and pure. Sign the petition below byclicking here. Then share why this is important to you onFacebook and Twitter.

In Christ,
Rev. Mitch Hescox

PETITION

As pro-life Christians, we believe that it is essential that the water we give our children is clean and pure. We urge the EPA and Congress to do everything you can to make sure that all of our waters, especially our headwaters, are protected.

Click Here To Sign Your Name

November 14, 2014

Via www.regulations.gov and email to ow-docket@epa.gov

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue, NW
Washington, DC 20460
Attention: Docket ID No. EPAHQOW20110880

Re: Comments On Definition of Waters of the United States Under the Clean Water Act, Proposed Rule, 79 Fed. Reg. 22188-22271.

Dear Administrator McCarthy and Assistant Secretary Darcy:

The Friends of Shades Creek, Inc. (FOSC) appreciates the clarification of the definition of waters of the United States by the EPA and the Army Corps. We have reviewed the comments submitted by Beth Stewart, Executive Director, and Randy Haddock, Field Director, of the Cahaba River Society and the comments submitted by Mitch Reid, Program Director, of the Alabama Rivers Alliance, both organizations with whom we work closely. We also endorse the comments, shared with FOSC, made by William Sapp of the Southern Environmental Law Center.

As a local water protection organization, we see the need to improve the health of our rivers and streams to a far greater degree than we have currently achieved and to extend, not restrict, the protections to them outlined in the Clean Water Act. We support adoption of this rule and encourage the Army Corps and EPA to adopt a more inclusive view of which waters are to be covered under Clean Water Act regulations.

Thank you.

Sincerely,

Henry Hughes
Executive Director
Friends of Shades Creek
401 Woodland Drive
Homewood, AL 35209
205-999-5625

October 17, 2014

The Honorable Gina McCarthy
Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue
Washington, DC 20460

Email to: ow-docket@epa.gov
Re: Clean Water Rule Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy:

The undersigned owners and partners of businesses in Connecticut support the US Environmental Protection Agency (EPA) and US Army Corps of Engineers (Corps) proposed *Definition of "Waters of the United States Under the Clean Water Act*" to clarify which streams, wetlands and other waters are protected by the Clean Water Act. Our businesses depend on the availability of clean and abundant water, and this action by the Agencies is a prime example of the vital partnership between business and government.

For its first thirty years, the Clean Water Act safeguarded nearly all of our nation's waters. These protections are necessary to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," as intended by Congress when it passed the Clean Water Act in 1972. Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction. These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's streams miles and at least 20 percent of the 110 million acres of wetlands in the continental United States. This confusion has put the drinking water for 117 million Americans at risk. If we do not protect these networks of small streams, we cannot protect and restore the lakes, rivers and bays that our economy and way of life depend on. We will also be jeopardizing jobs and revenue in businesses that depend on clean water, including outdoor activities like angling and water-based recreation.

Protecting streams and wetlands that science has shown are clearly linked to downstream rivers and other water bodies is not only commonsense, it ensures the quality of water used in our products. Whether a company produces food, manufactures silicon wafers, brews beer, or operates an outdoor door recreation outfitter, businesses rely on clean water to produce high quality, safe products and services. Protecting these water resources is critical to the continued growth of American businesses. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade and better protection for critical water resources on which our businesses all depend in order to prosper.

A recent national poll[i] found that 80% of small business owners favor federal rules to better protect headwaters and small streams. The poll found that small business owners assign high importance to clean water for their own operations and believe that government regulations are needed to safeguard it. Two-thirds of the business owners polled expressed concern that water pollution could hurt their business. In fact, more than seven in ten business owners, regardless of political affiliation, believe protecting clean water helps spur economic growth.

We value the protection that the EPA and Army Corps guarantee for our water supply – consistent regulations that limit pollution and protect water at its source enable our businesses to thrive and expand the local economies in which we work. We encourage the Agencies to finalize the proposed rule, Definition of "Waters of the United States," without delay and reject any efforts to weaken the proposal.

Sincerely,
~~[Undersigned Businesses to be listed]~~Kimberly Grustas
Owner, Good For You Girls Natural Skincare
New Hartford, CT 06057

CC: US Senators and Representatives

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http://asbcouncil.org/sites/default/files/asbc_clean_water_http://asbcouncil.org/sites/default/files/asbc_clean_water_poll_report_july2014_sv_final_140721v2sm.pdfpoll_report_july2014_sv_final_140721v2sm.pdf

Dear Senator McCaskill,

The Green Dining Alliance (GDA; a program of St. Louis Earth Day) is a non-profit certification program that helps restaurants meet sustainability goals. We are comprised of 58 businesses in St. Louis City and County, and with our collective voice, we urge you to support the Clean Water Protection Rule.

The GDA has certified 44 restaurants in the St Louis area for their environmentally-sound practices, and is currently working to certify another 14. We carefully consider what measures can increase the environmental and economic sustainability of our members. **However, the safe, reliable water that supports our businesses are at risk.** Our restaurants, cafes, and breweries drive Missouri's growing local economy, and we need assurance that our water will be protected.

For years, tens of thousands of miles of rivers and streams have lacked water quality protections because the State of Missouri **has not implemented the basic requirements of the Clean Water Act.** Wetlands have also suffered, since **Missouri does not currently have any water quality standards for wetlands. We have already lost 87% of them to drainage and development.**

Millions of taxpayer dollars have been inefficiently spent litigating over which waters are protected and which are open for dumping. Because of this confusion, many previously protected waters become fair game for dumping, leaving drinking water supplies for one-third of Americans at risk. In Missouri, **over half of the population relies on rivers and streams for their drinking water and the other half relies on groundwater sources that are also vulnerable to contamination.** This new rule would finally ensure that all small streams and wetlands are protected by the Clean Water Act.

Senator Blunt and other conservatives have painted the proposed Clean Water Protection Rule as "egregious government overreach" that threatens the livelihoods of Missouri businesses and farmers. **Representing a collection of businesses in the St. Louis Metro area that are responsible for employing over 1000 Missourians and sourcing thousands of pounds of local farmers' products per week, the GDA can definitively say that this is untrue.** In fact, we find the opposite to be true. Clean water not only protects our families, but our businesses as well. The food service industry must have access to reliable, safe, clean water.

Thank you for considering our comments in support of the Waters of the U.S. rulemaking.

Sincerely,

Olivia Engel,
Program Coordinator of the Green Dining Alliance

Statement for the Record from Mark Magaña
President of GreenLatinos

On behalf of GreenLatinos, a network of Latino environment and conservation leaders across the country, I write to express our strong support of the joint Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers (USACOE) rulemaking on the definition of Waters of the United States, informally known as the "Clean Water Rule."

The Hispanic community overwhelmingly supports the Waters of the United States proposed rule and our organizations encourage the EPA to implement strong protections for streams and wetlands that supply drinking water for 1 in 3 Americans.

Latino families across the nation drink, swim, and recreate in their cherished community waterways throughout this country. With many of these waterways under constant threat of pollution and degradation, particularly in socioeconomically disadvantaged and minority communities, we are thankful that EPA has taken the necessary and important step of clarifying the jurisdiction of the Clean Water Act. This science-based proposed rule will provide reassurance for Latino families that their cherished waterways are protected.

For scores of Latino families, protecting our natural resources, particularly water, is critical to our values as an electorate. Latino voters are deeply concerned about environmental pollution, and support regulations that protect our natural resources. A Sierra Club and National Council of La Raza poll from 2012 found that 72% of Latino voters agree that "environmental regulations protect our health and our families by lowering toxic levels of mercury, arsenic, carbon dioxide and other life-threatening pollution in our air and water." In this same poll, 92% of Latino voters agreed that they "have a moral responsibility to take care of God's creations on this earth - the wilderness and forests, the oceans, lakes and rivers."

Hispanics have been disproportionately impacted by poor water quality in regions throughout the United States. For example, more than one third (38%) of U.S. Hispanics live in the Colorado River basin—a major river system that has been impacted by toxic pollution. According to the Natural Resources Defense Council, Hispanics living in the West and Southwest have been exposed to polluted drinking water that contains high levels of toxins, including arsenic, perchlorate contamination, and nitrates.

For Latino working families, public health, environmental protections, and a strong economy are equally important policy priorities that support one another. As our previous joint comments on this rule, signed by nearly 30 additional national Hispanic advocacy organizations, pointed out, 87% of Latino voters in Western states believe we can protect our land and water while still having a strong economy—we don't have to choose one over the other.

The Clean Water Rule has been rigorously scrutinized with an open, publicly transparent process, which garnered over 800,000 public comments – the vast majority of which were in

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support of the rulemaking. GreenLatinos applauds EPA and USACOE for taking this important step to protect our nation's waterways, and encourages Congress to let this opened, transparent process continue without delay.

Sincerely,

Mark Magaña
President
GreenLatinos

David J Jaeger
<David.Jaeger@hennepin.us>

04/17/2014 04:25 PM

To OW-Docket@EPA

cc "jufner@naco.org" <jufner@naco.org>, "Joel C. Settles" <Joel.Settles@hennepin.us>, Randy J Anhorn <randy.anhorn@hennepin.us>, "Alene G Tchourumoff"

bcc

Subject EPA-HQ-OW-2011-0880, comments from Hennepin County, Minnesota

To whom it may concern. Hennepin County would like to provide its support for the clarifying language provided in the draft regulation for *Definition of Waters of the U.S. Under the Clean Water Act* soon to be published in the Federal Register.

The proposed amendment codifies how the USACOE has been making case by case decisions regarding whether or not they had jurisdiction subsequent to the supreme court rulings. Of note, the proposed change does narrow their jurisdiction per the court decisions, but still maintains their jurisdiction over tributaries to navigable waters and wetlands "adjacent to these tributaries". Truly isolated wetlands still must be reviewed for jurisdiction and may or may not be subject to federal protection/regulations. In Minnesota and Hennepin County, the narrowed federal jurisdiction should have little practical effect since we have state laws that protect wetlands regardless of federal jurisdiction and authorities. In comparison, other states will likely have objections from property rights advocates that the tributaries and wetlands adjacent to the tributaries of navigable waters should not be subject to federal jurisdiction and that isolated wetlands should also not be subject to any jurisdictional review.

Thank you for the opportunity to provide comments.

Sincerely, Dave.

David Jaeger
Strategic Planning & Resources | Hennepin County Public Works
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david.jaeger@hennepin.us

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Communities For Clean Water

November 11, 2014

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Ave., NW
Washington, DC 20460
E-mail: OW-Docket@epa.gov

Re: Docket ID: EPA-HQ-OW-2011-0880, Clean Water Act Waters of the US Rule

Dear EPA Office of Water:

Communities for Clean Water (CCW) is a network of New Mexican organizations whose mission is to ensure that community waters impacted by Los Alamos National Laboratory (LANL) are kept safe for drinking, agriculture, sacred ceremonies, and a sustainable future. Our growing network includes Concerned Citizens for Nuclear Safety (CCNS), Amigos Bravos, Honor Our Pueblo Existence (HOPE), the New Mexico Acequia Association, Partnership for Earth Spirituality, and Tewa Women United. CCW brings together the vast expertise and commitment of widely respected and well-tested advocacy groups from culturally diverse backgrounds. CCW supports clean water in New Mexico's rivers, streams, and lakes and we urge EPA to finalize the proposed Clean Water Act Waters of the U.S. Rule.

Clean water protections for many of New Mexico's waters have been in question for more than a decade. This rule is would clarify that tributary streams, including those that are intermittent and ephemeral, are protected. This is critically important here in New Mexico where over 94% of our rivers and streams are not perennial. At Los Alamos National Laboratory there are many non-perennial drainages that ultimately flow to the Rio Grande. The rule is essential to ensure that these waters are protected and restored.

Water is precious in New Mexico. Every drop is used to nourish our communities, wildlife, and landscape. Preserving our sources of clean water is essential for protecting our way of life. CCW urges you to further strengthen the final rule to fully protect wetlands and other waters found outside of the floodplain of covered waterways. Science shows that the health of these waters influences stream flow, water quality and wildlife in waters downstream. We are especially concerned about ensuring that waters in closed basins and playa lakes are once again protected as they once were. We urge you to explore avenues for strengthening the rule and restoring these protections.

CCW supports this critical initiative to protect our waters from pollution. We thank you and urge you to finalize a strong Waters of the U.S. rule that includes full protection for the nation's waters as soon as possible.

Sincerely,

Marian Naranjo
Honor Our Pueblo Existence

Kathy Sanchez and Beata Tsosie
Tewa Women United

Joni Arends
Concerned Citizens for Nuclear Safety

Brian Shields and Rachel Conn
Amigos Bravos

Joan Brown and Marlene Perrote
Partnership for Earth Spirituality

[GROUPS: IZAAK WALTON LEAGUE OF AMERICA · THEODORE ROOSEVELT CONSERVATION PARTNERSHIP]

February 4, 2015

The Honorable Jim Inhofe
Chairman
Committee on Environment & Public Works
U.S. Senate
Washington, D.C. 20510

The Honorable Barbara Boxer
Ranking Member
Committee on Environment & Public Works
U.S. Senate
Washington, D.C. 20510

The Honorable Bill Shuster
Chairman
Committee on Transportation & Infrastructure
U.S. House of Representatives
Washington, DC 20515

The Honorable Peter DeFazio
Ranking Member
Committee on Transportation & Infrastructure
U.S. House of Representatives
Washington, DC 20515

Dear Chairman Inhofe, Ranking Member Boxer, Chairman Shuster and Ranking Member DeFazio:

The undersigned sportsmen organizations represent millions of hunters and anglers nationwide, and we strongly support efforts to clarify longstanding Clean Water Act protections for wetlands and headwater streams across the country. We appreciate the opportunity to comment on your hearing titled "Impacts of the Proposed Waters of the United States Rule on State and Local Governments." We request that you include the concerns of America's 47 million hunters and anglers in your discussions by adding this statement to the hearing record.

Like all Americans, hunters and anglers rely on clean water. Yet bedrock safeguards for streams, lakes and wetlands have been eroding for nearly 15 years because of administrative guidance following a pair of confusing Supreme Court decisions (*Solid Waste Agency of Northern Cook Cty. v. Army Corps of Engineers (2001)* and *Rapanos v. United States (2006)*) that called into question more than 30 years' worth of Clean Water Act protections for these waters. As a result, 60 percent of stream miles in the United States, which provide drinking water for more than 117 million Americans, are at increased risk of pollution and destruction. Wetlands are at risk as well. In fact, the rate of wetlands loss increased by 140 percent during the 2004-2009 period – the years immediately following the Supreme Court decisions. This is the first documented acceleration of wetland loss since the Clean Water Act was enacted more than 40 years ago during the Nixon administration.

Following Supreme Court direction in the *Rapanos* decision, as well as at the request of many diverse stakeholders, including sportsmen's organizations, the Environmental Protection Agency and U.S. Army Corps of Engineers jointly proposed a rule on March 25, 2014, to clarify the jurisdiction of the Clean Water Act. We commend the agencies for advancing this long overdue rulemaking. This rule represents the best chance in a generation to restore protections to waters

upon which hunters and anglers rely while preserving – and, in some cases, enhancing – longstanding Clean Water Act exemptions for farmers, ranchers and foresters that encourage wise stewardship of land and water resources.

Sportsmen have been requesting a rulemaking to resolve Clean Water Act confusion for years, because, simply put, clean water equals better hunting and fishing. We were particularly pleased to see the proposed rule categorically include tributaries to waters already covered by the Clean Water Act in the definition of "waters of the United States." These tributaries include, for example, many headwater streams that provide spawning grounds for trout and salmon. Also, the proposed rule categorically includes wetlands adjacent to these tributaries, which provide critical nesting habitat for waterfowl, in the definition of "waters of the United States."

During the public comment period, many of our organizations commented on a third category of waters – so-called "other waters," which are not categorically included in the proposed rule. Many waters of this type are important as waterfowl habitat, as well, and the scientific literature supports a more definitive inclusion of these waters than contained in the proposed rule. For example, the Prairie Pothole Region, which stretches from Iowa through the Dakotas and into Canada, contains thousands of small, shallow wetlands that fall into the "other waters" category. This region provides nesting habitat to as many as 70 percent of all the ducks in North America.

The impacts of a final rule on the sporting communities will be dramatic and overwhelmingly positive. It will reinvigorate our outdoor pursuits that depend on quality habitat. Hunting and fishing collectively represent a $200 billion a year economy, supporting 1.5 million jobs. These economic benefits are especially pronounced in rural areas, where income generated during the hunting and fishing seasons can keep small businesses operational for an entire year. Through fees and excise taxes on sporting equipment, sportsmen also pay hundreds of millions of dollars each year for wildlife management, habitat conservation and public access. This economic engine runs on clean water.

Hunting and fishing aren't just valuable components of the local, state and national economies. They are a tradition we hope to pass on to our children. Now, when fewer children are spending time outdoors, we cannot afford to lose quality habitat and days in the field due to confusing federal laws.

We urge your support for this once-in-a-generation rulemaking process so we can improve and ultimately finalize a rule that – at long last – definitively states which waters are and are not covered by the Clean Water Act. Our hunting and fishing economy and way of life depend on it.

Sincerely,
Izaak Walton League of America
Theodore Roosevelt Conservation Partnership

The Honorable Gina McCarthy, Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Re: Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy,

We support the US Environmental Protection Agency and US Army Corps of Engineers proposed *Definition of "Waters of the United States Under the Clean Water Act"* to clarify which streams, wetlands and other waters are covered by Clean Water Act protections. Wetlands and small streams, including those that flow only seasonally, have a direct impact on the health and quality of larger streams and rivers downstream. These resources are critical drinking water sources, and they protect communities from flooding and filter pollutants.

As local and state decision makers, we believe broad federal protections are critical to protecting our local waters. Michigan has lost 50% of its wetlands, and 17% of the remaining wetlands along with 26,000 lakes and ponds could be considered "isolated" waters no longer protected under the Clean Water Act. Wetlands destruction continues in Michigan despite the many benefits these wetlands provide – improving water quality, providing wildlife habitat, flood control, groundwater recharge and recreational opportunities. We support the draft rule's proposal to restore Clean Water Act protection to all tributaries of navigable waterways. Failure to do so would jeopardize water quality in our larger river sheds and estuaries. It would also put at risk the millions of dollars and thousands of jobs generated by water related tourism activities and other businesses that are dependent on clean water supplies. Michigan is ranked number 2 out of all states as a non-resident fishing destination, with annual non-resident expenditures of more than $326 million. This economic activity is largely dependent on clean and healthy aquatic habitat.

For its first thirty years, the Clean Water Act safeguarded nearly all of our nation's waters. These protections are necessary to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," as intended by Congress when it passed the Clean Water Act in 1972. Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction.

This confusion has put the drinking water for 117 million Americans at risk, including 1.4 million people in Michigan. Michigan has more than 51,000 miles of streams and almost half of these streams do not flow year round and, as a result, have been at risk for more than a decade. These small streams and wetlands provide most of the flow to our most treasured rivers, including the Grand River, St. Clair River, and the Kalamazoo River in Michigan. If we do not protect these networks of small streams, we cannot protect and restore the lakes, rivers and bays that our economy and way of life depend on.

This commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the

regulatory assurance that has been absent for over a decade and better protection for critical water resources on which our communities depend. We strongly support finalization of *Definition of "Waters of the United States Under the Clean Water Act*."

Sincerely,

Honorable Glenn Anderson
State Senator
Michigan, District 6

Honorable Steven M. Bieda
State Senator
Michigan, District 9

Honorable Rebekah Warren
State Senator
Michigan, District 18

Honorable Vicki Barnett
State Representative
Michigan, District 37

Honorable Phil Cavanagh
State Representative
Michigan, District 10

Honorable Jeff Irwin
State Representative
Michigan, District 53

Honorable Marilyn Lane
State Representative
Michigan, District 31

Honorable Sarah Roberts
State Representative
Michigan, District 18

Honorable Jon Switalski
State Representative
Michigan, District 28

Honorable Rashida Tlaib
State Representative
Michigan, District 6

Honorable Jim Townsend
State Representative
Michigan, District 26

Honorable Fred Miller
County Commissioner
Macomb County, Michigan

Honorable Cardi DeMoncao, Jr.
City Council Member
City of Eastpointe, Michigan

CC: US Senators and Representatives

COMMONWEALTH OF MASSACHUSETTS

THE GENERAL COURT

STATE HOUSE, BOSTON 02133-1053

The Honorable Gina McCarthy, Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Re: Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy,

We write today in support of the US Environmental Protection Agency and US Army Corps of Engineers' proposed *Definition of "Waters of the United States Under the Clean Water Act"* that clarifies which streams, wetlands and other waters are covered by Clean Water Act protections. Wetlands and small streams, including those that flow only seasonally, can have a direct impact on the health and quality of larger streams and rivers downstream and we fully support their inclusion in the updated definitions.

Since 1972, the Clean Water Act has safeguarded our nation's navigable waters and has been crucial to restoring and maintaining "the chemical, physical, and biological integrity of the Nation's waters," as intended by Congress. The proposed changes will clarify, consistent with recent court decisions, that these protections also apply to smaller streams and water bodies that have a significant nexus to navigable waters and potential sources of drinking water. Specifically, the changes will ensure that nearly 60% of our nation's streams miles and at least 20% of the 110 million acres of US wetlands are subject to the provisions of the Clean Water Act and protected from contamination.

In addition, the proposed changes will have the benefit of making implementation of the Clean Water Act more consistent and predictable. Consistency among states is essential since water flows downhill, and states feel the impacts of upstream activities occurring in neighboring states.

As state decision makers, we strongly support finalization of *Definition of "Waters of the United States Under the Clean Water Act"* and encourage the proposed definitions to be adopted as soon as possible.

Sincerely,

Carolyn C. Dykema
State Representative
8th Middlesex District

James Eldridge
State Senator
Middlesex and Worcester

Michael Barrett
State Senator
Third Middlesex District

Daniel Wolf
State Senator
Cape and the Islands

John J. Lawn, Jr.
State Representative
10th Middlesex District

Paul Brodeur
State Representative
32nd Middlesex District

Kay Khan
State Representative
11th Middlesex District

David M. Rogers
State Representative
24th Middlesex District

Denise Provost
State Representative
27th Middlesex District

Jennifer Benson
State Representative
37th Middlesex District

Claire D. Cronin
State Representative
11th Plymouth District

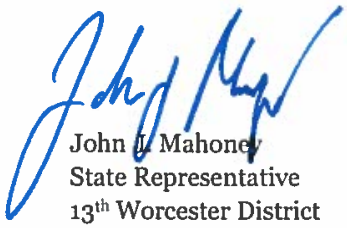
James M. Cantwell
State Representative
4th Plymouth District

Brian Ashe
State Representative
2nd Hampden District

Anne M. Gobi
State Representative
5th Worcester District

Frank A. Moran
State Representative
17th Essex District

Sean Garballey
State Representative
23rd Middlesex District



John J. Mahoney
State Representative
13th Worcester District



Kevin G. Honan
State Representative
17th Suffolk District



Paul McMurtry
State Representative
11th Norfolk District



Lori A. Ehrlich
State Representative
8th Essex District



Kate Hogan
State Representative
3rd Middlesex District



Frank I. Smizik
State Representative
15th Norfolk District



Louis L. Kafka
State Representative
8th Norfolk District



Jonathan Hecht
State Representative
29th Middlesex District

November 14, 2014

The Honorable Gina McCarthy, Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Re: Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy,

We support the US Environmental Protection Agency and US Army Corps of Engineers proposed *Definition of "Waters of the United States Under the Clean Water Act*" to clarify which streams, wetlands and other waters are covered by Clean Water Act protections, Wetlands and small streams, including those that flow only seasonally, have a direct impact on the health and quality of larger streams and rivers downstream. These resources are critical drinking water sources, and they protect communities from flooding and filter pollutants.

For its first thirty years, the Clean Water Act safeguarded nearly all of our nation's waters. These protections are necessary to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," as intended by Congress when it passed the Clean Water Act in 1972. Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction.

These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's streams miles and at least 20 percent of the 110 million acres of wetlands in the continental United States. This confusion has put the drinking water for 117 million Americans at risk, including 11.5 million Texans. Millions of small streams and wetlands provide most of the flow to our most treasured waterways, including the Brazos, Colorado, Trinity, and Rio Grande rivers, and Caddo Lake and Galveston Bay. If we do not protect these networks of small streams, we cannot protect and restore the lakes, rivers, and bays that our economy and way of life depend on. We will also be jeopardizing jobs and revenue in businesses that depend on clean water, including outdoor activities like angling and water-based recreation.

As state and local decision makers, we believe broad federal protections are critical to protecting our local waters. Water flows downhill, and each of the lower 48 states have water bodies that are downstream of one or more other states. Maintaining consistency among water pollution programs throughout these states is essential. Since the passage of the Clean Water Act, states have come to rely on the Act's core provisions and have structured their own water pollution programs accordingly.

We support the draft rule's proposal to restore Clean Water Act protection to all tributaries of navigable waterways. Failure to do so would jeopardize water quality in our larger riversheds and estuaries. It would also put at risk the millions of dollars and thousands of jobs generated by water related tourism activities and other businesses that are dependent on clean water supplies.

This commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade and better protection for critical water resources on which our communities depend. We strongly support finalization of *Definition of "Waters of the United States Under the Clean Water Act.*"

Sincerely,

Roberto Alonzo
Texas State Representative, District 104
312 W. 12th Street, Suite A
Dallas, TX 75208

Rafael Anchia
Texas State Representative, District 103
1111 West Mockingbird Lane, Suite 1010
Dallas, TX 75247

Lon Burnam
Texas State Representative, District 90
1067 W. Magnolia Avenue
Fort Worth, TX 76104

Yvonne Davis
Texas State Representative, District 111
5787 S. Hampton Road, Suite 447
Dallas, TX 75232

Dawnna Dukes
Texas State Representative, District 46
P.O. Box 2910
Austin, TX 78768

Jessica Farrar
Texas State Representative, District 148
P.O. Box 30099
Houston, TX 77249

Sylvia R. Garcia
Texas State Senator, District 6
5425 Polk Street, Suite 125
Houston, Texas 77023

Roland Gutierrez
Texas State Representative, District 119
3319 Sidney Brooks
San Antonio, TX 78235

Donna Howard
Texas State Representative, District 48
P.O. Box 2910
Austin, TX 78768

Celia Israel
Texas State Representative, District 50
P.O. Box 2910
Austin, TX 78768

Marisa Marquez
Texas State Representative, District 77
310 N. Mesa Street, Ste. 906
El Paso, TX 79901

Tom Colkin
Gallatin City Council Member
770 Pine Grove Road
Rusk, TX 75785

Roberta Colkin
Gallatin City Council Member & President,
East Texas Sub-Regional Planning Commission
770 Pine Grove Road
Rusk, TX 75785

Hoyte Davis, Board Member and Past President
Craft-Turney Water Supply
3784 FM 7475
Jacksonville, TX 75766

Dr. Elba Garcia
Dallas County Commissioner, Precinct 4
411 Elm Street, Second Floor
Dallas, Texas 75201

Delia Garza
Austin City Council Member Elect, District 2
209 Sandra Street
Austin, TX 78745

Sandy Greyson
Dallas City Council Member, District 12
1500 Marilla, 5FM
Dallas, TX 75201

Scott Griggs
Dallas City Council Member, District 1
1500 Marilla, 5FN
Dallas, TX 75201

Philip Kingston
Dallas City Council Member, District 14
1500 Marilla, 5FM
Dallas, TX 75201

Ann Kitchen
Austin City Council Member-Elect, District 5
2401 Briargrove Drive
Austin, TX 78704

Adam Medrano
Dallas City Council Member, District 2
1500 Marilla, 5FN
Dallas, TX 75201

Brigid Shea
Travis County Commissioner-Elect, Precinct 2
2604 Geraghty Avenue
Austin, TX 78757

Elliott Naishtat
Texas State Representative, District 49
P.O. Box 2910
Austin, TX 78768

Eddie Rodriguez
Texas State Representative, District 51
P.O. Box 2910
Austin, TX 78768

José Rodriguez
Texas Senator, District 29
100 N. Ochoa, Suite A
El Paso, Texas 79901

CC: US Senators and Representatives

Ana Reyes
Farmers Branch City Council, District 1
13000 William Dobson Pkwy
Farmers Branch, TX 75234

PA Craft Brew Businesses Supporting Proposed *Definition of "Waters of the United States" Under the Clean Water Act*

Earth Bread + Brewery • East End Brewery • Evil Genius Beer Company • Milkman Brewery •Neshaminy Creek Brewing Company • Red Star Kombucha • Round Guys Brewing • St. Benjamin Brewing Company •Vault Brewing Company

November 13, 2014

The Honorable Gina McCarthy
Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue
Washington, DC 20460

Email to: ow-docket@epa.gov

Re: Clean Water Rule Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy:

The undersigned 9 craft breweries in Pennsylvania support the US Environmental Protection Agency (EPA) and US Army Corps of Engineers (Corps) proposed *Definition of "Waters of the United States" Under the Clean Water Act* to clarify which streams, wetlands and other waters are protected under the Clean Water Act. Clean and abundant water is the most important ingredient in our beer, and this action by the Agencies gives us the confidence that our growing businesses need to continue to thrive.

Protecting streams and wetlands that science has shown are clearly linked to downstream rivers and other water bodies is not only commonsense, it ensures the quality of water used in our product. As business owners that have carved out a unique niche in the brewing industry, plentiful supplies of clean water are as important to our business as the malted barley that we select. Our customers understand that it is water, the most wholesome of all ingredients, when combined with hops, malt, innovation and care that gives our beer the distinctive taste.

While we are small and independent, the classification belies the true economic impact that we have generated by tapping into strong consumer demand in Pennsylvania and nationally. According to the Brewers Association, in 2013, Pennsylvania ranked 7th nationally with 108 craft breweries and $2 billion poured in to the state's economy. Top that off with over 2,768 craft breweries operating in the nation

generating $33.9 billion and over 360,000 jobs in 2013, and our importance to communities and the economy is clear.

The Agencies' proposal recognizes the importance of wetlands and headwaters to rivers and streams downriver, and protecting these water resources is critical to the continued growth of the craft brewing and microbrewing industry in Pennsylvania and nationally. Many of the names that we have chosen for our businesses have their roots in the very mill, steel, and river towns that harnessed abundant water supplies to fuel the local economies of years past and today have transformed themselves into recreation and river tourism hubs. Additionally, some of the iconic wildlife species featured in our brand names and logos from river and estuarine habitats depend on clean, abundant water supplies, the same ingredient that is key to our survival.

Clean water is our lifeblood and is inextricably tied to the quality of our beer. Recognizing this drives us to become better stewards of our water resources, which is why we continue to strive to address water consumption and wastewater management concerns. Minimizing our pollution impact on water resources is also just being a good neighbor.

We value the protection that the EPA and Army Corps guarantee for our water supply – consistent regulations that limit pollution and protect water at its source enable our businesses to thrive and expand the local economies in which we work. We encourage the Agencies to finalize the proposed rule, Definition of "Waters of the United States," without delay and reject any efforts to weaken the proposal.

Sincerely,

Earth Bread + Brewery
Peggy Zwerver, Member
Philadelphia, PA

East End Brewery
Scott Smith, Owner/Brewmaster
Pittsburgh, PA

Evil Genius Beer Company
Luke Bowen, Owner
West Grove, PA

Milkman Brewery
Justin, Kyle, & Jamie, Brewmasters
Pittsburgh, PA

Neshaminy Creek Brewing Company
Jeremy Myers, Head Brewer
Croydon, PA

Redstar Kombucha
Naomi Auth, Owner
Pittsburgh, PA

Round Guys Brewing Company
Bill McGeeney, Marketing Director
Lansdale, PA

St. Benjamin Brewing Company
Tim Patton, Owner/President
Philadelphia, PA

Vault Brewing Company
James Cain/Mark Thomas, Owner/ Brewmaster
Yardley, PA

November 13, 2014

The Honorable Gina McCarthy, Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Ave NW
Washington DC 20460

Re: Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy,

We support the US Environmental Protection Agency and US Army Corps of Engineers proposed *Definition of "Waters of the United States Under the Clean Water Act*" to clarify which streams, wetlands and other waters are covered by Clean Water Act protections. Wetlands and small streams, including those that flow only seasonally, have a direct impact on the health and quality of larger streams and rivers downstream. These resources are critical drinking water sources, and they protect communities from flooding and filter pollutants.

For its first thirty years, the Clean Water Act safeguarded nearly all of our nation's waters. These protections are necessary to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," as intended by Congress when it passed the Clean Water Act in 1972. Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction. These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's streams miles and at least 20 percent of the 110 million acres of wetlands in the continental United States. This confusion has put the drinking water for 117 million Americans at risk, including 979,000 residents in Minnesota. Millions of small streams and wetlands provide most of the flow to our most treasured rivers, including the Mississippi, Minnesota, and St. Croix Rivers. If we do not protect these networks of small streams, we cannot protect and restore the lakes, rivers and bays that our economy and way of life depend on. We will also be jeopardizing jobs and revenue in businesses that depend on clean water, including outdoor activities like angling and water-based recreation.

As local and state decision makers, we believe broad federal protections are critical to protecting our local waters. Water flows downhill, and each of the lower 48 states have water bodies that are downstream of one or more other states. Maintaining consistency among water pollution programs throughout these states is essential. Since the passage of the Clean Water Act, states have come to rely on the Act's core provisions and have structured our own water pollution programs accordingly.
We support the draft rule's proposal to restore Clean Water Act protection to all tributaries of navigable waterways. Failure to do so would jeopardize water quality in our larger riversheds and estuaries. It

would also put at risk the millions of dollars and thousands of jobs generated by water related tourism activities and other businesses that are dependent on clean water supplies.

This commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade and better protection for critical water resources on which our communities depend. We strongly support finalization of *Definition of "Waters of the United States Under the Clean Water Act.*"

Sincerely,

John Ward
State Representative- District 10A

David Bly
State Representative- District 20B

Jerry Newton
State Representative- District 37A

Peter Fischer
State Representative- District 43A

Yvonne Selcer
State Representative- District 48A

Linda Slocum
State Representative- District 50A

Joe Atkins
State Representative- District 52B

JoAnn Ward
State Representative- District 53A

Joe Mullery
State Representative- District 59A

Jim Davnie
State Representative- District 63A

Alice Hausman
State Representative- District 66A

John Lesch
State Representative- District 66B

Sheldon Johnson
State Representative- District 67B

November 14, 2014

The Honorable Gina McCarthy, Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Ave NW
Washington DC 20460

Email to: ow-docket@epa.gov

Re: Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy,

We support the US Environmental Protection Agency and US Army Corps of Engineers proposed *Definition of "Waters of the United States Under the Clean Water Act*" to clarify which streams, wetlands and other waters are covered by Clean Water Act protections, Wetlands and small streams, including those that flow only seasonally, have a direct impact on the health and quality of larger streams and rivers downstream. These resources are critical drinking water sources, and they protect communities from flooding and filter pollutants.

For its first thirty years, the Clean Water Act safeguarded nearly all of our nation's waters. These protections are necessary to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," as intended by Congress when it passed the Clean Water Act in 1972. Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction. These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's streams miles and at least 20 percent of the 110 million acres of wetlands in the continental United States. This confusion has put the drinking water for 117 million Americans at risk, including 2.36 million people in Virginia. Millions of small streams and wetlands provide most of the flow to our most treasured rivers, including the Shenandoah and Potomac. If we do not protect these networks of small streams, we cannot protect and restore the lakes, rivers and bays that our economy and way of life depend on. We will also be jeopardizing jobs and revenue in businesses that depend on clean water, including outdoor activities like angling and water-based recreation.

As local and state decision makers, we believe broad federal protections are critical to protecting our local waters. Water flows downhill, and each of the lower 48 states have water bodies that are downstream of one or more other states. Maintaining consistency among water pollution programs throughout these states is essential. Since the passage of the Clean Water Act, states have come to rely on the Act's core provisions and have structured our own water pollution programs accordingly.

We support the draft rule's proposal to restore Clean Water Act protection to all tributaries of navigable waterways. Failure to do so would jeopardize water quality in our larger riversheds and estuaries. It would also put at risk the millions of dollars and thousands of jobs generated by water related tourism activities and other businesses that are dependent on clean water supplies.

This commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade and better protection for critical water resources on which our communities depend. We strongly support finalization of *Definition of "Waters of the United States" Under the Clean Water Act.*

Sincerely,

VA General Assembly Senators and Delegates

Senator Adam Ebbin – District 30
Senator Barbara Favola – District 31
Senator John Edwards – District 21
Senator Creigh Deeds – District 25
Delegate Patrick Hope – District 47
Delegate Kaye Kory – District 38
Delegate Robert Kupricka – District 45
Delegate Marcus Simon – District 53
Delegate Scott Surovell – District 44
Delegate Alfonso Lopez – District 49
Delegate Charniele Herring – District 46

City of Alexandria, VA

Mayor William Euille
Councilmember John Chapman
Councilmember Paul Smedberg

Town of Herndon, VA

Mayor Lisa Merkel
Councilmember Sheila Olem
Councilmember Steven Mitchell

Thursday, November 14, 2014

The Honorable Gina McCarthy
Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Water Docket, Environmental Protection Agency
Mail Code 2822T1200, Pennsylvania Avenue
Washington, DC 20460

Email to: ow-docket@epa.gov

Re: Clean Water Rule Docket ID # EPA-HQ-OW-2011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy:

The undersigned 31 NJ environmental, farming, surfing, labor and religious organizations appreciate the opportunity to comment on the US Environmental Protection Agency (EPA) and US Army Corps of Engineers (Corps) proposed *Definition of "Waters of the United States Under the Clean Water Act*" to clarify which streams, wetlands and other waters are protected under the Clean Water Act. This rule is long overdue. Many of our organizations have spent more than a decade advocating to restore Clean Water Act protections to all wetlands and tributary streams, as Congress originally intended when it passed the landmark Act in 1972.

For its first thirty years, the Clean Water Act safeguarded nearly all of our rivers, streams, lakes and wetlands, in order to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction. These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's stream miles and at least 20 million acres of wetlands in the continental United States.

We support the proposed rule for the clear protections it restores to headwaters, intermittent and ephemeral streams, and to wetlands and other waters located near or within the floodplain of these tributaries. We urge the Agencies to strengthen the final rule by further clarifying that important wetlands and other waters located beyond floodplains are also categorically protected under the Clean Water Act. Nearly a million small streams and wetlands provide most of the flow to our most treasured rivers, including but not limited in New Jersey to the Delaware, Great Egg, Hackensack, Manasquan, Metedeconk, Millstone, Musconetcong, Navesink, Passaic, Pequannock, Rahway, Rancocas, Ramapo, Raritan, Rockaway, Shrewsbury, Swimming, Toms, Wallkill, and Wanaque.

If we do not protect these streams and wetlands, we cannot protect and restore the lakes, rivers and bays like the Barnegat and Delaware Bays on which communities and local economies depend. Leaving critical water resources vulnerable jeopardizes jobs and revenue for businesses that depend on clean water, including outdoor activities like angling and water-based recreation. Whether or not a stream or wetland is a "water of the U.S" determines whether or not a polluter must get a permit to limit how much pollution it can dump into that water. In 2007, EPA estimated that 34% of individual NPDES discharge permits in New Jersey are for discharges into headwater streams, including some streams that do not flow year round. Clarifying that these streams fall under the Clean Water Act will ensure they are protected from pollution or destruction, and therefore better protect the quality and health of downstream tributaries and rivers.

We support the Agencies' proposal to define all tributaries as "waters of the United States," including headwaters and small streams that may only flow seasonally. Headwater streams provide most of the flow to downstream streams and rivers, and make up 48% of New Jersey's stream miles. Intermittent and ephemeral streams may only flow during parts of the year, but they support water quality in downstream waters by filtering pollutants and capturing nutrients and make up 6% of NJ's stream miles. These streams are also critical habitat for fish and other aquatic species.

Headwater and seasonal streams also feed the drinking water sources of 117 million Americans, including 4.3 million New Jerseyans. Clarifying that all tributary streams, regardless of size or frequency of flow are covered under the Clean Water Act will restore protections to 1,157 miles of streams in New Jersey that 48% of our residents depend on for drinking water.

In addition, we support the Agencies' definition of tributary and strongly agree that ditches should be defined as "waters of the U.S." where they function as tributaries. There is sufficient scientific evidence that some ditches function as tributaries moving water and pollutants downstream. In those cases protection is important.

We support the Agencies' determination that all adjacent wetlands are "Waters of the U.S." Wetlands perform critical functions that support aquatic life, clean drinking water and safeguard communities from floods. Wetlands protect the water quality of entire watersheds by filtering pollutants. They also store floodwaters, reducing flood flows that can threaten property and infrastructure. Wetlands also provide essential fish and wildlife habitat that support robust outdoor recreation and tourism. When wetlands are polluted, dredged or filled, these benefits are lost. The Great Swamp and Troy Meadows are critical for flood control and drinking water for downstream communities in Union, Morris, Essex, and Passaic Counties. Further communities with more wetlands along Barnegat Bay and the Delaware Bayshore fared much better from Super Storm Sandy's storm surge than those that had less.

In order to protect wetlands and other resources, we also urge the agency to:

- **Categorically define certain non-adjacent "other waters" as "Waters of the United States" and identify additional subcategories of waters that are jurisdictional, rather than requiring case-by-case determinations.** Wetlands and other waters, even so-called isolated ones that are not adjacent to tributaries, provide many of the same natural benefits as adjacent waters located within floodplains. In fact, it is because of their placement outside of floodplains that they function as "sinks" to capture and filter pollutants and store floodwaters, protecting the physical, biological and chemical integrity of downstream waters. Examples of "other waters" where the science supports our recommendation that they should be categorically protected by rule include: prairie potholes, Carolina and Delmarva Bays including in coastal New Jersey, Texas coastal prairie wetlands, and vernal pools including in New Jersey's Highlands, Piedmont and Skylands.
- **Provide for new science by not categorically excluding any of the "other waters," and establishing a process by which evolving science can inform jurisdictional decisions in the future.** "Other waters" that cannot be defined as jurisdictional in the final rule should still be assessed on a case-by-case basis and provisions made for categorically including them as "Waters of the United States" if and when evolving science indicates that this is appropriate.

New Jersey's economy and local businesses depend on a safe, affordable and adequate water supply from tourism, recreation and fishing industries to food processors (M&M Mars, Anheuser-Busch, Goya Foods,

Manischewitz …) and the pharmaceutical industry. For example, protecting small streams and wetlands is vital for fish and wildlife and New Jersey's vibrant recreational industry. The U.S. Fish and Wildlife Service reports that New Jersey residents and nonresidents spent $2.3 billion on wildlife recreation, including $1.1 billion on fishing, in 2011. More than 2.4 million New Jersey residents participated in wildlife recreation activities in 2011.

The Agencies' commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade, eliminate permit confusion and delay, and better protect the critical water resources on which our communities depend.

Our groups urge the Agencies to swiftly finalize a rule to clarify all waters with a "significant nexus" to downstream waters are clearly protected under the Clean Water Act. We thank the Agencies efforts to protect these waters and look forward to working with them to adopt and implement a strong *"Definition of Waters of the US under the Clean Water Act."*

Sincerely,

Clean Water Action
Amy Goldsmith
New Jersey State Director

American Littoral Society
Tim Dillingham
Executive Director

Association of NJ Environmental Commissions
Jen Coffey
Executive Director

Bergen Save the Watershed Action Network
Lori Charkey
Administrator

CATA, The Farmworkers Support Committee
Margaret Niedda
Director

Citizens Coalition of Long Branch
Avery Grant
Executive Director

Citizens United for Renewable Energy (CURE)
Georgina Shanley
Founder

Clean Ocean Action
Cindy Zipf
Executive Director

Climate Mama
Harriet Sugarman
Founder

Comeback Farms
Mark Canright
Farmer

Delaware Riverkeeper Network
Maya von Rossum
Executive Director

Environment New Jersey
Doug O'Malley
Director

Food & Water Watch
Jim Walsh
Mid-Atlantic Region Director

Genesis Farms
Miriam MacGillis
Executive Director

Grandmothers, Mothers & More for Energy Safety
Janet Tauro
Co-Founder

Greater Newark Conservancy
Robin Dougherty
Executive Director

International Brotherhood of Teamsters- Port Division
Christina Montorio
International Representative

The Land Conservancy of New Jersey
David Epstein
President

NJ Conservation Foundation
Michele Byers
Executive Director

New Jersey Environmental Justice Alliance
Laureen Boles
Director

NJ Environmental Lobby
Michael Pisauro
Legislative Director

NJ Highlands Coalition
Julia Somers
Executive Director

NJ Work Environment Council
Rick Engler
Executive Director

North Jersey Pipeline Walkers
Diane Wexler
Co-Founder

Pinelands Preservation Alliance
Jaclyn Rhoads
Executive Director

Raritan Headwaters Association
William S. Kibler
Director of Policy and Science

Save Barnegat Bay
William DeCamp
President

Sierra Club, NJ Chapter
Jeff Tittel
State Director

Stony Brook Millstone Watershed Association
Jim Waltman
Executive Director

Surfers Environmental Alliance
Richard Lee
Executive Director/East Coast Director

Surfrider Foundation – NJ Chapter
Jon Weber
Mid-Atlantic Regional Manager

Unitarian Universalist Legislative Ministries of NJ
Dr. Rev. Craig Hirshberg
Director

Waterspirit
Jean-Marie Donahue
Senior Manager

November 2014

The Honorable Gina McCarthy
Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue
Washington, DC 20460

Email to: ow-docket@epa.gov

Re: Clean Water Rule Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy:

The undersigned thirty-four (34) organizations, representing thousands of members in Connecticut, appreciate the opportunity to comment on the US Environmental Protection Agency (EPA) and US Army Corps of Engineers (Corps) proposed *Definition of "Waters of the United States Under the Clean Water Act*" to clarify which streams, wetlands and other waters are protected under the Clean Water Act. This rule is long overdue. Many of our organizations have spent more than a decade advocating to restore Clean Water Act protections to all wetlands and tributary streams, as Congress originally intended when it passed the landmark Act in 1972.

For its first thirty years, the Clean Water Act safeguarded nearly all of our rivers, streams, lakes and wetlands, in order to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction. These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's stream miles and at least 20 million acres of wetlands in the continental United States.

For the last decade, polluter backed loopholes in the Clean Water Act have caused confusion about which streams, wetlands and other water are protected from pollution and destruction. Headwater and seasonal streams feed the drinking water sources of 117 million Americans, including 2.2 million residents in Connecticut. Clarifying that all tributary streams, regardless of size or frequency of flow are covered under the Clean Water Act will restore protections to 844 miles of streams that 63% of our residents depend on for drinking water. This number includes 100% of those who depend on public water supplies.

Whether or not a stream or wetland is a "water of the U.S" determines whether or not a polluter must get a permit to limit the amount of pollution that can be dumped into that water. In 2007, EPA estimated that 9% of individual NPDES discharge permits in Connecticut are for discharges into headwater streams, including some streams that do not flow year round. Clarifying that these streams fall under the Clean Water Act will ensure they are protected from pollution or destruction, and therefore better protect the quality and health of downstream tributaries and rivers. **Our organizations support the proposed rule for the clear protections it restores to headwaters, intermittent and ephemeral streams, and to wetlands and other waters located near or within the floodplain of these tributaries. We urge the Agencies to strengthen the final rule by further clarifying that important wetlands and other waters located beyond floodplains are also categorically protected under the Clean Water Act.** Millions of small streams and wetlands provide most of the flow to our most treasured rivers, including the Farmington, Thames, Connecticut, and Housatonic Rivers. If we do not protect these streams and

wetlands, we cannot protect and restore the lakes, rivers and bays on which communities and local economies depend. Leaving critical water resources vulnerable jeopardizes jobs and revenue for businesses that depend on clean water, including outdoor activities like angling and water-based recreation.

Our organizations support the Agencies' proposal to define all tributaries as "waters of the United States," including headwaters and small streams that may only flow seasonally. Headwater streams – streams that have no other streams flowing into them - account for 52% of the total stream miles in Connecticut. Intermittent and ephemeral streams may only flow during parts of the year, but they support water quality in downstream waters by filtering pollutants and capturing nutrients and make up 8% of Connecticut's stream miles. These streams are also critical habitat for fish and other aquatic species.

In addition, we support the Agencies' definition of tributary and strongly agree that ditches should be defined as "waters of the U.S." where they function as tributaries. There is sufficient scientific evidence that some ditches function as tributaries moving water and pollutants downstream. In those cases protection is important.

Our organizations support the Agencies' determination that all adjacent wetlands are "Waters of the U.S." Wetlands perform critical functions that support aquatic life, clean drinking water and safeguard communities from floods. Wetlands protect the water quality of entire watersheds by filtering pollutants. They also store floodwaters, reducing flood flows that can threaten property and infrastructure. Wetlands also provide essential fish and wildlife habitat that support robust outdoor recreation and tourism. When wetlands are polluted, dredged or filled, these benefits are lost.

In order to protect wetlands and other resources, we also urge the agency to:

> **Categorically define certain non-adjacent "other waters" as "Waters of the United States" and identify additional subcategories of waters that are jurisdictional, rather than requiring case-by-case determinations.** Wetlands and other waters, even so-called isolated ones that are not adjacent to tributaries, provide many of the same natural benefits as adjacent waters located within floodplains. In fact, it is because of their placement outside of floodplains that they function as "sinks" to capture and filter pollutants and store floodwaters, protecting the physical, biological and chemical integrity of downstream waters. Examples of "other waters" where the science supports our recommendation that they should be categorically protected by rule include: prairie potholes, Carolina and Delmarva Bays, Texas coastal prairie wetlands and vernal pools such as those found all over Connecticut
>
> **Provide for new science by not categorically excluding any of the "other waters," and establishing a process by which evolving science can inform jurisdictional decisions in the future.** "Other waters" that cannot be defined as jurisdictional in the final rule should still be assessed on a case-by-case basis and provisions made for categorically including them as "Waters of the United States" if and when evolving science indicates that this is appropriate.

The Agencies' commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade, eliminate permit confusion and delay, and better protect the critical water resources on which our communities depend.

Our organizations urge the Agencies to swiftly finalize a rule to clarify that all waters with a "significant nexus" to downstream waters are clearly protected under the Clean Water Act. We thank the Agencies for their efforts

to protect these waters and look forward to working with them to finalize and implement a strong *"Definition of Waters of the United States under the Clean Water Act."*

Sincerely,

Undersigned Organizations

Clean Water Action, *Anne Hulick, Director*

Connecticut Association of Conservation and Inland Wetlands Commissions (CACIWC), *Board of Directors, Alan J. Siniscalchi, President*

ConnectiCOSH, *Mike Fitts, Executive Director*

Connecticut Citizen Action Group, *Tom Swan, Executive Director*

Connecticut Coalition for Environmental Justice, *Sharon Lewis, Executive Director*

Connecticut Federation of Lakes, *Larry Marciano, President*

CT Fly Fisherman's Assoc., *Bruce Rich, President*

Connecticut Nurses' Association, *Kim Sandor, MSN, RN, Executive Director*

Connecticut Public Health Association, *Kathi Traugh, President*

Connecticut River Coastal Conservation District, *Jane Brawerman, Executive Director*

ConnPIRG, *Evan Preston, State Director*

Ecological Health Organization, Inc., ECHO, *Carolyn Wysocki, President*

Environment Connecticut, *Christopher Phelps, State Director*

Friends of Gully Brook*, John J. Thomas, Acting Chair*

Friends of the Lake, *Gregory L. Bollard, Executive Board*

Groton Open Space Association, Inc. *Joan Smith, President*

Hammonasset Chapter of Trout Unlimited - #446 CT, *Jim Woodworth, Chapter President*

Housatonic Valley Association, *Lynn Werner, Executive Director*

Interreligious Eco Justice Network, *Teresa Eickel, Executive Director*

The Jonah Center for Earth and Art, *Krishna Winston, President*

League of Women Voters of Connecticut *, Alison Rivard, V.P. Public Issues; Carolyn Bayne, Natural Resources Director; Susan Horstmann, Water Resources Specialist*

Naugatuck River Watershed Association, *Bob Gregorski, President*

Northeast Organic Farming Association of Connecticut, *Eileen Hochberg, Executive Director*

Norwalk River Watershed Association, *Kristen Begor, President*

Park Watershed, *Mary Rickel Pelletier, Founding Director*

Quinnipiac River Watershed Association, *Ginny Chirsky, QRWA Board Member*

Rivers Alliance of Connecticut, *Margaret Miner, Executive Director*

Save the Sound, *a bi-state program of Connecticut Fund for the Environment, Leah Lopez Schmalz, Director of Legislative and Legal Affairs*

Sierra Club Connecticut, *Roberta Paro, Chapter Chair*

Southbury Land Trust, *Tom Crider, President*

Tidewater Institute*, Charles J. Rothenberger, Vice-President*

Toxics Action Center, *Sylvia Broude, Executive Director*

Watershed Partnership, Inc., *Jerry Silbert, M.D., Executive Director*

Wepawaug River Watershed Alliance, *Steven Johnson, Chair*

CC: US Senators and Representatives

THE LEAGUE
OF WOMEN VOTERS
OF ILLINOIS

October 8, 2014

RECEIVED
OCT 20 2014
EPA DOCKET CENTER

Water Docket, Environmental Protection Agency
Mail Code 2822 T
1200 Pennsylvania Avenue NW
Washington, DC 20460

RE: Docket ID no. EPA-HQ-OW-2011-0880

The League of Women Voters of Illinois supports the Army Corps and Environmental Protection Agency's rulemaking recommendations to define the waters of the United States. We believe this will provide clarity for the regulatory community and is consistent with the intent of the Clean Water Act as interpreted by the Supreme Court.

League of Women Voters members nationwide were active in the passage of the Clean Water Act in the 1970's. We worked to protect, expand, and strengthen it through the 1990's. Our Illinois members also belong to a multi-state basin League group, the League of Women Voters Lake Michigan Region, which was formed to act on selected governmental issues affecting the Lake Michigan watershed. We have studied the issues and work with our communities to educate and advocate for the protection of our water quality, public health, and environment. We support policies "to achieve water quality essential for maintaining species populations and diversity, including measures to protect lakes, estuaries, wetlands, and in-stream flows." We further support "stringent controls to protect the quality of current and potential drinking water supplies including protection of watersheds for surface supplies and recharge areas for groundwater."

Our statement today is consistent with our comments from 2003. "The Clean Water Act covers all waters, whether large or small, they function as an interconnected system. Excision of parts of the system from regulation will impair health and optimal functioning of the whole."

Thank you for the opportunity to comment on the proposed rules for the Clean Water Act. The League of Women Voters of Illinois supports these science-based decisions.

Sincerely,

POSTMARKED
OCT 08 2014
EPA DOCKET CENTER

Mary Kubasak

Mary Kubasak, President
League of Women Voters of Illinois

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RE: Docket ID No. EPA-HQ-OW-2011-08806 Nov. 2014

As a member of the Advocacy Committee of the League of Women Voters of Ohio, I speak for the entire League in Ohio. One of our four action priorities this year has been water, not only quantity but also quality. With the combination of Lake Erie and the Ohio River making over half of our borders and with a growing human population, we are indeed concerned about federal rules regarding water. We support the Army Corps and EPA's rulemaking recommendations to define the waters of the United States. Clarity will provide regulators the authority needed to protect our water quality, public health and environment.

Water knows no boundaries and all waters function as an interconnected system. Our concerns, of course, include Canadians, some of whom also drink and fish the Great Lakes. It is imperative to protect all tributaries, including wetlands and in-stream flows, to the Great Lakes, which provide drinking water for about 40 million people. We support stringent controls to protect the quality of current and potential drinking water supplies including protection of watersheds for surface supplies and recharge areas for groundwater. Science reported in the 1 Aug 2014 issue (vol. 345: p. 492) that in the last 10 years western groundwater (which takes thousands of years to recharge naturally) has been depleted six times faster than surface water, a rate that should scare us all.

Thank you for the opportunity to comment on the proposed rules for the Clean Water Act and voice our support for regulations that will ensure water quality.

Sincerely,
Kristin B. Vessey
Board of Directors, League of Women Voters of Ohio

November 14, 2014

The Honorable Gina McCarthy
Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue
Washington, DC 20460

Email to: ow-docket@epa.gov
Re: Clean Water Rule Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy:

The undersigned owners and partners of businesses in Connecticut support the US Environmental Protection Agency (EPA) and US Army Corps of Engineers (Corps) proposed *Definition of "Waters of the United States Under the Clean Water Act*" to clarify which streams, wetlands and other waters are protected by the Clean Water Act. Our businesses depend on the availability of clean and abundant water, and this action by the Agencies is a prime example of the vital partnership between business and government.

For its first thirty years, the Clean Water Act safeguarded nearly all of our nation's waters. These protections are necessary to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," as intended by Congress when it passed the Clean Water Act in 1972. Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction. These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's streams miles and at least 20 percent of the 110 million acres of wetlands in the continental United States. This confusion has put the drinking water for 117 million Americans at risk. If we do not protect these networks of small streams, we cannot protect and restore the lakes, rivers and bays that our economy and way of life depend on. We will also be jeopardizing jobs and revenue in businesses that depend on clean water, including outdoor activities like angling and water-based recreation.

Protecting streams and wetlands that science has shown are clearly linked to downstream rivers and other water bodies is not only commonsense, it ensures the quality of water used in our products. Whether a company produces food, manufactures silicon wafers, brews beer, or operates an outdoor door recreation outfitter, businesses rely on clean water to produce high quality, safe products and services. Protecting these water resources is critical to the continued growth of American businesses. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade and better protection for critical water resources on which our businesses all depend in order to prosper.

A recent national poll[i] found that 80% of small business owners favor federal rules to better protect headwaters and small streams. The poll found that small business owners assign high importance to clean water for their own operations and believe that government regulations are needed to safeguard it. Two-thirds of the business owners polled expressed concern that water pollution could hurt their business. In fact, more than seven in ten business owners, regardless of political affiliation, believe protecting clean water helps spur economic growth.

We value the protection that the EPA and Army Corps guarantee for our water supply – consistent regulations that limit pollution and protect water at its source enable our businesses to thrive and expand the local economies in which we work. We encourage the Agencies to finalize the proposed rule, Definition of "Waters of the United States," without delay and reject any efforts to weaken the proposal.

Sincerely,

The Undersigned Businesses:

Mitchell Environmental Health Associates, President, Mark A. Mitchell M.D., MPH

Mark Palmer, e-Learning Developer, Willington, CT

Pith Products, LLC, Lou Albert, Owner Partner

Therapeutic Enterprises, Noreen Wallace, OTR/L

The Henrietta House Bed and Breakfast and Red House Farm, LLC, Marian Matthews, Owner

CC: US Senators and Representatives

http://asbcouncil.org/sites/default/files/asbc_clean_water_http://asbcouncil.org/sites/default/files/asbc_clean_water_poll_report_july2014_sv_final_140721v2sm.pdfpoll_report_july2014_sv_final_140721v2sm.pdf

November 14, 2014

The Honorable Gina McCarthy, Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Re: Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy,

The undersigned state and local officials, appreciate the opportunity to comment in support of the US Environmental Protection Agency (EPA) and US Army Corps of Engineers (Corps) proposed *Definition of "Waters of the United States Under the Clean Water Act*" to clarify which streams, wetlands and other waters are covered by Clean Water Act protections. Wetlands and small streams, including those that flow only seasonally, have a direct impact on the health and quality of larger streams and rivers downstream. These resources are critical drinking water sources, and they protect communities from flooding and filter pollutants.

For its first thirty years, the Clean Water Act safeguarded nearly all of our nation's waters. These protections are necessary to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," as intended by Congress when it passed the Clean Water Act in 1972. Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction. These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's streams miles and at least 20 percent of the 110 million acres of wetlands in the continental United States. This confusion has put the drinking water for 117 million Americans at risk, including 2.2 million residents of Connecticut. Millions of small streams and wetlands provide most of the flow to our most treasured rivers, including the Farmington, Thames, Connecticut, and Housatonic Rivers. If we do not protect these networks of small streams, we cannot protect and restore the lakes, rivers and bays that our economy and way of life depend on. We will also be jeopardizing jobs and revenue in businesses that depend on clean water, including outdoor activities like angling and water-based recreation.

As local and state decision makers, we believe broad federal protections are critical to protecting our local waters. Water flows downhill, and each of the lower 48 states have water bodies that are downstream of one or more other states. Maintaining consistency among water pollution programs throughout these states is essential. Since the passage of the Clean Water Act, states have come to rely on the Act's core provisions and have structured our own water pollution programs accordingly.
We support the draft rule's proposal to restore Clean Water Act protection to all tributaries of navigable waterways. Failure to do so would jeopardize water quality in our larger riversheds and estuaries. It would also put at risk the millions of dollars and thousands of jobs generated by water related tourism activities and other businesses that are dependent on clean water supplies.

This commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection,

filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade and better protection for critical water resources on which our communities depend. We strongly support finalization of *Definition of "Waters of the United States Under the Clean Water Act.*"

Sincerely,

The Undersigned State and Local Officials:

Anthony Irving*, Chairman Eightmile River Wild & Scenic Coordinating Committee*

Ashford Conservation Commission*, Loretta Wrobel, Chairperson*

Hartford City Council*, Resolution by Cynthia Jennings, Councilwoman*

Housatonic River Estuary Commission*, Robert Gesullo, Chair*

Lynn Werner*, Chair Kent Inland-Wetlands Commission*

Margaret Miner*, Roxbury ZBA and Co-chair CT Water Planning Council Advisory Group*

Middletown Conservation Commission*, Joan Liska, Chair*

Maureen Nicholson*, Town of Pomfret*

Ridgefield Conservation Commission*, Jack Kace Chair*

Simsbury Conservation Commission*, Don Rieger, Secretary*

Susan Eastwood*, Chair, Ashford Clean Energy Task Force*

CC: US Senators and other Representatives

Pennsylvania Elected Officials Supporting Proposed *Definition of "Waters of the United States" Under the Clean Water Act*

The Honorable Kevin Boyle • The Honorable Mark B. Cohen • The Honorable Gene DiGirolamo • The Honorable Andy Dinniman • The Honorable Jim Ferlo • The Honorable Robert Freeman • The Honorable Michael A. Golden • The Honorable Mary Jo Daley • The Honorable Patty Kim • The Honorable Stephen Kinsey • The Honorable Daylin Leach • The Honorable Steve McCarter • The Honorable Chuck McIlhinney • The Honorable Phyllis Mundy • The Honorable James R. Roebuck, Jr. • The Honorable Michael Stack • The Honorable Greg Vitali

November 13, 2014

The Honorable Gina McCarthy, Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Re: Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy,

We support the US Environmental Protection Agency and US Army Corps of Engineers proposed *Definition of "Waters of the United States" Under the Clean Water Act* to clarify which streams, wetlands and other waters are covered by Clean Water Act protections, Wetlands and small streams, including those that flow only seasonally, have a direct impact on the health and quality of larger streams and rivers downstream. These resources are critical drinking water sources, and they protect communities from flooding and filter pollutants.

For its first thirty years, the Clean Water Act safeguarded nearly all of our nation's waters. These protections are necessary to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," as intended by Congress when it passed the Clean Water Act in 1972. Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction.

These federal policy changes have called into question Clean Water Act protections for nearly 60 percent of our nation's streams miles and at least 20 percent of the 110 million acres of wetlands in the continental United States. This confusion has put the drinking water for 117 million Americans at risk, including 8 million people in Pennsylvania. Millions of small streams and wetlands provide most of the flow to our most treasured rivers, including the Allegheny, Monongahela, Delaware, Schuylkill, and Susquehanna in Pennsylvania. If we do not protect these networks of small streams, we cannot protect and restore the lakes, rivers and bays that our economy and way of life depend on. We will also be jeopardizing jobs and revenue in businesses that depend on clean water, including outdoor activities like angling and water-based recreation.

As local and state decision makers, we believe broad federal protections are critical to protecting our local waters. Water flows downhill, and each of the lower 48 states have water bodies that are downstream of one or more other states. Maintaining consistency among water pollution programs throughout these states is essential. Since the passage of the Clean Water Act, states have come to rely on the Act's core provisions and have structured our own water pollution programs accordingly.

Pennsylvania Elected Officials Supporting Proposed *Definition of "Waters of the United States" Under the Clean Water Act*

We support the draft rule's proposal to restore Clean Water Act protection to all tributaries of navigable waterways. Failure to do so would jeopardize water quality in our larger riversheds and estuaries. It would also put at risk the millions of dollars and thousands of jobs generated by water related tourism activities and other businesses that are dependent on clean water supplies.

This commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade and better protection for critical water resources on which our communities depend. We strongly support finalization of *Definition of "Waters of the United States" Under the Clean Water Act.*

Sincerely,

The Honorable Kevin Boyle
HD 172

The Honorable Mark B. Cohen
HD 202

The Honorable Gene DiGirolamo
HD 18

The Honorable Andy Dinniman
SD 19

The Honorable Jim Ferlo
SD 38

The Honorable Robert Freeman
HD 136

The Honorable Michael A. Golden
Councilor, Jenkintown Borough

The Honorable Mary Jo Daley
HD 148

The Honorable Patty Kim
HD 103

The Honorable Stephen Kinsey
HD 201

The Honorable Daylin Leach
SD 17

The Honorable Steve McCarter
HD 154

The Honorable Chuck McIlhinney
SD 10

The Honorable Phyllis Mundy
HD 120

The Hon. James R. Roebuck, Jr.
HD 188

The Honorable Michael Stack
SD 5

The Honorable Greg Vitali
HD 166

State of Connecticut

GENERAL ASSEMBLY

STATE CAPITOL

HARTFORD, CONNECTICUT 06106-1591

October 2014

The Honorable Gina McCarthy, Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Re: Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy,

The undersigned state and local officials, appreciate the opportunity to comment in support of the US Environmental Protection Agency (EPA) and US Army Corps of Engineers (Corps) proposed *Definition of "Waters of the United States Under the Clean Water Act"* to clarify which streams, wetlands and other waters are covered by Clean Water Act protections. Wetlands and small streams, including those that flow only seasonally, have a direct impact on the health and quality of larger streams and rivers downstream. These resources are critical drinking water sources, and they protect communities from flooding and filter pollutants.

For its first thirty years, the Clean Water Act safeguarded nearly all of our nation's waters. These protections are necessary to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," as intended by Congress when it passed the Clean Water Act in 1972. Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction.

These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's streams miles and at least 20 percent of the 110 million acres of wetlands in the continental United States. This confusion has put the drinking water for 117 million Americans at risk, including 2.2 million residents of Connecticut. Millions of small streams and wetlands provide most of the flow to our most treasured rivers, including the Farmington, Thames, Connecticut, and Housatonic Rivers. If we do not protect these networks of small streams, we cannot protect and restore the lakes, rivers and bays that our economy and way of life depend on. We will also be jeopardizing jobs and revenue in

businesses that depend on clean water, including outdoor activities like angling and water-based recreation.

As local and state decision makers, we believe broad federal protections are critical to protecting our local waters. Water flows downhill, and each of the lower 48 states have water bodies that are downstream of one or more other states. Maintaining consistency among water pollution programs throughout these states is essential. Since the passage of the Clean Water Act, states have come to rely on the Act's core provisions and have structured our own water pollution programs accordingly.

We support the draft rule's proposal to restore Clean Water Act protection to all tributaries of navigable waterways. Failure to do so would jeopardize water quality in our larger riversheds and estuaries. It would also put at risk the millions of dollars and thousands of jobs generated by water related tourism activities and other businesses that are dependent on clean water supplies.

This commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade and better protection for critical water resources on which our communities depend. We strongly support finalization of *Definition of "Waters of the United States Under the Clean Water Act."*

Sincerely,

Mary Mushinsky
State Representative

Peter Tercyak
State Representative

Rick Lopes
State Representative

James Albis
State Representative

William Tong
State Representative

Matthew Lesser
State Representative

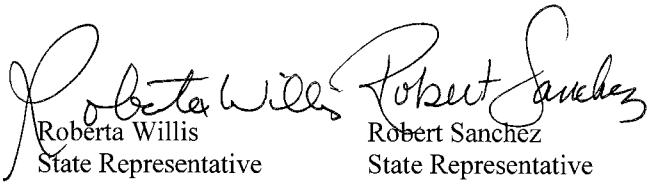
Emmett Riley
State Representative

Susan Johnson
State Representative

Gerald Fox
State Representative



Kim Rose
State Representative



Roberta Willis
State Representative

Robert Sanchez
State Representative



Edwin Vargas
State Representative



Terry Backer
State Representative



Kevin Ryan
State Representative



Elizabeth B. Ritter
State Representative



Robyn Porter
State Representative



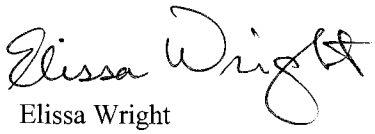
Philip Miller
State Representative



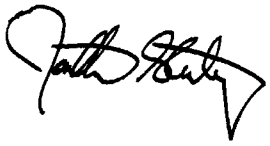
Angel Arce
State Representative



Paul Davis
State Representative



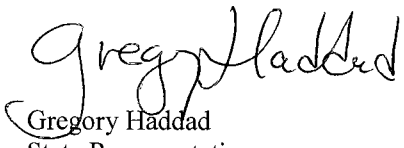
Elissa Wright
State Representative



Jonathan Steinberg
State Representative



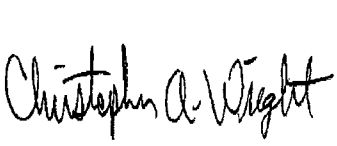
Timothy Bowles
State Representative



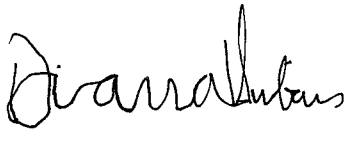
Gregory Haddad
State Representative



Mike Demicco
State Representative



Christopher A. Wright
State Representative



Diana Urban
State Representative

Hilda Santiago
State Representative

Russell Morin
State Representative

Andrew Fleischmann
State Representative

Gary LeBeau
State Senator

Terry Gerratana
State Senator

Danté Bartolomeo
State Senator



CITY OF BOSTON • MASSACHUSETTS

OFFICE OF THE MAYOR
MARTIN J. WALSH
August 25, 2014

The Honorable Gina McCarthy, Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Re: Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy,

As Mayor of Boston, I support the US Environmental Protection Agency and US Army Corps of Engineers' proposed *Definition of "Waters of the United States Under the Clean Water Act"* to clarify which streams, wetlands and other waters are covered by Clean Water Act protections. Wetlands and small streams, including those that flow only seasonally, have a direct impact on the health and quality of larger streams and rivers downstream. These resources are critical drinking water sources, and they protect communities from flooding and filter pollutants.

For its first thirty years, the Clean Water Act safeguarded nearly all of our nation's waters. These protections are necessary to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," as intended by Congress when it passed the Clean Water Act in 1972. Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction. These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's streams miles and at least 20 percent of the 110 million acres of wetlands in the continental United States.

This confusion has put the drinking water for 117 million Americans at risk, including over almost 7 million people in Massachusetts. Millions of small streams and wetlands provide most of the flow to our most treasured water bodies, including the Charles and Merrimack Rivers and the Quabbin Reservoir. These rivers provide a place of recreation for people and a home for wildlife as well as providing the state with economic benefits such as pollution filtration and flood control. The Quabbin Reservoir alone provides drinking water for over 2.5 million people in over 46 communities in Massachusetts.

If we do not protect these networks of small streams, we cannot protect and restore the lakes, rivers bays, and reservoirs upon which our economy and way of life depend. Clean water is an

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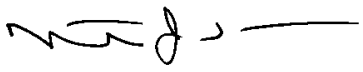
economic driver. It is essential for businesses, and also raises property values and boosts local economies. Protecting small streams and wetlands is vital for fish and wildlife and Massachusetts' vibrant recreational industry. The U.S. Fish and Wildlife Service reports that Massachusetts residents and nonresidents spent $2 billion on wildlife recreation, including $455 million on fishing, in 2011. More than 2.2 million Massachusetts residents participated in wildlife recreation like angling and water-based recreation activities in 2011. Across the United States, recreational fishing generates about $125 billion annually and supports 1.5 million jobs.

According to a national poll conducted this year by the American Sustainable Business Council, "80% of small business owners favor federal rules for clean water to protect upstream headwaters as proposed in the Environmental Protection Agency's new Waters of the U.S. rule." The rule protects citizens and their water sources as well as businesses, small and large that depend on clean water to run profitably.

As Mayor of Boston, I believe broad federal protections are critical to protecting our local waters. Water flows downhill, and each of the lower 48 states have water bodies that are downstream of one or more other states. Maintaining consistency among water pollution programs throughout these states is essential. Since the passage of the Clean Water Act, states have come to rely on the Act's core provisions and have structured our own water pollution programs accordingly. I support the draft rule's proposal to restore Clean Water Act protection to all tributaries of navigable waterways. Failure to do so would jeopardize water quality in our larger riversheds and estuaries. It would also put at risk the millions of dollars and thousands of jobs generated by water related tourism activities and other businesses that are dependent on clean water supplies.

This commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade and better protection for critical water resources on which our communities depend. We strongly support finalization of *Definition of "Waters of the United States Under the Clean Water Act."*

Sincerely,



Martin J. Walsh
Mayor of Boston

The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

DEVAL L. PATRICK
GOVERNOR

MAEVE VALLELY BARTLETT
SECRETARY

Tel: (617) 626-1000
Fax: (617) 626-1018
http://www.mass.gov/eea

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September 23, 2014

Administrator Gina McCarthy
Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue NW,
Washington, DC 20460

Attention: Docket ID No. EPA-HQ-OW-2011-0880

Dear Administrator McCarthy:

I am writing to express the Commonwealth of Massachusetts Executive Office of Energy and Environmental Affairs support for the Proposed Rule regarding the definition of "Waters of the United States" under the federal Clean Water Act. EPA has undertaken this important task to provide additional clarity with these regulatory changes which will reduce the number of necessary case-by-case jurisdictional determinations. The refinements embodied in the proposed changes will assist EPA, the Army Corps of Engineers, states and property owners seeking jurisdictional determinations, and provide national predictability and certainty in the administration of the permitting requirements of the federal Clean Water Act.

The proposed rule refines the jurisdictional terms which determine the scope of federal Clean Water Act permitting to include and provide strong protection for headwater streams that serve a critical role in maintaining water quality and protecting communities from flooding. The rule also will include in the jurisdictional scope of the Act wetlands near rivers and streams, which serve important ecosystem services and have strong connections to rivers or streams. Massachusetts also supports the

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effort to use the significant nexus standard as applied to other waters in case-by-case determinations. These other waters may be determined to be connected in important ways to jurisdictional waters that make their protection vital.

Massachusetts has been working for many years to protect its wetlands and headwater streams which, in combination with the hydrologic system of which they are part, form a crucial network that serves to keep our waters clean and healthy. Maintaining effective legal protection of waters of the United States, including wetlands and headwater streams, is critical. The scientific evidence provided by EPA in support of the proposed rule reinforces the need for solid requirements to safeguard our nation's waters and wetlands. The public benefits that will result from implementing the rule are significant to all states, and include flood control, storm damage prevention, prevention of pollution, and protection of fisheries and wildlife habitat.

Across the country individual states have implemented varying levels of protection for waters and wetlands. Therefore, implementation of the proposed rule on a national level will ensure that minimum protections will be maintained in all states.

EPA's proposed rule will maintain strong federal Clean Water Act protection for these critically important waters and provide consistency in interpretation.

Sincerely,

Maeve Vallely Bartlett

Maeve Vallely Bartlett
Secretary

October 18, 2014

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

The Honorable Gina McCarthy
Administrator
US Environmental Protection Agency

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue
Washington, DC 20460

Email to: ow-docket@epa.gov

Re: Clean Water Rule Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy:

Save The Bay appreciates the opportunity to comment on the US Environmental Protection Agency (EPA) and US Army Corps of Engineers (Corps) proposed *Definition of "Waters of the United States Under the Clean Water Act*" to clarify which streams, wetlands and other waters are protected under the Clean Water Act. This rule is long overdue. Save The Bay represents thousands of members and supporters committed to preserving, restoring, and protecting the ecological integrity and value of Narragansett Bay and coastal Rhode Island. Our tributary watersheds, 60% of which are in Massachusetts, are an important contributor to the Narragansett Bay estuary, and many of those streams are small headwater streams and wetlands that help to protect water quality, filter pollutants, and mitigate downstream flooding.

For its first thirty years, the Clean Water Act safeguarded nearly all of our rivers, streams, lakes and wetlands, in order to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction. These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's stream miles and at least 20 million acres of wetlands in the continental United States.

Save The Bay supports the proposed rule for the clear protections it restores to headwaters, intermittent and ephemeral streams, and to wetlands and other waters located near or within the floodplain of these tributaries. We urge the Agencies to strengthen the final rule by further clarifying that important wetlands and other waters located beyond floodplains are also

categorically protected under the Clean Water Act. If we do not protect these streams and wetlands, we cannot protect and restore the lakes, rivers and bays on which communities and local economies depend. Leaving critical water resources vulnerable jeopardizes jobs and revenue for businesses that depend on clean water, including outdoor activities like angling and water-based recreation.

We support the Agencies' proposal to define all tributaries as "waters of the United States," including headwaters and small streams that may only flow seasonally. Headwater streams are an important habitat resource and provide benefits to downstream ecosystems. Intermittent and ephemeral streams may only flow during parts of the year, but they support water quality in downstream waters by filtering pollutants and capturing nutrients. These streams are also critical habitat for fish and other aquatic species.

The Taunton River, the largest source of freshwater to Narragansett Bay, was designated as a Wild & Scenic River in 2009 for its outstanding resources and rare habitats. The river hosts several rare fish species including the bridal shiner which lives in small headwater streams. These streams also host cold water fish such as native trout species that spawn in these pristine systems.

In addition, we support the Agencies' definition of tributary and strongly agree that ditches should be defined as "waters of the U.S." where they function as tributaries. There is sufficient scientific evidence that some ditches function as tributaries moving water and pollutants downstream. In those cases protection is important.

We support the Agencies' determination that all adjacent wetlands are "Waters of the U.S." Wetlands perform critical functions that support aquatic life, clean drinking water and safeguard communities from floods. Wetlands protect the water quality of entire watersheds by filtering pollutants. They also store floodwaters, reducing flood flows that can threaten property and infrastructure. Wetlands also provide essential fish and wildlife habitat that support robust outdoor recreation and tourism. When wetlands are polluted, dredged or filled, these benefits are lost.

In order to protect wetlands and other resources, we also urge the agency to:

> **Categorically define certain non-adjacent "other waters" as "Waters of the United States" and identify additional subcategories of waters that are jurisdictional, rather than requiring case-by-case determinations.** Wetlands and other waters, even so-called isolated ones that are not adjacent to tributaries, provide many of the same natural benefits as adjacent waters located within floodplains. In fact, it is because of their placement outside of floodplains that they function as "sinks" to capture and filter pollutants and store floodwaters, protecting the physical, biological and chemical integrity of downstream waters. Examples of "other waters" where the science supports our recommendation that they should be categorically protected by rule

include: prairie potholes, Carolina and Delmarva Bays, Texas coastal prairie wetlands and vernal pools.

Provide for new science by not categorically excluding any of the "other waters," and establishing a process by which evolving science can inform jurisdictional decisions in the future. "Other waters" that cannot be defined as jurisdictional in the final rule should still be assessed on a case-by-case basis and provisions made for categorically including them as "Waters of the United States" if and when evolving science indicates that this is appropriate.

When finalized, this rule will provide the regulatory assurance that has been absent for over a decade, eliminate permit confusion and delay, and better protect the critical water resources on which our communities depend. The Narragansett Bay watershed is an active working watershed, home to industry, recreation, tourism and fishing. All these uses must co-exist while maintaining the water quality essential to a healthy thriving economy. Headwater streams and wetlands are essential in providing clean, healthy water to Narragansett Bay and in providing pristine habitats for wildlife.

We urge the Agencies to swiftly finalize a rule to clarify that all waters with a "significant nexus" to downstream waters are clearly protected under the Clean Water Act. We thank the Agencies for their efforts to protect these waters and look forward to working with them to finalize and implement a strong *"Definition of Waters of the United States under the Clean Water Act."*

Sincerely,



Rachel Calabro
Save The Bay

American Lung Association
Apeiron Institute for Environmental Living
Appalachian Mountain Club
Arpin Group, Inc
Audubon Society of RI
Blackstone River Watershed Council
Buckeye Brook Coalition
CCRI Students for Environmental Action
Center for Environmental Studies at Brown University
Childhood Lead Action Project
Citizens Climate Lobby RI Chapter
Clean Water Action
Coastal Institute
Common Fence Point Improvement Association
Concerned Airport Neighborhoods
Conservation Law Foundation
Empire Loan
Environment Northeast
Environment Rhode Island
Fort Adams Trust
Friends of India Point Park
Friends of the Pawtuxet
Full Circle Recycling
Green Circle Design
Greene School
GreenWays Rhode Island
Groundwork Providence Inc.
Heartwood Group Inc.
Herff Jones Inc.
Lincoln Land Trust
Narragansett Bay Estuary Program
National Education Association RI
Nature Conservancy, (The)
New Dawn Earth Center
Norman Bird Sanctuary
Ocean State Action
People's Power & Light
Pro Act Biotech
Providential Gardener
R.W. Chew, LLC
RENEW
RI Association of Railroad Passengers
RI Environmental Education Association
RI Interfaith Power & Light
RI Land Trust Council
RI Rural Development Council
RI Saltwater Anglers Association
RI State Nurses Association
RI Student Climate Coalition
RI Tree Council
RI Wild Plant Society
Roger Williams Park Zoo
Save the Bay
Save the Lakes
Sierra Club of RI
Southside Community Land Trust
Spiral Ecology
The MA/RI Chapter of The American Chestnut Foundation
Toxics Action Center
Trust for Public Land (The)
US Green Building Council, RI Chapter
Washington County Regional Planning Council
Westerly Land Trust
Wood-Pawcatuck Watershed Association
Woonasquatucket River Watershed Council
Your Family Farm

ENVIRONMENT COUNCIL OF RHODE ISLAND

The Honorable Gina McCarthy
Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

July 3, 2014

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue
Washington, DC 20460

Email to: ow-docket@epa.gov

Re: Clean Water Rule Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy:

The organizations comprising the Environment Council of Rhode Island appreciate the opportunity to comment on the US Environmental Protection Agency (EPA) and US Army Corps of Engineers (Corps) proposed *Definition of "Waters of the United States Under the Clean Water Act*" to clarify which streams, wetlands and other waters are protected under the Clean Water Act. This rule is long overdue. Many of our organizations have spent more than a decade advocating to restore Clean Water Act protections to all wetlands and tributary streams, as Congress originally intended when it passed the landmark Act in 1972.

For its first thirty years, the Clean Water Act safeguarded nearly all of our rivers, streams, lakes and wetlands, in order to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade

have left many small streams and “isolated” wetlands vulnerable to pollution or destruction. These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's stream miles and at least 20 million acres of wetlands in the continental United States.

Our organizations support the proposed rule for the clear protections it restores to headwaters, intermittent and ephemeral streams, and to wetlands and other waters located near or within the floodplain of these tributaries. We urge the Agencies to strengthen the final rule by further clarifying that important wetlands and other waters located beyond floodplains are also categorically protected under the Clean Water Act. Millions of small streams and wetlands provide most of the flow to Rhode Island's most treasured rivers, including the Blackstone River, the Pawtuxet River, the Wood River and the Sakonnet River, to name a few. If we do not protect these streams and wetlands, we cannot protect and restore the lakes, rivers and bays on which communities and local economies depend. Leaving critical water resources vulnerable jeopardizes jobs and revenue for businesses that depend on clean water, including outdoor activities like angling and water-based recreation.

Our organizations support the Agencies’ proposal to define all tributaries as “waters of the United States,” including headwaters and small streams that may only flow seasonally. Headwater streams provide most of the flow to downstream streams and rivers, and make up 54% of Rhode Island's stream miles. Intermittent and ephemeral streams may only flow during parts of the year, but they support water quality in downstream waters by filtering pollutants and capturing nutrients and make up 97% of Rhode Island's stream miles. These streams are also critical habitat for fish and other aquatic species. There is great potential for re-connecting and protecting the many miles of river and stream systems in RI, benefitting migratory fish species (salmon, river herring, shad) and also resident freshwater fish and wildlife populations (trout and freshwater mussels, crayfish).

Headwater and seasonal streams also feed the drinking water sources of 117 million Americans, including 564,893 residents in Rhode Island. Clarifying that all tributary streams, regardless of size or frequency of flow are covered under the Clean Water Act will restore protections to 169 miles of streams in Rhode Island that 54% of our residents depend on for drinking water.

In addition, we support the Agencies’ definition of tributary and strongly agree that ditches should be defined as “waters of the U.S.” where they function as tributaries. There is sufficient scientific evidence that some ditches function as tributaries moving water and pollutants downstream. In those cases protection is important.

Our organizations support the Agencies’ determination that all adjacent wetlands are “Waters of the U.S.” Wetlands perform critical functions that support aquatic life, clean drinking water and safeguard communities from floods. Wetlands protect the water quality of

entire watersheds by filtering pollutants. They also store floodwaters, reducing flood flows that can threaten property and infrastructure. Wetlands also provide essential fish and wildlife habitat that support robust outdoor recreational activities.

In order to protect wetlands and other resources, we also urge the agency to:

1. Categorically define certain non-adjacent "other waters" as "Waters of the United States" and identify additional subcategories of waters that are jurisdictional, rather than requiring case-by-case determinations. Wetlands and other waters, even so-called isolated ones that are not adjacent to tributaries, provide many of the same natural benefits as adjacent waters located within floodplains. In fact, it is because of their placement outside of floodplains that they function as "sinks" to capture and filter pollutants and store floodwaters, protecting the physical, biological and chemical integrity of downstream waters.

2. Provide for new science by not categorically excluding any of the "other waters," and establishing a process by which evolving science can inform jurisdictional decisions in the future. "Other waters" that cannot be defined as jurisdictional in the final rule should still be assessed on a case-by-case basis and provisions made for categorically including them as "Waters of the United States" if and when evolving science indicates that this is appropriate.

Protecting small streams and wetlands is vital for fish and wildlife and Rhode Island's vibrant recreational industry. The U.S. Fish and Wildlife Service reports that Rhode Island residents and nonresidents spent $360 million on wildlife recreation, including $130 million on fishing, in 2011. More than 402,000 Rhode Islanders participated in wildlife recreation activities in 2011. In Rhode Island, tourism means jobs and jobs are critical to Rhode Island now. Clean water is good for tourism because:

- **Tourism is the 4th largest private sector employer in Rhode Island**
- **Every 220 visitors creates a new job in Rhode Island**
- **Approximately $1.63 billion in wages and salaries are generated by Travel and Tourism**
- **1 out of every 10 Rhode Islanders job is attributed to Tourism.**
- **8.2% of non-farm state employment is generated by Tourism**

The Agencies' commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade, eliminate permit confusion and delay, and better protect the critical water resources on which our communities depend.

Our organizations urge the Agencies to swiftly finalize a rule to clarify that all waters with a "significant nexus" to downstream waters are clearly protected under the Clean Water Act.

We thank the Agencies for their efforts to protect these waters and look forward to working with them to finalize and implement a strong *"Definition of Waters of the United States under the Clean Water Act."*

Sincerely,



Jamie Rhodes
President
Environment Council of Rhode Island

Wood-Pawcatuck Watershed Association
203 Arcadia Road, Hope Valley, RI 02832; 401-539-9017; info@wpwa.org; www.wpwa.org

August 27, 2014

The Honorable Gina McCarthy
Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue
Washington, DC 20460

Email to: ow-docket@epa.gov
Re: Clean Water Rule Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy:

The Wood-Pawcatuck Watershed Association (WPWA) was organized over 30 years ago to protect and promote the lands and waters of the Wood-Pawcatuck Watershed. This relatively small watershed (300 square miles) encompasses approximately one quarter of the land mass for Rhode Island and a small portion of Connecticut. A bill that would assign the National Parks Service to study the rivers of the watershed for inclusion in the National Wild and Scenic Rivers System (Wood-Pawcatuck Watershed Protection Act) is currently under consideration in Congress and has already passed the house.

WPWA supports the proposed rule for the clear protections it restores to headwaters, intermittent and ephemeral streams, and to wetlands and other waters located near or within the floodplain of these tributaries. We urge the Agencies to strengthen the final rule by further clarifying that important wetlands and other waters located beyond floodplains are also categorically protected under the Clean Water Act. Brook trout, the only native salmonid in RI, depend entirely on small streams and tributaries in the watershed for habitat. Because of their location in the landscape, these streams receive groundwater flow which maintains temperatures adequate for trout. They also provide appropriate breeding sites. Due to their size, however, small streams are also the most vulnerable to any type of disturbances. The loss of habitat these small streams provide would adversely impact brook trout populations. Leaving critical water resources vulnerable jeopardizes jobs and revenue for businesses that depend on clean water, including outdoor activities like angling and water-based recreation.

WPWA supports the Agencies' proposal to define all tributaries as "waters of the United States," including headwaters and small streams that may only flow seasonally. In addition, we support

the Agencies' definition of tributary and strongly agree that ditches should be defined as "waters of the U.S." where they function as tributaries.

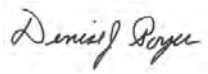
WPWA supports the Agencies' determination that all adjacent wetlands are "Waters of the U.S." Wetlands perform critical functions that support aquatic life, clean drinking water and safeguard communities from floods. Wetlands protect the water quality of entire watersheds by filtering pollutants. They also store floodwaters, reducing flood flows that can threaten property and infrastructure. Wetlands also provide essential fish and wildlife habitat that support robust outdoor recreational activities.

In order to protect wetlands and other resources, we also urge the agency to:
1. Categorically define certain non-adjacent "other waters" as "Waters of the United States" and identify additional subcategories of waters that are jurisdictional, rather than requiring case-by-case determinations. Wetlands and other waters, even so-called isolated ones that are not adjacent to tributaries, provide many of the same natural benefits as adjacent waters located within floodplains. In fact, it is because of their placement outside of floodplains that they function as "sinks" to capture and filter pollutants and store floodwaters, protecting the physical, biological and chemical integrity of downstream waters.
2. Provide for new science by not categorically excluding any of the "other waters," and establishing a process by which evolving science can inform jurisdictional decisions in the future. "Other waters" that cannot be defined as jurisdictional in the final rule should still be assessed on a case-by-case basis and provisions made for categorically including them as "Waters of the United States" if and when evolving science indicates that this is appropriate.

It is our understanding that the Agencies' commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade, eliminate permit confusion and delay, and better protect the critical water resources on which our communities depend.

WPWA urges the Agencies to swiftly finalize a rule to clarify that all waters with a "significant nexus" to downstream waters are clearly protected under the Clean Water Act. We thank the Agencies for their efforts to protect these waters.

Sincerely,



Denise J. Poyer
Program Director
Wood-Pawcatuck Watershed Association

August 15, 2014

Water Docket, Environmental Protection Agency
Mail Code 2822 T
1200 Pennsylvania Avenue NW
Washington, DC 20460

RE: Docket ID No. EPA-HQ-OW-2011-0880

The League of Women Voters of Michigan supports the Army Corps and Environmental Protection Agencys rulemaking recommendations to define the waters of the United States. This will provide clarity for the regulatory community and is consistent with the intent of the Clean Water Act as interpreted by the Supreme Court.

League of Women Voters members were active in the passage of the Clean Water Act in the 1970s. We worked to protect, expand and strengthen it through the 1990s. Our Michigan membership belongs to two multi-state basin League groups representing Lake Erie and Lake Michigan. We have studied the issues and work with our communities to educate and advocate for the protection of our water quality, public health and environment. Our organization position states that water resource policies should reflect the interrelationships of water quality, water quantity, ground water and surface water. We support policies to achieve water quality essential for maintaining species populations and diversity, including measures to protect lakes, estuaries, wetlands and in-stream flows. Further, we support stringent controls to protect the quality of current and potential drinking water supplies including protection of watersheds for surface supplies and recharge areas for groundwater.

Our statement today is consistent with our comments from 2003. The Clean Water Act covers all waters, whether large or small, they function as an interconnected system. Excision of parts of the system from regulation will impair health and optimal functioning of the whole.

Thank you for the opportunity to comment on the proposed rules for the Clean Water Act. The League of Women Voters of Michigan supports these science-based decisions.

Sincerely,

Susan K Smith
Susan Smith, President
League of Women Voters of Michigan

Board of Commissioners

2014

RESOLUTION NO. R14-180

Official Resolution of the Board of Commissioners
Macomb County, Michigan

Resolution Supporting The U.S. EPA/Army Corps Proposed Definition Of "Waters of the United States" Under the Clean Water Act (CWA)

Commissioner Fred Miller on Behalf of the Board of Commissioners, Offer the Following Resolution:

***WHEREAS**, the waters of the United States provide an extraordinary value for the protection of public health, recreational resources, economic livelihood related to clean water, and are a treasured resource; and*

***WHEREAS**, the Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters, and the basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972 and the "Clean Water Act" became the Act's common name with amendments in 1972; and*

***WHEREAS**, critical streams and wetlands which supply drinking water protect against floods and filter pollution previously were protected under the CWA but federal policy changes over the last decade have left these streams and wetlands vulnerable to degradation or destruction; and*

***WHEREAS**, these vulnerable Waters of the United States impact sources of drinking water for millions and millions of Americans; and*

***WHEREAS**, strong federal standards are needed because water does not respect political boundaries and flows from one state to another; and*

***WHEREAS**, more than 1,000 peer reviewed scientific studies have confirmed that headwater intermittent and ephemeral streams and wetlands affect the quantity and quality of water in larger bodies of water downstream; and*

***WHEREAS**, the U.S. Environmental Protection Agency and Army Corps of Engineers have proposed a clarifying rulemaking to restore protection for streams and wetlands previously protected under the CWA, safeguarding water quality in the nation's waters, protecting jobs in businesses that depend on clean water and safeguarding drinking water for one in three Americans; and*

***WHEREAS**, the proposal would broaden the number of county maintained ditches (roadside, flood channels funnel water away from low-lying roads, properties and businesses to prevent accidents and flooding incidences) that would require CWA Section 404 federal permits; and county owned Municipal Separate Storm Sewer System (MS4) ditches may be regulated under the CWA Section 402 storm water permit program; both of which would establish additional water quality standards; and*

***WHEREAS**, the proposal leaves in place all agricultural exemptions and creates new exemptions for agricultural practices related to conservation; and*

***WHEREAS**, according to a joint document released by EPA and the Corps, Economic Analysis of Proposed Revised Definition of Waters of the United States (March 2014), the proposed rule would provide $388 million to $514 million annually in benefits to the public, including reducing flooding, filtering pollution, providing wildlife habitat, supporting hunting and fishing, and recharging groundwater.*

***NOW THEREFORE BE IT RESOLVED** that the Macomb County Board of Commissioners supports the proposed definition of "Waters of the United States" under the Clean Water Act and urges the Environmental Protection Agency and Army Corps of Engineers to finalize these important protections for our nation's water resources.*

***BE IT FURTHER RESOLVED** that copies of this resolution, digital copies if possible, be provided to Administrator for EPA's Region 5 Office Susan Hedman, Command of the U.S. Army Corps of Engineers in Detroit Lt. Col. Michael L. Sellers, all Macomb County Federal Legislators, all Macomb County State Legislators, Director of Michigan Department of Environmental Quality (MDEQ) Dan Wyant, SE Michigan Field Office Director of MDEQ Jack Lanigan, Executive Director of Michigan Leagues of Conservation Voters Lisa Wozniak, Sierra Club of Michigan State Director Anne Woiwode, Clean Water Action Michigan State Director Nic Clark, Clean Water Action Lake St. Clair Program Coordinator Margi Armstrong, Macomb County Executive Mark Hackel, Macomb County Public Works Commissioner Anthony Marrocco, Macomb County Department of Planning and Economic Development Director Steve Cassin, and Macomb County Department of Planning and Economic Development Land and Water Resources Group Program Manager Gerard Santoro.*

Fred Miller
Fred Miller
Macomb County Commissioner

Carmella Sabaugh
Carmella Sabaugh
Macomb County Clerk

Passed at 7/31/14 Full Board Meeting

MARYLAND DEPARTMENT OF THE ENVIRONMENT
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Martin O'Malley
Governor

Anthony G. Brown
Lieutenant Governor

Robert M. Summers, Ph.D.
Secretary

November 14, 2014

Mr. Ken Kopocis
Deputy Assistant Administrator for Water
United States Environmental Protection Agency
Office of Water
William Jefferson Clinton Building
1200 Pennsylvania Ave NW, MC 4101M
Washington, DC 20460

Ms. Jo Ellen Darcy
Assistant Secretary of Army (Civil Works)
U.S. Army Corps of Engineers
108 Army Pentagon, Room 3E446
Washington, DC 20310-0108

Via email to: ow-docket@epa.gov

Re: Definition of "Waters of the United States" Under the Clean Water Act Proposed Rule: Docket ID No. EPA–HQ–OW–2011–0880

Dear Deputy Assistant Administrator Kopocis and Assistant Secretary Darcy:

The Maryland Department of the Environment submits this letter to the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (Corps) on the proposed national rulemaking *Definition of "Waters of the United States" Under the Clean Water Act* (79 Fed. Reg. 22188, April 21, 2014). The Department would like to provide comments on this proposed rule.

Determining Clean Water Act (CWA) jurisdiction for streams and wetlands became confusing and complex following two Supreme Court decisions in 2001 and 2006. The past eight years have resulted in inconsistent application of the Supreme Court decisions throughout the Federal Circuit Courts and District Courts. This proposed rule provides needed certainty and coherence to protect streams and wetlands and is consistent with the Supreme Court's reading of CWA jurisdiction.

Maryland supports the implementation of this proposed rule. While the proposed rule will not affect the State of Maryland's regulation of wetlands and waters with a Total Maximum Daily Load (TMDL) directly, the proposed rule will be a benefit to Maryland because it will clarify protections in other states with rivers and streams that drain into Maryland's streams, rivers, reservoirs and the Chesapeake Bay. The

proposed rule will result in a more uniform and consistent regulation of headwaters and other small upstream waters.

This proposed rule will not result in increased Federal jurisdiction over waters in Maryland. It will serve to create a more delineated jurisdictional determination for EPA and the Corps. EPA has previously highlighted examples where they were not able to pursue CWA violations because it was either too costly or too difficult to prove that such a violation had taken place. This proposed rule will make jurisdictional determinations more straightforward for the EPA, the Corps, states, and regulated entities.

Additionally, this proposed rule will have the benefit of clarifying categories of "other waters," which fall within the scope of the CWA. EPA has stated that isolated wetlands, including Delmarva Bays, may be evaluated as a class for a pre-determination of their jurisdiction. This class determination would eliminate the need for time-consuming case-by-case jurisdictional determinations.

This proposed rule is an important step forward for protection of water quality. For almost a decade, certain bodies of water have been unprotected because of confusing legal precedent. The Maryland Department of the Environment appreciates the dialogue and outreach efforts that have occurred throughout the development of this proposed rule and looks forward to future collaboration with the various stakeholders.

We appreciate the opportunity to offer these comments. If you have any questions, please contact me at Robert.Summers@maryland.gov or 410-537-3084, toll-free at 800-633-6101.

Sincerely,



Robert M. Summers
Secretary

CLEAN WATER ACTION
MARYLAND

November 14, 2014

The Honorable Gina McCarthy
Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue
Washington, DC 20460

Re: Clean Water Rule Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy:

The undersigned organizations appreciate the opportunity to comment on the US Environmental Protection Agency (EPA) and US Army Corps of Engineers (Corps) proposed *Definition of "Waters of the United States Under the Clean Water Act*" to clarify which streams, wetlands and other waters are protected under the Clean Water Act. This rule is long overdue. Many of our organizations have spent more than a decade advocating to restore Clean Water Act protections to all wetlands and tributary streams, as Congress originally intended when it passed the landmark Act in 1972.

For its first thirty years, the Clean Water Act safeguarded nearly all of our rivers, streams, lakes and wetlands in order to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." However, despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction. These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's stream miles and at least 20 million acres of wetlands in the continental United States.

Our organizations support the proposed rule for the clear protections it restores to headwaters, intermittent and ephemeral streams, and to wetlands and other waters located near or within the floodplain of these tributaries. We urge the Agencies to strengthen the final rule by further clarifying that important wetlands and other waters located beyond floodplains are also categorically protected under the Clean Water Act.

Headwater and seasonal streams feed the drinking water sources of 117 million Americans, including 3,990,016 residents in Maryland. Clarifying that all tributary streams, regardless of size or frequency of flow are covered under the Clean Water Act will restore protections to 2210 miles of streams in Maryland that 77% of our residents depend on for drinking water. In the Baltimore City area that's roughly 1.6 million people and 100% of City residents.

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www.cleanwateraction.org/md

Millions of small streams and wetlands provide most of the flow to our most treasured rivers that feed the Chesapeake Bay. If we do not protect these streams and wetlands, we cannot protect the livelihood on which communities and local economies depend. Leaving critical water resources vulnerable jeopardizes drinking water sources, public health and quality of life, as well as jobs and revenue for businesses that depend on clean water, including commercial fishing, outdoor activities and water-based recreation.

Our organizations support the Agencies' proposal to define all tributaries as "waters of the United States," including headwaters and small streams that may only flow seasonally. Headwater streams, streams that have no other streams feeding into them, provide most of the flow to downstream streams and rivers, and account for 59% of the total stream miles in Maryland. In 2007, EPA estimated that 46% of individual NPDES discharge permits in Maryland are for discharges into headwater streams, including some streams that do not flow year round.

Intermittent and ephemeral streams may only flow during parts of the year, but they support water quality in downstream waters by filtering pollutants and capturing nutrients and making up 19% of streams in Maryland do not flow year round. These streams are also critical habitat for fish and other aquatic species. There is great potential for re-connecting and protecting the many miles of river and stream systems flowing throughout Maryland and into the Chesapeake Bay. These waters benefit resident freshwater and saltwater fish and wildlife alike, contributing significantly to the state's economy in commercial fishing industry, recreation and tourism.

As a major producer and processor of seafood in the U.S., Maryland is a national leader in supplying blue crabs and soft clams. The Chesapeake Bay provides 50 percent of the total blue crab harvest in the United States. Important commercial species, besides blue crabs and soft clams, including striped bass, oysters, flounder, perch, spot, croaker, catfish, sea trout, and bluefish add to the economic importance of the state's fishing industry. Each year, the Maryland seafood industry contributes some $600 million to the State's economy. Annual commercial landings have averaged 56.9 million pounds since 2000.

Protecting small streams and wetlands is also vital for to the state's vibrant recreation and tourism industries. In Maryland outdoor recreation is an essential driver of economic activity bringing in dollars from residents and out-of-state visitors alike. Outdoor recreation attracts and sustains families and businesses, creates healthy communities and fosters a high quality of life. At least 43% of Marylanders participate in outdoor recreation each year. Overall outdoor recreation generated $9.5 billion in consumer spending in Maryland and supports 85,000 jobs. Additionally, the economic impact of tourism in Maryland is significant. More than 35.4 million people visited Maryland in 2012 and spent $14.9 billion on travel and other related activities.

Our organizations also support the Agencies' determination that all adjacent wetlands are "Waters of the U.S." Wetlands perform critical functions that support aquatic life, clean drinking water and safeguard communities from floods. Wetlands protect the water quality of entire watersheds by filtering pollutants. They also store floodwaters, reducing flood flows that can threaten property and infrastructure. A single acre of wetland can store 1 to 1.5 million gallons of flood water. Wetlands in the continental United States save an estimated $30 plus billion in annual flood damage repair costs. Wetlands also provide essential fish and wildlife habitat that support robust fishing and outdoor recreation and tourism economy in Maryland. When wetlands are polluted, dredged or filled, these benefits are lost.

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In order to protect wetlands and other resources, we also urge the agency to:

Categorically define certain non-adjacent "other waters" as "Waters of the United States" and identify additional subcategories of waters that are jurisdictional, rather than requiring case-by-case determinations. "Other waters," even so-called isolated ones that are not adjacent to tributaries, provide many of the same natural benefits as adjacent waters located within floodplains. In fact, it is because of their placement outside of floodplains that they function as "sinks" to capture and filter pollutants and store floodwaters, protecting the physical, biological and chemical integrity of downstream waters. Examples of "other waters" where the science supports our recommendation that they should be categorically protected by rule include: prairie potholes, Carolina and Delmarva Bays, Texas coastal prairie wetlands and vernal pools.

Provide for new science by not categorically excluding any of the "other waters," and establishing a process by which evolving science can inform jurisdictional decisions in the future. "Other waters" that cannot be defined as jurisdictional in the final rule should still be assessed on a case-by-case basis and provisions made for categorically including them as "Waters of the United States" if and when evolving science indicates that this is appropriate.

In addition, we support the Agencies' definition of tributary and strongly agree that ditches should be defined as "waters of the U.S." where they function as tributaries. There is sufficient scientific evidence that some ditches function as tributaries moving water and pollutants downstream. In those cases protection is important.

The Agencies' commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade, eliminate permit confusion and delay, and better protect the critical water resources on which our communities depend.

Our organizations urge the Agencies to swiftly finalize a rule to clarify that all waters with a "significant nexus" to downstream waters are clearly protected under the Clean Water Act.

We thank the Agencies for their efforts to protect these waters and look forward to working with them to finalize and implement a strong *"Definition of Waters of the United States under the Clean Water Act."*

Sincerely,

Clean Water Action: Maryland
Andy Galli
Maryland Program Coordinator

Maryland League of Conservation Voters
Karla Raettig
Executive Director

National Aquarium
Stacy Trust
Conservation Technician

Waterfront Partnership of Baltimore, Inc.
Adam Lindquist
Project Manager, Healthy Harbor Initiative

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Blue Water Baltimore
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Senior Manager for Advocacy & Public Policy

Maryland Conservation Council
Paulette Hammond
President

MD Pesticide Network
Ruth Berlin
Executive Director

Audubon Maryland-DC
David Curson, PhD
Director of Bird Conservation

The Rachel Carson Council, Inc.
Robert Musil, PhD, MPH
President & CEO

Little Falls Watershed Alliance
Sarah Morse
Executive Director

Anacostia Watershed Society
Dan Smith
Director of Public Policy & Advocacy

Friends of Deep Creek Lake
Barbara Beelar
Executive Director

Nature Abounds
Melinda Hughes-Wert
President

Harris Creek Watershed Project
Raymond D. Bahr MD
Stormwater Watershed Project Manager

Port Tobacco River Conservancy
Julie Simpson
Executive Director

Sierra Club: Maryland Chapter
Josh Tulkin
Executive Director

Chesapeake Climate Action Network
Tommy Landers
Maryland & DC Policy Director

Chesapeake Wildlife Heritage
Ned Gerber
Wildlife Habitat Ecologist/Director

Food & Water Watch
Julie Gouldener
Maryland Organizer

Maryland Bass Nation
Scott Sewell
Conservation Director

Crabshell Alliance of Greater Baltimore
Dagmar Fabian
Secretary of Crabshell Alliance

Community & Environmental Defense Services
Richard D. Klein
President & Founder

Audubon Naturalist Society
Diane Cameron
Director of Conservation

Towson University EcoReps
Victoria Brusaferro
Coordinator, Office of Civic Engagement & Leadership

Mid-Atlantic Council of Trout Unlimited
Don Haynes
Chair

Interfaith Partners for the Chesapeake
Jodi Rose
Executive Director

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Potomac Conservancy
Amanda John
Policy Manager, MD-DC

Protecting Our Waters
Iris Marie Bloom
Executive Director

Friends of the Nanticoke River
Judith Stribling
President

Citizens to Conserve and Restore Indian Creek
Vicky Hageman
Chair

Midshore Riverkeeper Conservancy
Drew J. Koslow
Choptank Riverkeeper

Neighbors of the Northwest Branch, Anacostia River
James Graham
President

Rock Creek Conservancy
Matt Fleischer
Executive Director

Nanjemoy-Potomac Environmental Coalition, Inc.
Deanna Wheeler
President

Clean Bread and Cheese Creek
John Long
President/Founder

Savage River Watershed Association
Ann Bristow
Board President

Mattawoman Watershed Society, Inc.
Jim Long
President

The Cecil Land Use Association
Nancy Valentine
CLUA Board

Sierra Club: Southern MD Chapter
Frank Fox
Chair

Montgomery Countryside Alliance
Caroline Taylor
Executive Director

Apostolic Catholic Church in America
Meredith Moise
The Very Reverend

Baltimore Nonviolence Center
Max Obuszewski
Peace Activist

Magothy River Association, Inc.
Paul Spadaro
President

St. Mary's River Watershed Association
Bob Lewis
Executive Director

Earth Forum of Howard County
Nancy Fayer
Coordinator

Maryland Native Plant Society
Kirsten Johnson
President

Cecil Land Use Alliance
Jill Burke
President

Sparks-Glencoe Community Planning Council
Kirsten Burger
President

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Friends of Harford
Morita Bruce
President

Westport Neighborhood Association
Keisha Allen
President

Towson Estates Association
Phil Dorsey
President

Hampden Community Council
Kayla Garner
President

Denise Frey
Master Wastershed Steward Candidate
Watershed Steward Academy of Anne Arundel, Maryland

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STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

August 22, 2014

VIA E-MAIL

Ms. Gina McCarthy, Administrator
U.S. Environmental Protection Agency
1101A
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Ms. Jo Ellen Darcy
Assistant Secretary of Army (Civil Works)
U.S. Army Corps of Engineers
108 Army Pentagon
Washington, DC 20310-0108

Water Docket
U.S. Environmental Protection Agency
Mail Code: 2822T
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Ms. McCarthy and Ms. Darcy:

SUBJECT: Docket ID No. EPA-HQ-OW-2011-0880, the Proposed Definition of Waters of the United States under the Clean Water Act (CWA)

As one of only two states to administer both Sections 402 and 404 of the CWA, the State of Michigan appreciates the opportunity to comment on the Proposed Definition of Waters of the United States.

Although Michigan agrees the United States Environmental Protection Agency (USEPA) should clarify the definition of Waters of the United States under the CWA, the State of Michigan would like to begin its comments by encouraging the USEPA to wait until the Science Advisory Board Draft Report "Connectivity of Streams and Wetlands to Downstream Waters" is complete and final before moving forward with a rule. As the purpose of this report is to summarize the current scientific understanding of the connections between streams and wetlands, and downstream waters, including physical, chemical, and biological connections that affect the condition or function of downstream waters, any final action to clarify jurisdictional waters under the CWA should be based on the final findings of this report, after consideration of public comments and independent peer review. In short, we believe a determination of this sort should be based on science.

Because Michigan administers the Sections 402 and 404 Programs under state law, the proposed rule will not significantly impact Michigan. Michigan has been administering the Section 402 Program for over 40 years, during which time we have been a leader in

improving and maintaining water quality through both regulatory and non-regulatory initiatives in the program. Although we do not believe the proposed rule will impact Michigan's administration of the Section 402 Program because of the widespread controversy and confusion about this issue, we recommend the USEPA clarify the impact of this rule on activities regulated under the Section 402 Program, specifically regulated agricultural activities.

Michigan's Section 404 Program, with its clear definition of wetlands and other waters, provides a superior jurisdictional framework for the regulated community (i.e., provides predictability and certainty for the regulated community regarding the waters that are regulated) than the federal program does. Furthermore, having administration of the federal program has insulated most of Michigan's citizens from the many jurisdictional process changes over the years at the federal level. However, clarification of the Waters of the United States through a rule would benefit Michigan citizens who need permits from the United States Army Corps of Engineers (USACE) in areas of the state where the USACE has retained administration of the Section 404 Program. In those areas, it has been Michigan's experience that the current jurisdictional determination process at the federal level results in significant delays for the regulated community.

Michigan has administered the Section 404 Program for 30 years. In 2008 following a ten-year review of Michigan's program, the USEPA issued its report identifying issues needing to be addressed in order for Michigan's program to remain consistent with federal regulations. Although Michigan's jurisdictional framework for regulating waters was determined to be consistent with federal regulations and the federal *Rapanos* guidance, other deficiencies were identified that the USEPA stated needed to be addressed. As a result, Michigan's Legislature created the Wetland Advisory Council (WAC) to evaluate the findings of the report and propose solutions to align Michigan's program with the requirements of the CWA. The WAC had broad stakeholder participation, including business groups; drain commissioners; local, state and federal agencies; and conservation and environmental groups. The 2012 recommendations from the Michigan Wetland Advisory Council and eighteen months of debate in the Michigan Legislature resulted in the passage of 2013 PA 98, which narrowed and clarified the exemptions in Michigan's Section 404 Program. These changes are intended to address the 2008 program review findings and modernize the program to allow Michigan to continue to be a leader in protecting and managing water and wetland resources, while being tailored to appropriately regulate Michigan's land-based industries. Michigan is seeking confirmation from the USEPA that the proposed rule will not impact the progress made in 2013 PA 98.

Although Michigan must stay consistent with the provisions of the CWA, having administration of the Sections 402 and 404 Programs has allowed Michigan to develop innovative approaches to provide a streamlined regulatory process while still protecting Michigan's water resources. It has also provided more clarity for the regulated community, so compliance can be achieved in a more timely manner than federal law

currently provides. We believe it is critical for the USEPA and USACE to continue to work collaboratively with states and tribes to continue to administer the CWA. One area of particular concern is the potential impact the proposed rule may have on the scope of waters for which jurisdiction may be assumed by states under the Section 404 Program. Although it is stated in the preamble and USEPA staff have stated in various forums that it is not the intent of the rule to impact assumable waters, the current language could be misinterpreted otherwise. Michigan does not support any changes to the scope of assumable waters and urges clarification of this issue before promulgation of the final rule.

Thank you for the opportunity to comment on the proposed rule. If you have questions regarding these comments, please contact Ms. Kim Fish, Assistant Division Chief, Water Resources Division, at 517-599-9040; fishk@michigan.gov; or Michigan Department of Environmental Quality (MDEQ), P.O. Box 30458, Lansing, Michigan 48909-7958.

Sincerely,

Dan Wyant
Director
517-284-6700

cc: Ms. Jamie Clover Adams, Director, Michigan Department of Agriculture and Rural Development
Mr. Keith Creagh, Director, Michigan Department of Natural Resources
Ms. Valerie Brader, Governor's Office
Mr. Bill McBride, Governor's Washington Office
Mr. Eric Brown, Governor's Washington Office
Mr. Jim Sygo, Deputy Director, MDEQ
Ms. Maggie Datema, Director of Legislative Affairs, MDEQ
Mr. William Creal, MDEQ
Ms. Kim Fish, MDEQ

OCT 22 2014

Missoula Public Health
City-County Health Department

Missoula City-County Health Department
WATER QUALITY ADVISORY COUNCIL
301 West Alder Street | Missoula MT 59802-4123
www.co.missoula.mt.us/healthadvisory
Phone | 406.258.4890
Fax | 406.258.4781

October 14, 2014

Water Docket, Environmental Protection Agency,
Mail Code 2822T
1200 Pennsylvania Avenue NW., Washington, DC 20460
Attention: Docket ID No. EPA-HQ-OW-2011-0880.

To Whom It May Concern,

The Missoula Water Quality Advisory Council supports the efforts to protect headwater streams, wetlands and riparian an areas in Missoula County.

Healthy rivers, streams, wetlands and riparian areas are valuable resources in Missoula County. Clean water affects fisheries, streamside wildlife habitat, and drinking water. For these reasons we support the efforts to restore and clarify Clean Water Act protection of water resources in Missoula County.

Under the 1972 Clean Water Act, for more than 30 years, virtually all natural surface waters were recognized as "Waters of the United States", and protected from pollution or destruction through dredging, filling and draining. Court decisions in 2001 and 2006 (SWANCC and Rapanos), and subsequent agency guidance have removed much of the protection for vital wetlands and streams. These water resources are critically important to the protection of water quality, enhancement of wildlife habitat, and attenuation of floodwaters in Missoula County. Isolated pocket wetlands in areas such as the Blackfoot River and Swan River Valleys, small mountain tributaries to Rock Creek, Lolo Creek, and Ninemile Creek, intermittent streams that go dry during the hot months of summer, and wetlands adjacent to the Clark Fork and Bitterroot Rivers are valuable resources to the citizens of Missoula County. They all provide important functions - filtering pollutants, recharging groundwater aquifers, providing habitat for fish and wildlife, attenuating floodwaters, and protecting downstream property owners.

We believe that the proposed regulations need additional work to clarify the significant connection issue.

We endorse restoration of meaningful enforcement of the Clean Water Act in Missoula County.

Sincerely,

Ian Magruder, Chair

OCT 16 2014

MONTGOMERY COUNTY COUNCIL
ROCKVILLE, MARYLAND

MARC ELRICH
COUNCILMEMBER AT-LARGE

November 14, 2014

The Honorable Gina McCarthy, Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Re: Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy,

I support the US Environmental Protection Agency and US Army Corps of Engineers proposed *Definition of "Waters of the United States Under the Clean Water Act*" to clarify which streams, wetlands and other waters are covered by Clean Water Act protections. Wetlands and small streams, including those that flow only seasonally, have a direct impact on the health and quality of larger streams and rivers downstream. These resources are critical drinking water sources, and they protect communities from flooding and filter pollutants.

For its first thirty years, the Clean Water Act safeguarded nearly all of our nation's waters. These protections are necessary to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," as intended by Congress when it passed the Clean Water Act in 1972. Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction. These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's streams miles and at least 20 percent of the 110 million acres of wetlands in the continental United States. This confusion has put the drinking water for 117 million Americans at risk, including the nearly one million residents of Montgomery County. Small streams and wetlands provide most of the flow to our Potomac, Patuxent and Anacostia Rivers. If we do not protect these networks of small streams, we cannot protect and restore the lakes, rivers and the Chesapeake Bay that our economy and way of life depend on. We will also be jeopardizing jobs and revenue in businesses that depend on clean water, including outdoor activities like angling and water-based recreation.

As a local government decision maker, I believe broad federal protections are critical to protecting our local waters. Water flows downhill, and each of the lower 48 states have water bodies that are downstream of one or more other states. Maintaining consistency among water pollution programs throughout these states is essential. Since the passage of the Clean Water Act, states have come to rely on the Act's core provisions and have structured our own water pollution programs accordingly.

100 MARYLAND AVENUE, 6TH FLOOR • ROCKVILLE, MARYLAND 20850
240/777-7966 • TTY 240/777-7914 • FAX 240/777-7989 • COUNCILMEMBER.ELRICH@MONTGOMERYCOUNTYMD.GOV

I support the draft rule's proposal to restore Clean Water Act protection to all tributaries of navigable waterways. Failure to do so would jeopardize water quality in our larger riversheds and estuaries. It would also put at risk the millions of dollars and thousands of jobs generated by water related tourism activities and other businesses that are dependent on clean water supplies.

This commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade and better protection for critical water resources on which our communities depend. I strongly support finalization of *Definition of "Waters of the United States Under the Clean Water Act.*"

Sincerely,

Marc Elrich

CC:
US Senator Barbara Mikulski
US Senator Benjamin Cardin
US Representative John Sarbanes, MD-3
US Representative John Delaney, MD-6
US Representative Chris Van Hollen, MD-8

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Statement for the Record from Rudy Arredondo,

President of the National Latino Farmers and Ranchers Trade Association

Chairmen Inhofe and Shuster, Ranking Members Boxer and DeFazio, and Members of the Committees:

The National Latino Farmers & Ranchers Trade Association (NLFRTA) was founded in August of 2004 in Washington, D.C. Our mission is to engage and empower Latino farmer advocacy groups throughout the United States and beyond to protect and promote sustainable farm policy issues for quality and safe food systems for the future.

NLFRTA represents thousands of Latino farming and ranching operators throughout the United States, and works with our members to promote policy and legislation that adequately addresses the needs of Latino Farmers and Ranchers, advances equity and sustainability in food production, and incorporates the ethics and values held by our membership of respecting the land, providing safe and healthy foods for consumers to enjoy, and promoting good stewardship of our scarce natural resources.

NLFRTA is in support of the Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers joint rulemaking on the definition of waters of the United States, known as the Clean Water Rulemaking.

Our members support this rulemaking because, as Alfonso Abeyta, a fifth generation Colorado rancher and NLFRTA member puts it: “Farmers know that everything is connected. Snow from the mountains feeds the streams. The streams feed the rivers. The rivers feed us. You can’t grow food without water… without water nothing survives… it is our job to protect it.”

Members of the committees, we submit that it is also YOUR job to protect clean water. The Clean Water rule takes steps to restore key protections to vulnerable waters that biologically and hydrologically impact and feed into our nation’s headwaters. Water is the lifeblood for agriculture, small businesses and recreation. These industries, and the rural Latino farmers and ranchers whom we represent not only depend on clean water for their business, but recognize the importance of clean water to their own families and communities. Our members do not want to go back to the days when two-thirds of our waterways were too polluted to fish, swim, or drink from. Latino farmers and ranchers need the full protection of the Clean Water Act restored to the countless miles of tributaries and seasonal streams, wetlands, and rivers that sustain our communities.

NLFRTA is deeply concerned about growing contamination in our waterways that leaves our waters too polluted to sustain agriculture. The recent spills in Montana, West Virginia, Minnesota, North Dakota, and other regions in the country give our membership great concern. As EPA’s Science Advisory Board report on stream connectivity makes clear; upstream waters deeply impact rivers downstream. These water sources feed our drinking water sources and support traditional irrigation systems and agricultural activities such as acequia farming.

As farmers and small business owners that share the water, we know how important to our heritage, our business, and our way of life having access to clean water is. We need a regulatory fix that brings an end to uncertainty on which waters are and are not covered by the Clean Water Act. We feel that the EPA and Army Corps of Engineers' Clean Water rulemaking accomplishes that certainty and we urge you to let the open, public, and transparent process to finalize this rule move forward unabated.

November 14, 2014

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue NW.
Washington, DC 20460

Attention: Docket ID No. EPA-HQ-OW-2011-0880

To whom it may concern:

On behalf of the National Parks Conservation Association and our more than 1 million members and supporters, I write to offer the Environmental Protection Agency ("EPA") and U.S. Army Corps of Engineers ("USACE") NPCA's support for the proposed rule clarifying the scope of the Clean Water Act ("CWA"). National parks are inseparable from the waters that are in, surround, and flow through them. Because many park waters originate on lands outside of park boundaries, where beyond boundary activities impact park water quality and availability, the National Park Service ("NPS") often relies on the EPA and USACE to exercise their CWA authority to prevent impairment of park waters.

The proposed rule helps protect national park waters by providing a clearer and more predictable science-based and legal framework for determining which waters are protected by the CWA. For the past 13 years, Supreme Court decisions and agency guidance have created regulatory confusion over the protected status of waters that crucially affect water quality in parks. This clarification of the CWA's jurisdiction is important for parks because many of the waters that are at risk from the existing jurisdictional confusion significantly impact the quality of park waters. Small and seasonal stream networks of headwater, intermittent, and ephemeral streams often overlap park boundaries and strongly influence the biological, chemical, and physical integrity of park ecosystems. Additionally, larger downstream park units are vulnerable to pollution from activities upstream. Shoreline parks also suffer from water quality issues that emerge inland, often from small and upstream waters that could lose their protection if no action is taken to clarify the CWA's scope.

Headwater, Ephemeral, and Intermittent Streams

Recent regulatory uncertainties especially threaten headwater, ephemeral, and intermittent streams as well as other upstream areas that feed into park units. About 117 million (one-third of Americans) – and many park visitors – depend on drinking water from public water systems that are fed in whole or in part by intermittent, headwater, or ephemeral streams (EPA 2009). For the past 13 years, confusion resulting from both the Supreme Court decisions and agency guidance particularly muddied the protection status of these types of waters, which respectively

comprise 53 percent (headwater, see Figure 2 in Appendix) and 59 percent (intermittent and ephemeral, see Figure 3 in Appendix) of total stream length in the United States, excluding Alaska (Nadeau and Rains 2007; Levick et al. 2008). The new rule provides a clear standard for treating these streams as jurisdictional tributaries (EPA Federal Register 2014, 22206), which benefits water quality and availability in downstream parks.

Headwaters include streams where surface water first collects and converges into visible channels. They provide the original source of water for watersheds by supplying more than half of the water volume of higher-order streams (Alexander et al. 2007), and as such they strongly indicate water quality, biological content, and habitat quality in downstream systems (Dodds and Oakes 2008; Snyder et al. 2013; Clarke et al. 2008; Finn et al. 2011).[1] Also, due to their large spatial coverage, headwater networks are major entry points for non-point source pollution into riparian networks around parks.[2]

Ironically, headwater, intermittent, and ephemeral streams, which science shows are important to protecting water quality and wildlife habitat, are the very waters at risk because of policy and legal decisions. Because these decisions called into question protections for streams without "strong connectivity" to traditionally navigable waterways, headwater streams potentially lost protection because 50 percent are seasonally ephemeral or intermittent (Nadeau and Rains 2007). Ephemeral and intermittent streams do not continually flow into higher order streams throughout the year. However, they still substantially affect traditionally navigable waterways (EPA Federal Register 2014). According to the EPA, ephemeral and intermittent streams:

> "provide landscape hydrologic connections; stream energy dissipation during high-water flows to reduce erosion and improve water quality; surface and subsurface water storage and exchange; ground-water recharge and discharge; sediment transport, storage, and deposition to aid in floodplain maintenance and development; nutrient storage and cycling; wildlife habitat and migration corridors; support for vegetation communities to help stabilize stream banks and provide wildlife services; and water supply and water-quality filtering" (Levick et al. 2008).

In terms of biological connectivity, the extensive spatial coverage of headwater, ephemeral, and intermittent streams allows these areas to host large portions of an entire river system's biodiversity (for macro invertebrates, see Finn et al. 2011; for microbes, plants, and other animals, see Meyer et al. 2003 and 2007). Scientists have repeatedly shown that the water quality of headwater streams directly affects biological (through nutrient concentration and flux) and chemical (Peterson et al. 2001) signatures of higher-order stream features and downstream water bodies (Lowe and Likens 2005; Gomi, Sidle, and Richardson 2002). All of these scientific considerations have direct implications for how these streams affect national park waters.

[1] Areas with headwaters overlap many national park unit boundaries such as Shenandoah, Yellowstone, and Rocky Mountain National Parks.

[2] NPS studies show that nonpoint source pollution and sedimentation are responsible for more than 70 percent of the known threats to park water quality and wetland loss. National park lands surrounding headwaters and streams provide important cleansing services by regulating nutrient and pollutant loads, but this filtering capacity can be degraded overtime if it is overtaxed, as was observed to some extent, for example, in Great Smoky Mountain National Park (Cai et al., 2010).

In addition to protecting scientifically-important headwater, ephemeral, and intermittent streams themselves, the rule also provides for the evaluation of these waters in "networks" and aggregation of small features. When considered together, these networks represent a collection of waters with strong connectivity to downstream water bodies and other features (Gomi, Sidle, and Richardson 2002), like park units. Taken individually, small streams in headwater systems may not always display discretely significant contributions to higher order streams; however, their strong biological and chemical connections become more apparent when headwater streams are analyzed as the networks that science has clear methods for identifying (e.g., see NCDWQ 2010 and various guidance documents from USACE).[3]

These stream types are important to national parks across the country. The southwestern U.S. and Colorado River watershed, for example, is especially reliant on intermittent and ephemeral streams (Levick et al. 2008). These streams constitute over 81 percent of all streams in this region, which includes such icons as the Grand Canyon National Park, Lake Mead National Recreation Area, and the Glen Canyon National Recreation Area. These parks alone have over 12 million visitors each year (NPS 2013). Colorado River headwaters are in Rocky Mountain National Park. The Colorado River supplies seven states with water, hydropower, flood control, recreation, and habitats. Many areas in the Colorado watershed have generally arid climates where many important streams dry up or flow infrequently. Reliable water flows in the Colorado are also necessary to fulfill the U.S.'s 1944 treaty obligation to annually deliver certain volumes to Mexico. Long-term trends in precipitation and temperature patterns suggest mean annual runoff in this area will decrease by 8.5 percent by 2050, making it especially important to protect the quality and quantity of what little water may be left (DOI 2011).

Glacier National Park's Flathead River region is an area where headwater pollution threatens U.S. national parks. The Flathead River feeds the iconic Glacier National Park, but the river has its headwaters in British Columbia, Canada. The U.S. Congress and Canadian Parliament both designated these combined areas as the world's first International Peace Park, the Waterton-Glacier Peace Park, which the United Nations recognized as a World Heritage Area in 1995. However, recently, a Canadian land-use plan almost permitted significant pollution in the headwaters of the Flathead River Valley, thereby directly threatening the internationally significant natural resources in Glacier National Park (NPCA 2010a). Fortunately, the British Columbia Premier and Montana Governor agreed to protect the transboundary Flathead River valley from energy exploitation. Recent regulatory uncertainties regarding the "waters of the United States" threaten to expand the same problem within the U.S.

Shenandoah National Park is home to major headwaters for the Chesapeake watershed. The Shenandoah River and neighboring tributaries feed into the Chesapeake Bay, which is the largest estuary system in North America. There are over 55 national park units in the Chesapeake region, and the bay's rate of flow and quality affect drinking water, recreation, and commercial fishing in the surrounding regions. A 2010-2012 survey found that only 31 percent of the Chesapeake Bay was attaining water quality standards (including dissolved oxygen, water clarity, underwater bay grasses, and chlorophyll-a concentrations—all vital to aquatic ecosystem

[3] Overzealous application of the aggregation concept is prevented by the rule's requirement that the case-specific scientific analysis of aggregations be "more than speculative or insubstantial," as Justice Kennedy suggested. Furthermore, delineations of streams with significant nexuses are fairly reliable in areas with healthy bank vegetation, which helps channel locations to not naturally move over time; this is especially true in mountainous areas which contain many headwaters with winter permafrost that hardens banks and slows stream flow (Crawford and Stanley 2014).

health). The goal is to have 60 percent attain these standards by 2025 (FLCCB 2014). Seventeen million people live in the Chesapeake watershed, which spans six states and the District of Columbia, has nearly 12,000 miles of shoreline, and is the largest estuary system in North America with 150 major rivers and streams, and 100,000 smaller streams, creeks, and rivers (Chesapeake Bay Program). The Shenandoah watershed provides some of the cleanest contributions to the Bay (USGS watershed online mapper), and this is largely a result of strong protections for the streams in and surrounding the park.

In addition, the Snake River's headwaters largely overlap the southwest areas of Yellowstone National Park (having strong connection to Jackson Lake). The Snake River passes through Grand Teton National Park, the Snake River Wild and Scenic River, and many non-national park lands in between. Flowing east, Yellowstone National Park also contains one of the branches of the headwaters of the Missouri River, which eventually flows into the Mississippi River and Gulf of Mexico.

Large Impacts on Downstream Park Units

The protection of water must begin at its source otherwise pollutants aggregate and get worse on the way downstream. This is a particular concern for national parks, where waters flowing into and through the parks may be adversely impacted by beyond boundary threats. These threats include point source pollution from upstream landfills, toxic dumps, mining practices, inadequate septic and wastewater disposal systems, contaminated runoff from agriculture and urban development, and pollution such as acid rain that upsets the delicate balance of water quality. Parks with their fixed geographic boundaries cannot on their own prevent the threats occurring in their watersheds affecting water quality and availability in park units. Most rivers and lakes that flow through park units originate outside park boundaries.

For example, Buffalo National River ranks as the number two tourist destination in Arkansas, and it attracts $44 million in tourism spending creating 610 jobs in the surrounding Ozark communities. However, a major branch of the Buffalo River has high *E-coli* bacteria concentrations that possibly originate from animal agricultural operations within the watershed (see Buffalo River Watershed Alliance 2014).

At Big Hole National Battlefield in southwestern Montana, the North Fork of the Big Hole River flows through the park and is impaired from flow alterations and nonpoint source pollution from upstream creeks and tributaries (NPS 2013b; Big Hole Watershed Committee 2012). At Colonial National Historical Park, upstream rural and urban land disturbances on watersheds are polluting creeks and streams. As a result, the marshes and wetlands of the park are being harmed by increased stream bank soil erosion and sediment deposition. At the St. Croix National Scenic Riverway, nutrient runoff from expanded residential development on watershed lands adjacent to these parks are polluting park waters. Similarly, the unique mineralized and freshwater springs of Chickasaw National Recreation Area, which lures in visitors as the park's main attraction, are being degraded from leaky sewer pipes from nearby municipalities (Pringle 2000).

Urban parks especially have suffered from pollution and effluents that flow from non-park areas. Around 90 percent of the water bodies and waterways in the National Capital Parks Region in and near Washington, D.C. are impaired, and Rock Creek Park in the nation's capital is similarly degraded (NPS 2014). Two NPS units in and near the heart of St. Paul, Minnesota, (Mississippi National River and Recreation Area and Saint Croix) are the fifth and eleventh most impaired park areas in the nation (NPS 2014). Also, Gateway National Recreation Area in New

York City is the seventh most visited unit in the national park system (NPS 2013a), but 66 percent of its water bodies are polluted, largely because it receives pollution from the confluence of the Hudson Bay watershed and many areas of industrial activity (NPS 2014).

Suburban areas also strongly affect water quality in nearby parks, such as Cuyahoga Valley National Park, which is close to Cleveland, Ohio. Cuyahoga waters are 100 percent impaired meaning the water in Ohio's only national park do not meet water quality standards (NPS 2014). Similarly, with the fourth most impairments (NPS 2014), the Illinois & Michigan Canal National Heritage Corridor receives pollution from the drainage basin of much of Chicago's southwestern suburbs.

Shoreline Park Units

Through this rulemaking shoreline park units will also benefit from clearer CWA protections for surrounding waters. Enhanced water quality in upstream watersheds will aggregate into better water quality along lakeshores and coastlines. Rivers eventually flow to the coast, and as a result, much of the pollution that enters in upstream areas aggregates in estuarine and coastal regions, including parks managed by NPS (Ruttenberg and Granek 2011). The NPS system has four national lakeshores bordering the Great Lakes and 85 coastal park units, which include national seashores and recreation areas.

Pollution from upstream activities deplete water clarity and the health of iconic coral reefs in areas such as Biscayne National Park (NPCA 2006) and NPS areas in the U.S. Virgin Islands (Rothenberger et al., 2008). Water quality is generally good but declining in the U.S. Virgin Islands, due largely to polluted runoff and sedimentation from developed areas (Rothenberger et al., 2008). In the Everglades, water pollution has caused overpopulation of some inland and coastal plant species (Surratt, Shinde, and Aumen 2012; also see Miller et al. 2004), which imbalances these coastal ecosystems. Although water quality is generally good in Assateague Island National Seashore, water quality in the park and surrounding bays has declined steadily over the long-run due to agricultural practices much further upstream in the watershed (Carruthers et al. 2012). Pollution from runoff from intermittent drainage ditches plagues the Cape Hatteras National Seashore (Mallin and McIver 2012). (While the CWA rule excludes upland-draining ditches from jurisdiction, it does not exclude ditches that contribute to a traditionally navigable waterway, such as those affecting these parks). Almost the entire coastline of Santa Monica Mountains National Recreation Area is impaired and has fish advisories for toxins and high mercury content (NPS 2014; EPA 2014), which likely resulted from a combination of suburban runoff into non-NPS upstream areas and offshore pollution.

Climate Change

All of the threats to the quality and availability of water in national parks could be exacerbated by climate change. Changes in long-term weather and temperature patterns will only compound existing stresses to water quality in parks (NPCA 2010b) and alter water resource quantity, quality, and location (e.g., see discussion for NPS units in the Great Lakes region in Schramm and Loehman 2010), especially in small and intermittent streams. Many smaller and intermittent waters could relocate as some areas receive more rain and others less. Glacier-fed rivers and lakes will also experience significant changes as land-ice melts and flows into the sea. Moreover, water temperature affects many chemical and ecological processes in water, such as dissolved nitrogen and oxygen levels and fish hatching cycles, respectively. These weather- and temperature-driven changes will be difficult if not impossible for our national parks to avoid making CWA protection for small, intermittent, and upstream water features even more

important as our waters experience weather- and temperature-driven stresses that would amplify the effects of upstream pollution.

For example, a 2009 National Park Service report found that northern prairie wetlands, which provide essential habitat for many wildlife populations, are at risk of being lost due to changes in land use and patterns in rainfall and temperature (Beerie and Phillips 2007, cited in Loehman 2009). Climate change could also be causing notable changes in water chemistry in Olympic, Mt. Rainier, and North Cascades National Parks, but more research is needed to understand this relationship (Sheibley et al. 2014). Studies in Great Smoky Mountain National Park found that some storm events can cause spikes in watershed surface water pH, and this, where frequent enough, has caused extirpation of some fish species in several streams (Deyton et al. 2009). In this region and others, scientists predict storm frequency and seasonal distribution will change significantly in the future, which could bring more episodic acid and nutrient spikes that affect species that rely on these features. So in addition to protecting park units from today's threats to water quality, restoring traditional protection for "waters of the United States" will help them be resilient to future stressors.

Conclusion

NPCA strongly supports this rulemaking. The proposed clarifications help protect and restore the waters flowing in and through our national parks. Because EPA and USACE have primary responsibility for implementing and enforcing the CWA, the national parks rely on these partner agencies to help prevent impairment of park waters from activities that take place beyond park boundaries. This is especially true for headwater, ephemeral, and intermittent streams, which science shows are important to protecting water quality and wildlife habitat of the over 66,250 miles of ephemeral and intermittent streams in our national park system. However, pollution that finds its way into smaller rivers and lakes easily aggregates as it travels downstream through many national parks, battlefields, and recreation areas. This can be particularly problematic as upstream polluted waters discharge into coastal areas.

We appreciate your consideration of our views.

Sincerely,

Chad W. Lord
Senior Director, Water Policy

CWL/lm

Appendix

Figure 1: Percentage of Surface Drinking Water from Intermittent, Ephemeral, and Headwater Streams (EPA 2009)

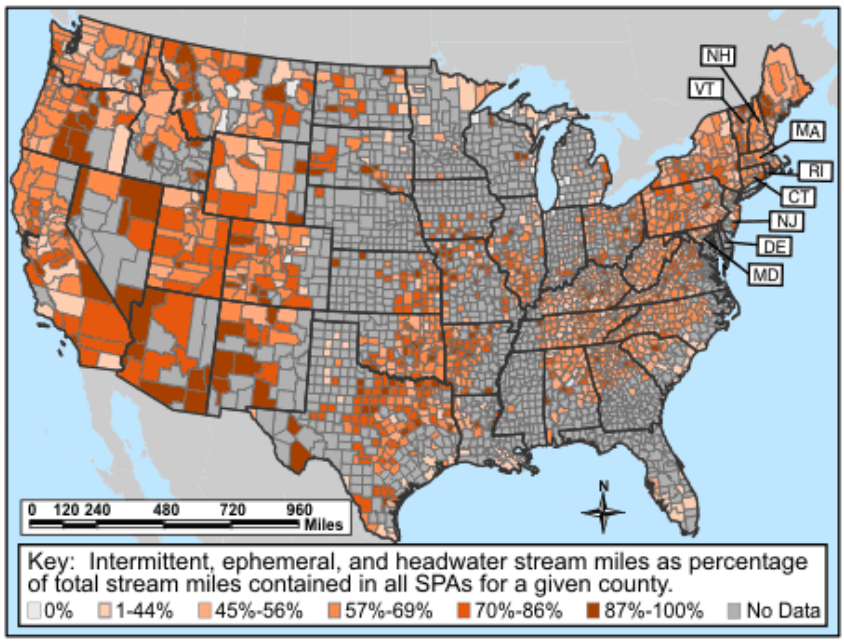


Figure 2: " Headwater Stream Length, as a Proportion of Total Stream Length Within Each 8 Digit HUC Watershed, in the U.S., Excluding Alaska, as Computed Querying the NHD RAD v2.0 for Reaches That Have No Other Inflowing Streams at the 1:100,000 Scale. The NHD RAD v2.0 Does not Capture Streams Under 1 mile (i.e., 1.61 km) in Length." Image and description source: Nadeau and Rains 2007.

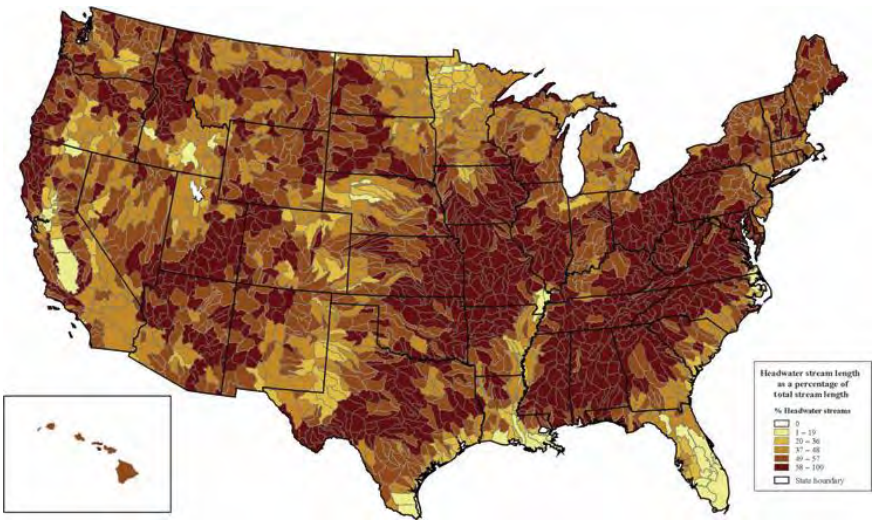
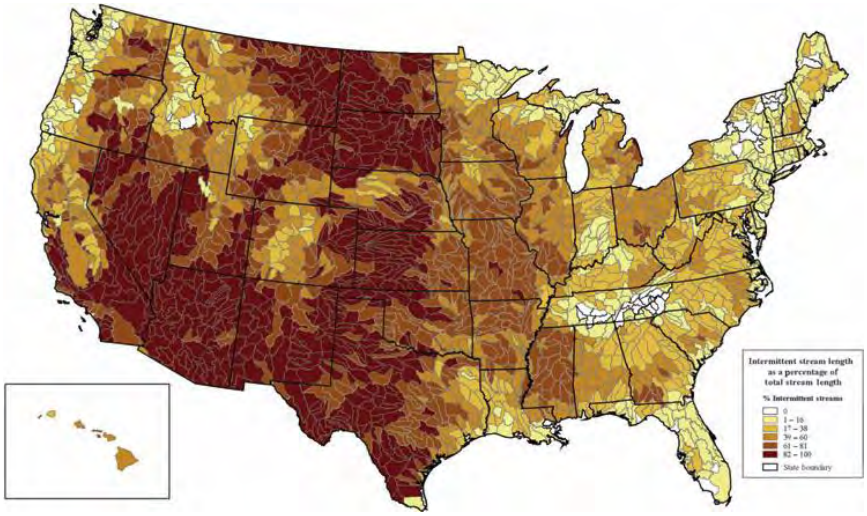


Figure 3: “Combined Intermittent and Ephemeral Stream Length in the U.S., Excluding Alaska, as a Proportion of Total Stream Length Within Each 8 Digit HUC Watershed, as Computed by Querying the NHD RAD v2.0 for Reaches That Contain Water Only Part of the Year at the 1:100,000 Scale. The NHD RAD v2.0 does not capture streams under 1 mile (i.e., 1.61 km) in length.” Image and description source: Nadeau and Rains 2007.



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October 20, 2014

The Honorable Gina McCarthy
Administrator
Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Administrator McCarthy:

As faith leaders in Louisiana, we view caring for God's creation, including God's gift of water, as an important moral and religious obligation. Water is a fundamental component of all life, and an integral part of our physical and spiritual wellbeing. We are writing to urge the Administration to finalize the Waters of the US rule that clarifies what waterways are protected under the Clean Water Act.

The proposed rule will provide protection for the thirty-six percent of streams in Louisiana that are seasonal or rain dependent. It will clarify confusing Supreme Court decisions and establish criteria for at-risk waters, which provide critical environmental, economic, public health, and other benefits. With many communities in Louisiana receiving their drinking water from public systems fed in whole or in part by intermittent, headwater, and ephemeral streams, this proposed rule helps ensure safe drinking water for our communities.

Our faith traditions teach us to care for vulnerable populations including communities of color and low-income communities. The proposed rule will protect waters in parishes such as Orleans, St. James, West Baton Rouge, Caddo, Terrebonne and Lafourche that have significant populations of African Americans, Native Americans, or low-income communities.

As communities of faith across a broad spectrum of traditions, we understand water as a symbol of preservation, cleansing, and renewal. Water is a gift from God. We urge you to act swiftly to finalize the Waters of the US rule so that we can protect this gift for the health and wellbeing of our people and all creation.

Sincerely,
Dr. Leo Cyrus, President - Greater Louisiana Baptist State Convention
Rob Gorman, Catholic Charities of the Diocese of Houma-Thibodaux
Rev. Anthony Kelly, Greater Free Baptist

Rev. Dan Krutz, Louisiana Interchurch Conference
Rabbi Gabriel Greenberg, Congregation Beth Israel, Metairie
Dana Parfait, Deputy Chief, Grand Caillou/Dulac Band of Biloxi-Chtimacha-Choctaw
Rev. Ronald Roberston, Capitol Missionary Baptist
Rev. Fred Smith, Shiloh Baptist
Rev. Cory Sparks, Louisiana Interchurch Conference
Rev. Gus Spurlock, Fairview Baptist
Rev. Dwight Webster, Christian Unity Baptist Church
Rev. Edward Alexander, Christian Baptist Church, Lake Charles
Rev. Kirbu Alfred, Macedonis Baptist Church, Lake Charles
Rev. Matthew Alfred,Jr., Golden Star Baptist Church, Eunice
Rev. Charles Allen, Friendship Chapel Missionary, Baton Rouge
Rev. Christopher Arvie, St. Mark Missionary Baptist. New Orleans
Rev. Herman Arvie, St. Paul Missionary Baptist, Ville Platte
Rev. Bonji Arvie, St. James Baptist Church, Opelousas
Rev. Norlan Arvie, Ebenezer Baptist Church, Opelousas
Pastor Renwick Bacon, Annadale Baptist Church, Alexandria
Rev. Sam Baker, Nineveh Missionary Baptist, Destrehan
Rev. L.V. Banks, First Union Baptist Church, Marksville
Rev. Dwight Baker, First New Light Baptist Church, Lake Charles
Rev. Gilbert L. Barnes, Rock of Ages Missionary Baptist Church, Marrero
Rev. Tillman Ben,Jr., Morning Plgrim Baptist, Ville Platte
Rev. Eradley Ben,Jr, St. Peter Baptist Church, Ville Platte
Rev. Eradley Ben, Sr, Mt. Pilgram Missionary Baptist Church, Ville Platte
Rev. Jon D. Bennett, Belfair Missionary Baptist Church, Baton Rouge
Rev. D.R. Berryhill,Sr., First Zion Missionary Baptist Church, New Orleans
Rev. Clyde Blade, Second Nazarene Baptist Church, Alexandria
Rev. Jarod Bottley, Young's Chapel Missionary Baptist Church, Waterproof
Rev. Don Boutte, St. John Missionary Baptist Church, New Orleans
Rev. Frank Boyette, Little Zion Baptist Church, Plaquemine
Rev. Melvin Q. Cross, Bethlehem Baptist Church, Pointe-A-La-Hache
Rev. Larry Cross, Berean Baptist Church, Hammond
Rev. James D. Cyrus, Second Baptist Church, Bogalusa
Rev. Charles M. Daniels, Christian Missionary Baptist Church, New Orleans
Rev. Andrew Darby Jr., St Bernard Community Baptist Church, New Orleans
Rev. John Dartez, Antioch Baptist Church, Lake Charles
Rev. Jerome Davis, New Pilgrim Baptist Church, Woodworth
Rev. W.M. Davis, 1st Missionary Baptist Church-Richmond Park, Baton Rouge
Rev. Frank Davis,III, Little Bethel Missionary Church, Amite
Rev. George Davis Sr., New Jerusalem Missionary Baptist Church, Bridge City
Rev. Lueinza Dearborne,II, True Believers Missionary Baptist Church, Alexandria
Rev. Shelton C. Dixon, Greater Mt. Olive Missionary Baptist Church, Baton Rouge
Rev. Jessie Doulet, Chimneyville Baptist Church, Washington
Rev. Shovie Ducre, Starlight Missionary Baptist Church, Slidell
Rev. James Dunkley, Mount Olive Baptist Church, Alexandria
Rev. Clarence J. Dupar, New Bethel Community Baptist Church, Alexandria

Rev. Leon Figgins, Plymouth Rock Baptist Church, Alexandria
Rev. Norman Farve, Tabernacle Baptist Church, Slidell
Rev. Dennis Everett,Sr., Lake Bethlehem Missionary Baptist Church, Shreveport
Rev. Albert J. Ellis, Second Evergreen Baptist Church, Avondale
Rev. Richmond Edwards, New Birth Cathedral of Glory Ministries, Kenner
Rev. Mallery Callahan,II, First Free Mission Baptist Church, Mandeville
Rev. Horace Early, Greater New Hope Baptist Church, Scottlandville
Rev. Michael D. Callahan, First Baptist Church – Amulet, Natchitoches
Rev. Franklin Fondel, Macedonia Missionary Baptist Church, Lakes Charles
Rev. Clarence Fontenot, Golden Light Baptist Church, Lakes Charles
Rev. James Fontenot, St. Matthew Baptist Church, Palmetto
Rev. Elloitt Ford, Mount Olive Baptist Church, Westlake
Rev. Elton Wilson, Good Shepherd Missionary Baptist Church, Lafayette
Rev. Shovie Ducre, Starlight Missionary Baptist Church, Slidell
Rev. Bob Fradieu, Beulah Baptist Church, Slidell
Rev. Waylon Frost, First St. James Baptist Church, New Orleans
Rev. M.J. Galloway, Metropolitan Missionary Baptist Church, Bogalusa
Rev. Ronald E. Gardner, Third Evergreen Baptist Church, Alexandria
Rev. Elmore Garner, Mt. Calvary Missionary Baptist Church, Lake Charles
Rev. Early Garrett, New Hope Baptist Church, Franklinton
Rev. Hennon Garrett, Oak Grove Baptist Church, Franklinton
Rev. James Gaither, First St. Paul Baptist Church, Leesville
Rev. Chadwick Godfrey, Greater Magnolia Baptist Church, Alexandria
Rev. Willie Giles, Mary Evergreen Baptist Church, Shreveport
Rev. Moses Gordon,II, Fellowship Baptist Church, New Orleans
Rev. Charlie Green, Mt. Pleasant Missionary Baptist Church, Baton Rouge
Rev. Herbert Green, Second Salvation Baptist Church, Bridge City
Rev. Taza Green, Second Baptist Church, New Orleans
Elder Donald Robinson, The Micah Project
Rev. Rommel E. Griffin, St. John Baptist Church, Geismar
Rev. Webster West, Antioch Baptist Church, Shreveport
Rev. Patrick L. Dennis, Bright Star Baptist Church, Shreveport
Rev. Patrick L. Dennis, Bright Star Baptist Church, Winnsboro
Rev. Ronald Robertson, Capital Missionary Baptist Church, Baton Rouge
Rev. D. J. Lanier, Sr., Christ Temple Baptist Church, Ruston
Rev. Steven Beckham, Church of Life Fellowship, Baton Rouge
Rev. Linda Miller Smith, Evening Star Baptist Church, Grayson
Rev. Gus Spurlock, Fairview Baptist Church, Baton Rouge
Rev. James E. Jackson, Faith Harvest Baptist Church, Monroe
Rev. Jimmie R. Spears, First Zion Baptist Church, Winnsboro
Rev. D. B. Mollaire, Good Hope Baptist Church, Norco
Rev. Ricky E. Carter, Good Hope Baptist Church, Lafayette
Rev. Anthony Kelley, Greater First Church Baptist, Baton Rouge
Rev. Rodney McFarland, Sr., Greater Free Gift Baptist Church, Monroe
Rev. William Ross, Greater New Hope Baptist Church, Monroe
Rev. Alan K. Creecy, Sr., Hill of Zion Baptist Church, Metairie

Rev. William Ross, Holly Grove Baptist Church, Archibald
Rev. Ivan Lewis, Israelite Baptist Church, Crowley
Rev. Norselles Holmes, III, Jerusalem #2 Baptist Church, Bastrop
Rev. Larry D. Hood, Logos and Life Bible Church, Plaquemine
Rev. Ronnie L. Traylor, Marion Baptist Church, Monroe
Rev. Mason T. Jack, Mt. Bethel Baptist Church, Lafayette
Rev. T. A. Knapp, Mt. Calm Baptist Church, Minden
Rev. Roland Price, Mt. Calvary Baptist Church, Chauvin
Rev. Louis C. Clark, Mt. Olive Baptist Church, Gray
Rev. Johnny Jackson, Mt. Zillah Baptist Church, Bienville
Rev. Willie J. Young, New Hope Missionary Baptist Church, Homer
Rev. Samuel G. Orange, Sr., New Inspiration Baptist Church, Shreveport
Rev. Ronald Williams, New Ollie Grove Baptist Church, Mer Rouge
Rev. Devin K. Mason, Sr., New Rescue Mission Baptist Church, LaPlace
Rev. Samuel Calhoun, New Salem Baptist Church, Jeanerette
Rev. Leonard Rhone, Oakland Baptist Church, Shreveport
Rev. Devin K. Mason, Sr., Philippian Baptist Church, LaPlace
Rev. Eddie J. Douzart, III, Pleasant Grove Baptist Church, Jonesboro
Rev. Clarence Mollaire, Second African Baptist Church, Edgar
Rev. Fred Feff Smith, Shiloh Baptist Church, Baton Rouge
Rev. John Cooks, St. Charles Baptist Church, Thibodaux
Rev. Cleon Waren, St. John Missionary Baptist Church, Homer
Rev. Louis C. Clark, St. John Missionary Baptist Church, Gray
Rev. Ruth Collins Brown, St. Jude Baptist Church, Monroe
Rev. Charles G. Chandler, The Harvest Baptist Church, Ferriday
Rev. Greg L. Oliver, Sr., True Vine Baptist Church, Monroe
Rev. Arthur R. Miller, Union Valley Baptist Church, Delhi
Rev. Timothy Tennant, Westside Baptist Church, Rayville
Rev. Willie Mabry, Zion Traveler Baptist Church, Monroe

National Wildlife Federation * Izaak Walton League of America
Theodore Roosevelt Conservation Partnership * Trout Unlimited

October 16, 2014

The Honorable Gina McCarthy
Administrator
Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army (Civil Works)
Department of the Army
108 Army Pentagon
Washington, DC 20310

Re: Clean Water Rule Docket ID No. EPA-HQ-OW-2011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy:

As sportsmen-conservation organizations representing millions of hunters and anglers nationwide, we strongly support your administration's vital effort to clarify and restore longstanding Clean Water Act protections for headwater streams and wetlands across the country.

Headwater streams provide important spawning and rearing habitat for fish, and they are incredibly important to water quality in downstream lakes, rivers, and bays that also provide important fish and wildlife habitat. These streams also supply drinking water for 1 in every 3 Americans.

Wetlands, even so-called isolated ones that are not adjacent to streams, are used by breeding, migrating, and resident waterfowl. They are the bedrock of our waterfowl hunting and conservation traditions. They also provide important habitat for a diversity of wildlife, filter pollutants, provide rural and coastal communities with critical flood control, and replenish ground and surface waters during drought.

America's 47 million sportsmen and women rely on clean water for hunting, angling, and other outdoor recreation. Yet the Clean Water Act -- the primary tool for maintaining and restoring the water quality of streams and wetlands – was unnecessarily weakened by agency guidance following two confusing Supreme Court decisions. As a result, 60 percent of stream miles in the United States are at increased risk of pollution and destruction. Also, the rate of wetlands loss increased by 140 percent from 2004 to 2009 -- the years immediately following the Supreme Court decisions. This is the first documented acceleration of wetland loss since the Clean Water Act was enacted more than 40 years ago.

When wetlands are drained and streams are polluted, it imperils America's hunting and fishing economy -- which accounts for over $200 billion in economic activity each year and 1.5 million jobs. These impacts are felt by rural communities in particular.

We commend your administration's proposed Clean Water Act rule for the protections it restores to headwaters streams and adjacent wetlands, and ask that the final rule offer similar protections for other important yet presently unprotected waters. We also support your administration's efforts to preserve longstanding Clean Water Act exemptions for farmers and foresters that encourage wise stewardship of land and water resources.

The current rulemaking is our best chance to restore protections for streams, wetlands and other waters critical to our hunting and fishing traditions and outdoor economy. We look forward to working with your administration to finalize and implement the Clean Water Act rule. Our economy and way of life depend on it.

Sincerely,

NATIONAL ORGANIZATIONS
American Fisheries Society
Backcountry Hunters & Anglers
National Wildlife Federation
Theodore Roosevelt Conservation Partnership
Trout Unlimited
Quail and Upland Wildlife Federation
Izaak Walton League of America
B.A.S.S. LLC

ALABAMA
Alabama B.A.S.S. Nation
Bluff City Bassmasters

ARIZONA
Arizona Council of Trout Unlimited
Arizona Wildlife Federation
Old Pueblo Chapter, Trout Unlimited
Gila Trout Chapter #530 Trout Unlimited
Trout Unlimited - Zane Grey Chapter
Grand Canyon Chapter 190, Trout Unlimited

ARKANSAS
Arkansas Audubon Society
Arkansas Canoe Club
Arkansas Chapter of the American Fisheries Society
Arkansas Chapter of The Wildlife Society
Arkansas Stream Team #443
Arkansas Wildlife Federation
White River Conservancy
Yell County Wildlife Federation
Friends of the North Fork and White Rivers
Arkansas Public Policy Panel

CALIFORNIA
California Council of Trout Unlimited

COLORADO
West Denver Trout Unlimited
Angler's Covey
Boulder Flycasters/Trout Unlimited

Colorado Tackle Pro
Denver Bassmasters
Pikes Peak Outfitter
Rocky Mountain Flycasters Chapter - Trout Unlimited
Colorado Wildlife Federation
North American Grouse Partnership
Bull Moose Sportsmen's Alliance (Rocky Mountain West)
Colorado Backcountry Hunters & Anglers

FLORIDA

Bonefish & Tarpon Trust
Snook & Gamefish Foundation
Florida Wildlife Federation

GEORGIA

Blue Ridge Mountain Chapter Trout Unlimited 626
Cohutta Chapter Trout Unlimited 242
Coosa Valley Chapter Trout Unlimited 519
Georgia Council Trout Unlimited
Georgia Foothills Chapter Trout Unlimited 629
Georgia Wildlife Federation
Gold Rush Chapter Trout Unlimited 733
Middle Georgia Chapter Trout Unlimited 435
Oconee River Chapter Trout Unlimited 661
Rabun Chapter Trout Unlimited 522
Savannah River Chapter Trout Unlimited 592
Tailwater Chapter Trout Unlimited 532
Chattahoochee/Nantahala Chapter 692 of Trout Unlimited

IDAHO

Idaho Wildlife Federation

ILLINOIS

Champaign County Izaak Walton League of America
Illinois Council Trout Unlimited

INDIANA

Indiana Wildlife Federation
Porter County Chapter
Tippecanoe Watershed Foundation

IOWA

Floyd County Ikes
Iowa Driftless Chapter, Trout Unlimited
Iowa Trout Unlimited
Iowa Wildlife Federation
Living River Group, Sierra Club
Northern Prairies Land Trust
Spring Creeks Chapter, Trout Unlimited

Trout Unlimited North Bear Chapter

KANSAS

Kansas BASS Nation

Kansas Wildlife Federation

KENTUCKY

Trout Unlimited, Kentucky

LOUISIANA

Louisiana Wildlife Federation

MAINE

Maine Council Trout Unlimited

MARYLAND

Free State Chapter, Izaak Walton League of America

Maryland Bass Nation

MICHIGAN

Dwighy Lydell Chapter, Izaak Walton League of America

Michigan United Conservation Clubs

MINNESOTA

Cass County Minnesota Chapter, Izaak Walton League of America

Headwaters Trout Unlimited Chapter #642

Hiawatha Trout Unlimited

Minnesota Conservation Federation

Minnesota Trout Unlimited

Trout Unlimited, Minnesota Gitche Gumee Chapter

Trout Unlimited, Minnesota Waybinahbe Chapter

Twin Cities - Trout Unlimited

MISSOURI

Conservation Federation of Missouri

MONTANA

MOBASS Federation Nation

Montana Wildlife Federation

NEBRASKA

Lincoln Chapter 65, Izaak Walton League of America

Nebraska Wildlife Federation

NEVEDA

Nevada Wildlife Federation

NEW MEXICO

New Mexico Wildlife Federation

NEW YORK

Rome NY Chapter of Izaak Walton League

NORTH CAROLINA

Blue Ridge Trout Unlimited

Pisgah Chapter Trout Unlimited

Albemarle Conservation & Wildlife Chapter

Charlotte Reconnecting Ourselves With Nature
Concord Wildlife Alliance
Fayetteville Increasing Sustainable Habitat
Gaston County Piedmont Area Wildlife Stewards
Greater Raleigh Outdoors and Wildlife
Habitat and Wildlife Keepers
Lake James Area Wildlife and Nature Society
Lake Norman Wildlife Conservationists
Mountain Island Lake Wildlife Stewards
Mountain Wild!
North Carolina Trout Unlimited Council
North Carolina Wildlife Federation
Protecting, Advocating, and Conserving Together in the High Country
Rocky River Trout Unlimited
South Wake Conservationists
Table Rock Trout Unlimited

OHIO

Headwaters Chapter Izaak Walton League of America
Izaak Walton League, Capitol City Chapter

OKLAHOMA

Conservation Coalition of Oklahoma

OREGON

Oregon Division, Izaak Walton League of America
Berkley Conservation Institute

PENNSYLVANIA

Hokendauqua Chapter Trout Unlimited
Central Pennsylvania Conservancy
Cumberland Valley Chapter Trout Unlimited
God's Country Chapter Trout Unlimited
Lackawanna Valley Trout Unlimited
Lloyd Wilson Chapter of Trout Unlimited
Monocacy Chapter Trout Unlimited
Pennsylvania State Council, Trout Unlimited
Stanley Cooper Sr Trout Unlimited
Trout Unlimited Tiadaghton chapter 688
Valley Forge Chapter Trout Unlimited
Allegheny Mountain Chapter of Trout Unlimited
Penns Creek Chapter of Trout Unlimited
Caldwell Creek Chapter, Trout Unlimited
Trout Unlimited, Pennsylvania North-Central Region
Adams County Chapter Trout Unlimited 323
Donegal Chapter of Trout Unlimited
Schuylkill County 537

Arrowhead Chapter of Trout Unlimited
Doc Fritchey Chapter of Trout Unlimited
Forks of the Delaware Chapter #482 of Trout Unlimited
Fort Bedford Trout Unlimited
Ken Sink Chapter Trout Unlimited
Little Lehigh Chapter of Trout Unlimited
Mountain Laurel Chapter of Trout Unlimited
Neshannock Chapter Trout Unlimited #216
Perkiomen Valley Trout Unlimited
Seneca Chapter of Trout Unlimited
Spring Creek Chapter of Trout Unlimited
Western Pocono Trout Unlimited #203
Trout Unlimited, Forbes Trail Chapter 206
Chestnut Ridge Trout Unlimited

SOUTH CAROLINA

Mountain Bridge Trout Unlimited
South Carolina Wildlife Federation
Campbells Farm Rod Co.
Chattooga River Chapter of Trout Unlimited
Trout Unlimited, South Carolina

SOUTH DAKOTA

Friends of the Big Sioux River
Kampeska Chapter, Izaak Walton League
Northeastern S.D. Walleye Club
Rapid City Chapter, Izaak Walton League
Sioux Falls Izaak Walton League
South Dakota Wildlife Federation
Sunshine Chapter, Izaak Walton League

TENNESSEE

Tennessee Council of Trout Unlimited

TEXAS

Dallas Safari Club
Guadalupe River Trout Unlimited
Texas Conservation Alliance

VERMONT

Greater Upper Valley Trout Unlimited Chapter
Trout Unlimited of Southwestern Vermont

VIRGINIA

Trout Unlimited, Mountain Empire Chapter
Bill Wills Southeast Virginia Chapter Trout Unlimited Chapter
Commonwealth Chapter Izaak Walton League of America
Massanutten Chapter (171), Trout Unlimited
New River Trout Unlimited

Northern Shenandoah Valley Trout Unlimited (Chapter 701)
Rapidan Chapter Trout Unlimited
Roanoke Valley Chapter of the Izaak Walton League of America
Roanoke Valley Chapter of TU (no. 308)
Smith River Trout Unlimited Chapter 264
Virginia Division Izaak Walton League

WEST VIRGINIA

Blennerhassett Chapter 304 of Trout Unlimited
Sal Font Chapter of Trout Unlimited
KYOVA Chapter, Trout Unlimited
Recreation Department, Beckley, WV
Upper Ohio Valley Northern Panhandle Chapter Trout Unlimited

WISCONSIN

Antigo Chapter Trout Unlimited
Aldo Leopold Chapter Trout Unlimited
Blackhawk Trout Unlimited
Brown County Chapter of the Izaak Walton League
Central Wisconsin Chapter of Trout Unlimited
Fox Valley Trout Unlimited
Northwoods Chapter Trout Unlimited
Oconto River Chapter of Trout Unlimited
Marinette County Chapter of Trout Unlimited
SEWTU - Southeast Wisconsin Trout Unlimited
Southern Wisconsin Chapter of Trout Unlimited
Wisconsin Council of Trout Unlimited
Wisconsin Wildlife Federation

Natural Resources Council of Maine
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November 14, 2014

Administrator Gina McCarthy
Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Docket ID No. EPA-HQ-OW-2011-0880

Filed electronically via Regulations.Gov

Dear Administrator McCarthy:

I am writing on behalf of the Natural Resources Council of Maine (NRCM). NRCM is Maine's largest environmental advocacy group with over 16,000 members and supporters. NRCM strongly supports EPA's proposed rule: Definition of ''Waters of the United States'' Under the Clean Water Act. The clear protections this rule provides for streams and wetlands are critical for the health of both U.S. and Maine waters.

More than 400,000 people in Maine drink water provided by utilities that rely on surface water supplies[1]. Protecting the small tributary streams and wetlands upstream from these water supplies is critical to keeping them clean, and EPA's proposed rules will help do this. Beyond drinking water, the small streams and wetlands across our state serve as the life blood of our outdoor recreation, hunting and fishing industries. In 2011, the most recent data available showed people spent nearly $600 million to fish and hunt in Maine[2]. Small streams provide critical habitat for the king of all Maine sport fish: brook trout. Maine wetlands filter pollutants that would otherwise harm the clean water brook trout need to survive. They also supply very productive habitat for waterfowl and make Maine a great place to duck hunt.

Protecting wetlands, even those that may appear isolated, also helps prevent flooding. When wetlands fill during a storm event, they take up water that would otherwise potentially cause flooding in downstream waterbodies. Protecting wetlands – even apparently isolated ones – is one of the best ways to keep Maine communities safe from flooding. The frequency of large precipitation events has increased in recent years and will likely continue to increase as a result of climate change. This makes wetland protection even more important to prevent flooding.

[1] Accessed at http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/sitemap/surfaceWater.shtml

[2] U.S. Fish and Wildlife Service. 2011. National Survey of Fishing, Hunting, and Wildlife-Associated Recreation: State Overview. Pp.18, 20. Accessed at: http://digitalmedia.fws.gov/cdm/ref/collection/document/id/858

In conclusion, NRCM strongly supports EPA's proposed clarification of the definition of "Waters of the United States". We believe this proposed rule will help protect Maine's clean water, its outdoor recreation industries, and its citizens. Thank you for the opportunity to comment on this important issue.

Sincerely,



Nick Bennett
Staff Scientist



November 14, 2014

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Ave. NW.
Washington, DC 20460

Attention: Docket ID No. EPA-HQ-OW-2011-0880

Submitted via www.regulations.gov and via email to ow-docket@epa.gov

To Whom It May Concern:

Thank you for considering our comments on the Environmental Protection Agency's (EPA) and U.S. Army Corps of Engineers' (the Corps) proposed rule, "Definition of 'Waters of the United States' Under the Clean Water Act." These comments are submitted on behalf of the Natural Resources Defense Council, and are joined by the Sierra Club, the Conservation Law Foundation, the League of Conservation Voters, Clean Water Action, and Environment America.

Americans depend on and deserve clean water. People should feel safe when they swim that they will not get a waterborne illness. They should have confidence that the streams feeding their drinking water supplies will not be recklessly polluted or destroyed. They should have waters with abundant fish that are safe to eat, and they should be able to boat without fighting through rafts of disgusting, sometimes toxic, algae.

We applaud the administration's efforts to protect our waterways from pollution. This proposed rule will help to improve the condition of the nation's waters, and we strongly support EPA's and the Corps' efforts to clarify which waters are protected by the Clean Water Act. We urge the agencies to strengthen the proposal and move quickly to finalize it, providing much needed clarity to regulated parties, pollution control officials, and all Americans who benefit from clean water.

It is difficult to overstate the importance of the issue this rule addresses. Whereas "waters of the United States" are protected from pollution and destruction by the Clean Water Act's important programs, aquatic features that are not considered "waters of the U.S." lack such protection under the federal Act. Virtually every one of the Act's critical safeguards depends upon the presence of "navigable waters," which the law defines to mean "waters of the U.S.,"[1] including:

[1] 33 U.S.C. § 1362(7) (defining "navigable waters" to mean "the waters of the United States").

- The national goal that pollutant discharges "be eliminated by 1985";[2]
- The absolute prohibition on discharging "any radiological, chemical, or biological warfare agent, any high-level radioactive waste, or any medical waste";[3]
- The core requirement that if an entity is going to discharge pollutants into waters from a point source, it must first apply for and obtain a permit that limits the pollutants allowed to be discharged;[4]
- The obligation that states develop water quality standards protecting designated uses and that EPA review them to ensure they are adequately protective;[5]
- EPA's review of total maximum daily load cleanup plans to restore impaired waters;[6]
- The requirement to develop water body-specific control strategies to address toxic pollution problems that are not solved by discharge standards applicable to sources of such pollution;[7]
- The obligation that states prepare biennial reports on water quality conditions;[8]
- Protections against the discharge of oil or hazardous substances;[9]
- The bar on a vessel that "is not equipped with an operable marine sanitation device" from operating in protected waters;[10]
- The directive for states to develop management programs for nonpoint pollution, and the related directive that EPA provide grants to assist with the implementation of such programs;[11]
- The requirement that applicants for federal permits obtain a state's certification that the discharge will comply with various provisions of the Act, including state water quality standards;[12] and
- Restrictions on the disposal of sewage sludge.[13]

Put simply, a water body that is denied treatment as a "water of the U.S." is subject to an assortment of industrial and municipal pollution assaults.

[2] *Id.* § 1251(a)(1).
[3] *Id.* § 1311(f).
[4] *See id.* §§ 1311(a) (generally prohibiting the "discharge of any pollutant" without compliance with other requirements of the Act), 1362(12) (defining "discharge of a pollutant" to mean "any addition of any pollutant to navigable waters from any point source").
[5] *Id.* §§ 1313(c)(2)(A) & (c)(4).
[6] *Id.* § 1313(e)(3)(c) ("The Administrator shall approve any continuing planning process submitted to him under this section which will result in plans for all navigable waters within such State, which include . . . total maximum daily load for pollutants in accordance with subsection (d) of this section").
[7] *Id.* § 1314(l)(1).
[8] *Id.* § 1315(b).
[9] *See, e.g.*, *id.* § 1321(b)(3) ("The discharge of oil or hazardous substances … into or upon the navigable waters of the United States in such quantities as may be harmful as determined by the President … is prohibited, except … where permitted in quantities and at times and locations or under such circumstances or conditions as the President may, by regulation, determine not to be harmful."); *id.* § 1321(j)(5) (providing for the development of facility response plans in the case of "[a]n onshore facility that, because of its location, could reasonably be expected to cause substantial harm to the environment by discharging into or on the navigable waters, adjoining shorelines, or the exclusive economic zone.").
[10] *Id.* § 1322(h)(4).
[11] *Id.* §§ 1329(a), (b) & (h).
[12] *Id.* § 1341.
[13] *Id.* § 1345.

It is likewise hard to overstate the importance of the aquatic resources that are implicated by this proposed rule. The three major categories of water bodies that have been thrown into the most doubt by developments in the law include so-called "isolated" waters; non-navigable tributaries, especially ones that do not flow "relatively permanently"; and waters adjacent to tributaries that are not considered "traditionally navigable." Although the exact extent of these categories is hard to quantify based on currently available information and is subject to interpretation, some statistics will give a rough sense of the scope of the problem. Approximately 20 percent of the roughly 110 million acres of wetlands in the continental U.S. could be considered "isolated."[14] Nearly two million miles of the nation's streams – about 59 percent of the total -- outside of Alaska are intermittent or ephemeral.[15] An estimated 53 percent of the streams outside of Alaska are "start reaches," making them unlikely to be traditionally navigable. Collectively, these streams have untold acres of wetlands adjacent to them.[16] An estimated 117 million Americans depend on drinking water suppliers that draw at least in part from intermittent, ephemeral, or headwater streams.[17]

These comments are organized as follows. First, we provide background on the establishment and judicial interpretation of the Clean Water Act showing that Congress intended for the law to be applied broadly, and that the Supreme Court's recent decisions support the continued exercise of broad jurisdiction. Second, we show how the existing policies governing implementation of the law – primarily a pair of guidance documents – do not properly protect water bodies consistent with the legal framework. Third, we explain why the proposed

[14] Eric Pianin, Administration Establishes New Wetlands Guidelines; 20 Million Acres Could Lose Protected Status, Groups Say, Washington Post, Jan. 11, 2003, at A05 ("The new regulation would shift responsibility from the federal government to the states for protecting as much as 20 percent of the 100 million acres of wetlands in the Lower 48 states, according to official estimates."); Solicitor General Resp't Arg. Tr., *Rapanos v. U.S. & Carabell v. U.S. Army Corps of Eng'rs*, at 41-42 (U.S. Feb. 21, 2006) ("about 20 percent of the Nation's wetlands are isolated"); Letter from Benjamin H. Grumbles, Acting Assistant Administrator for Water, U.S. EPA, to Anu Mittal, Director, Natural Resources & Environment, General Accounting Office, at 2 (Feb. 4, 2004), reprinted in U.S. GENERAL ACCOUNTING OFFICE, GAO-04-297,WATERS AND WETLANDS: CORPS OF ENGINEERS NEEDS TO EVALUATE ITS DISTRICT OFFICE PRACTICES IN DETERMINING JURISDICTION, appendix IV (Feb. 2004) ("The Continental United States has lost over half of its wetlands since European settlement, with approximately 100 million wetland acres remaining. Of those, some 20% may be wetlands that are less obviously connected to the broader aquatic ecosystem."). Notwithstanding the 100 million acre estimate in some of these prior assessments, the figure is closer to 110 million acres, according to the U.S. Fish and Wildlife Service. *See* T.E. Dahl, U.S. Fish & Wildlife Serv., U.S. Dept. of Interior, Status and Trends of Wetlands in the Conterminous United States 2004 to 2009, at 16 (2011), available at http://www.fws.gov/wetlands/Documents/Status-and-Trends-of-Wetlands-in-the-Conterminous-United-States-2004-to-2009.pdf.

[15] Letter from Benjamin H. Grumbles, Assistant Administrator for Water, U.S. EPA, to Jeanne Christie, Executive Director, Association of State Wetland Managers, at 2 (Jan. 9, 2006) (mis-dated as Jan. 9, 2005). Please note that these figures may not be precise; for instance, we are aware that the House of Representatives' Science Committee recently released a set of maps prepared for EPA, and the national map states that there are "7,339,124 miles of linear streams in the U.S. (including Puerto Rico), [of which] 77 percent (5,661,337 miles) are intermittent or ephemeral." Indus Corporation under contract with U.S. EPA Office of Water, Streams and Waterbodies in the United States (Oct. 2013), available at http://science.edgeboss.net/sst2014/documents/epa/national2013.pdf. We are unsure of the full basis for these estimates, and they seem to include data for Alaska, which are not included in the figures cited above, but the central point is the same – an enormous amount of the nation's water resources are at stake.

[16] *Id.*

[17] U.S. EPA, Geographic Information Systems Analysis of the Surface Drinking Water Provided by Intermittent, Ephemeral, and Headwater Streams in the U.S. (last updated on Oct. 29, 2013), available at http://water.epa.gov/lawsregs/guidance/wetlands/surface_drinking_water_index.cfm.

protections for tributaries and adjacent waters are legally and scientifically justified and must be included in the final rule. Fourth, in order to ensure necessary protections for critical waters, and to ensure the rule's consistency with the Clean Water Act, we describe three key aspects of the rule that must be strengthened when the rule is finalized. Fifth, we provide responses to a set of issues on which the agencies specifically request public comment. Finally, we describe needed improvements in the current process of documenting and tracking jurisdictional decisions, to ensure improved consistency and clarity throughout the country and over time as the rules are implemented.

I. BACKGROUND

CONGRESS INTENDED THE CLEAN WATER ACT TO BE APPLIED BROADLY, AND THE SUPREME COURT'S DECISIONS IN *SWANCC* AND *RAPANOS* SUPPORT THE CONTINUED EXERCISE OF BROAD JURISDICTION.

A. The Jurisdictional Scope of the Clean Water Act Is Broad

It is clear from the statutory language and legislative history that the intent of Congress when passing the Clean Water Act was to embrace the broadest possible definition of "navigable waters" when it defined that term as "the waters of the United States."

The need for this broad scope is well documented. By the 1960s, the deterioration of the Nation's waters was alarmingly evident. Symbolic of their disastrous state was the Cuyahoga River, running through Cleveland, Ohio into Lake Erie; it became so polluted with industrial waste in the 1950s and 1960s that it caught fire on more than one occasion.[18] Lake Erie itself became so polluted from municipal waste and agricultural runoff that it was projected to become biologically dead. Unchecked water pollution in inland waterways accounted for record fish kills; for example, some 26 million fish died as a result of the contamination of Lake Thonotosassa, Florida.[19] Industry discharged mercury into the Detroit River at a rate of between 10 and 20 pounds per day, causing in-stream water to exceed the Public Health Service limit for mercury six times over.[20] Waterways in many cities across the country were reduced to nothing more than sewage receptacles for industrial and municipal waste. The rate of wetlands loss from the 1950s to the 1970s was approximately 450,000 acres per year.[21]

Leaving the problem to individual states coupled with piecemeal federal law was clearly failing. There was a general – and accurate – perception that past approaches relying on state-by-state water quality standards was not cleaning up the waters and, indeed, waters were becoming more polluted. There was clearly a need for a broader federal role to address water pollution. Public outcry demanded a strong response from Congress.

[18] *U.S. v. Ashland Oil & Transp. Co.*, 504 F.2d 1317, 1326 (6th Cir. 1974).
[19] Robert W. Adler, et al., *The Clean Water Act: 20 Years Later* 5 (1993).
[20] *Id.*; *see also* Comm. on Pub. Works, Committee Print 93d Cong. 1st Sess., *A Legislative History of the Water Pollution Control Amendments of 1972* at 1253 (1973) (hereinafter "1972 Legislative History").
[21] W.E. Frayer et al., U.S. Fish & Wildlife Service, *Status and Trends of Wetlands and Deepwater Habitats in the Coterminous United States, 1950s to 1970s* at 3 (Apr. 1983).

B. Legislative Language and Legislative History Confirm that Congress Intended a Broad Scope of Protection

And Congress responded. The 1972 Act was hailed as the first truly comprehensive federal water pollution legislation. Congressman John Blatnik, Chairman of the House Public Works Committee, characterized it as a "landmark in the field of environmental legislation."[22] Senator Jennings Randolph, Chairman of the Senate Committee on Public Works, said, "It is perhaps the most comprehensive legislation that the Congress of the United States has ever developed in this particular field of the environment."[23]

The law's comprehensive nature was largely in recognition that existing water pollution laws were a failure. As Senator Edmund Muskie told the Senate when introducing the bill that was to become the new Act, "The committee on Public Works, after 2 years of study of the Federal water pollution control program, concludes that the national effort to abate and control water pollution is *inadequate in every vital aspect*."[24]

The very first sentence of the 1972 statute states, "The objective of this chapter is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[25] To achieve this objective, Congress adopted a general prohibition on discharging pollutants from point sources into "navigable waters" without a permit, and gave the fullest effect to this and other provisions of the law by defining that key term as "the waters of the United States, including the territorial seas."[26]

1. Congress Deliberately Redefined Previous Definitions of "Navigable Waters" to Encompass All "Waters of the United States."

Both of the House and Senate versions of the bills to amend the Federal Water Pollution Control Act (FWPCA) were written to expand federal authority to control and ultimately eliminate discharges of water pollution across the country.[27] Both the House and Senate sought to radically restructure the Nation's federal authority to control water pollution even though their bills borrowed some language from earlier versions of federal water pollution control law, as well as from the Refuse Act (RA) and the Rivers and Harbors Act (RHA). In their respective

[22] 1972 Legislative History at 350.
[23] *Id.* at 1269.
[24] *Id.* at 1253 (emphasis added).
[25] 33 U.S.C. § 1251(a). The House report explains, "The word 'integrity' … is intended to convey a concept that refers to a condition in which the natural structure and function of ecosystems is maintained." H.R. Rep. No. 92-911 at 76-77 (1972), 1972 Legislative History at 763. Similarly, the Senate report stated, "Maintenance of such integrity requires that any changes in the environment resulting in a physical, chemical or biological change in a pristine waterbody be of a temporary nature, such that by natural processes, within a few hours, days or weeks, the aquatic ecosystem will return to a state functionally identical to the original." 1972 U.S.C.C.A.N. at 3742.
[26] 33 U.S.C. §§ 1311(a), 1362(12), 1362(7). Other substantive provisions of the Act also strongly underscore that Congress' main purposes in enacting the law were water pollution and water quality, not navigation, and that Congress intended that the scope of the law be broad to achieve these purposes. *See, e.g.*, 33 U.S.C. § 1313(c)(2)(A), regarding water quality standards ("Such standards shall be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of this chapter. Such standards shall be established taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, *and also taking into consideration their use and value for navigation*.") (emphasis added).
[27] H.R. 11896, 92nd Cong. (1971); S. 2770, 92nd Cong. (1971).

bills, both bodies initially borrowed the term "navigable waters" from the RA and RHA, and included a definition that itself used the term "navigable."[28] However, in the reports discussing their respective versions of the legislation, both the House and Senate expressed concern about potential narrow interpretations of which waters they intended to be covered by the new Act. The House Public Works Committee stated its concern as follows:

> One term that the Committee was reluctant to define was the term "navigable waters." The reluctance was based on the fear that any interpretation would be read narrowly. However, this is not the Committee's intent. The Committee fully intends that the term "navigable waters" be given the broadest possible constitutional interpretation unencumbered by agency determinations which have been made or may be made for administrative purposes.[29]

The Senate Committee on Public Works stated:

> Through a narrow interpretation of the definition of interstate waters the implementation of the 1965 Act was severely limited. Water moves in hydrologic cycles and it is essential that discharges of pollutants be controlled at the source.[30]

So while the House report focused upon the need for a broad constitutional interpretation of the Act's scope, and the Senate report spoke to the scientific reality of waters being interconnected, both bodies signaled their desire not to constrain the reach of the Act to those waters previously protected primarily on the grounds of navigability.

When the House and Senate met in conference committee, they took an additional step to ensure that the definition of "navigable waters" did not result in unduly narrow interpretations. As discussed in the report of the Conference Committee, the House version of the definition was accepted into the final bill, but – critically -- the word "navigable" was deleted from the definition. Thus, the new definition read as follows: "The term 'navigable waters' means the waters of the United States, including the territorial seas."[31]

The Conference report spoke to this change, using the exact terminology of the earlier House Public Works Committee report confirming that the term "be given the broadest possible constitutional interpretation," and expressing that the interpretation of this definition must be "unencumbered by agency determinations which have been made or may be made for administrative purposes."[32]

Finally, the debate in Congress on final passage of the Act confirmed the conference report's intent that the law be given broad application. For example, Congressman John D.

[28] In the Senate, the earlier definition read: "the term navigable waters means the navigable waters of the United States, portions thereof, and the tributaries thereof, including the territorial seas and the Great Lakes." S. 2770, 92nd Cong. § 502(h) (1971), 1972 Legislative History at 1698. The House bill's initial definition read: "the term 'navigable waters' means the navigable waters of the United States, including the territorial seas." H.R. 11896, 92nd Cong. § 502(8) (1971), 1972 Legislative History at 1069.
[29] H.R. Rep. No. 92-911 at 131 (1972), 1972 Legislative History at 818.
[30] S. Rep. No. 92-414 at 77 (1971), 1972 Legislative History at 1495.
[31] S. Rep. No. 92-1236 at 144 (1971), 1972 Legislative History at 327.
[32] *Id.*

Dingell Jr. explained the definition in his statement to the House on the conference committee bill:

> [T]he conference bill defines the term "navigable waters" broadly for water quality purposes. *It means all "the waters of the United States" in a geographical sense*. It does not mean "navigable waters of the United States" in the technical sense as we sometimes see in some laws.[33]

After reviewing the broad extent of the Commerce Clause authority, Representative Dingell went on to state:

> Thus, the new definition *clearly encompasses all water bodies*, including main streams and their tributaries, for water quality purposes. No longer are the old, narrow definitions of navigability, as determined by the Corps of Engineers, going to govern matters covered by this bill. Indeed the conference report states on page 144:
>
> > "The conferees fully intend that the term *navigable waters be given the broadest possible constitutional interpretation* unencumbered by agency determinations which have been made or may be made for administrative purposes."[34]

Thus, Congress quite intentionally expanded the Act's jurisdictional scope in 1972 because of the new and ambitious water pollution reduction goals of the Act. For this reason, Congress chose to discard the traditional definition of the term "navigable waters" as it had been used in earlier laws and rejected placing other limits on the new law's jurisdictional reach such as some had proposed in earlier versions of the legislation.[35] Instead, Congress deleted the word "navigable" from the "navigable waters" definition of the 1972 Act, thereby asserting federal jurisdiction over all "the waters of the United States" in keeping with its stated objective to rid the Nation's waters of pollution.

2. Historically, the Clean Water Act Was Construed by the Courts to Apply to a Wide Variety of Waters.

Long before the cases to which the present proposal responds, the Supreme Court, in *International Paper Co. v. Ouellette*, recognized that the Act was designed to establish "an all-encompassing program of water pollution regulation," and "applies to all point sources *and virtually all bodies of water*."[36] Other courts also observed that "[i]t seems clear Congress intended to regulate discharges made into every creek, stream, river or body of water that in any way may affect interstate commerce,"[37] and that "Congress, by defining the term 'navigable waters' . . . to mean 'the waters of the United States, including the territorial seas,' asserted federal jurisdiction over the nation's waters to the maximum extent permissible under the Commerce Clause of the Constitution."[38]

[33] 118 Cong. Rec. 33, 756 (1972), 1972 Legislative History at 250 (emphasis added).
[34] 118 Cong. Rec. 33, 767 (1972), 1972 Legislative History at 250-51 (emphasis added).
[35] The definition of "navigable water" in earlier versions of the bill that became the FWPCA of 1972 had made express reference to "navigability." Clean Water Restoration Act of 1966; sec. 211 § 2(4), 80 Stat. 1246, 1253.
[36] 479 U.S. 481, 492 (1987) (emphasis added; internal quotations omitted).
[37] *United States v. Earth Sciences, Inc.*, 599 F.2d 368, 375 (10th Cir. 1979).
[38] *NRDC v. Callaway*, 392 F. Supp. 685, 686 (D.D.C. 1975).

Likewise, when first presented with the question of whether certain aquatic features were "waters of the U.S.," the Supreme Court concluded that the Corps of Engineers could reasonably apply the Act's legal protections to wetlands. In *United States v. Riverside Bayview Homes, Inc.*, the Court said:

> In view of the breadth of federal regulatory authority contemplated by the Act itself and the inherent difficulties of defining precise bounds to regulable waters, the Corps' ecological judgment about the relationship between waters and their adjacent wetlands provides an adequate basis for a legal judgment that adjacent wetlands may be defined as waters under the Act.[39]

In other words, the Court believed that the precise contours of the law should be determined by the technical agencies charged with implementing it.

3. Additional Evidence That the Scope of the Act Must Be Construed Broadly

As noted above, the Act's core permit program – the § 402 National Pollutant Discharge Elimination System program[40] - applies to "navigable waters," i.e., to "the waters of the United States," as defined in § 502(7). Accordingly, the evolution of § 402 offers relevant contextual evidence concerning the proper implementation of the § 502(7) definition.

The § 402 NPDES program was designed to supersede the preexisting permit program under the 1899 Refuse Act. Section 402 provides that permits previously issued under the Refuse Act would thenceforth constitute NPDES permits, and that no further Refuse Act permits would be issued.[41] Significantly, the Refuse Act does not merely govern discharge into traditionally navigable waters. To the contrary, it encompasses discharge "into any navigable water of the United States, *or into any tributary* of any navigable water from which the same shall float or be washed into such navigable water."[42] Thus, to interpret the Clean Water Act in a way that would cause non-navigable tributaries of traditionally navigable waters to become excluded from the law, one would have to believe that the 1972 Congress *cut back* the geographic scope of the predecessor 19th Century statute.[43] The notion that Congress intended any such cutback is untenable.

[39] 474 U.S. 121, 134 (1985).
[40] Section 402 authorized issuance of permits for "the discharge of any pollutant," 33 U.S.C. § 1342(a)(1), and section 502 defines "discharge of a pollutant" as the addition of a pollutant "to navigable waters." *Id.* § 1362(12).
[41] *Id.* §§ 1342(a)(4) & (5).
[42] *Id.* § 407 (emphasis added).
[43] Indeed, the cutback would be dramatic. *See* Letter from Benjamin H. Grumbles, Assistant Adm'r for Water, U.S. EPA, *available in* Brief of Assn. of State Wetlands Managers et al., as Amici Curiae Supporting Respondent in Rapanos v. United States, 547 U.S. 715 (2006) (Nos. 04-1034 & 04-1384), 2006 WL 139206 (estimating that over half of all U.S. streams are not traditionally navigable); Lance D. Wood, *Don't be Misled: CWA Jurisdiction Extends to All Non-Navigable Tributaries of the Traditional Navigable Waters and to Their Adjacent Wetlands*, 34 Envtl. L. Rep. 10187, 10193 n.32 (2004) (in the Missouri River watershed, there are by conservative estimate 559,669 miles of traditional navigable waters plus tributaries, of which traditional navigable waters represent only 3,151 miles – less than 1 percent). Even if only a fraction of these tributaries were to be left out of the scope of the Clean Water Act's protections – such as those lacking "relatively permanent flow" or an individualized showing of a demonstrable "significant nexus" to traditional navigable waters – the water pollution impacts would be significant.

The 1977 Amendments to the Act further confirm the inclusive nature of the law's scope. During the deliberations on those amendments, some members of Congress sought to narrow the waters covered by the Clean Water Act. Although the proposed narrowing language was included in the House bill, the Senate rejected it, and this history is extremely instructive.[44] Under the House's language, the dredge-and-fill permitting safeguards would have encompassed only traditionally navigable waters, together with wetlands that were "contiguous or adjacent" to such waters and also "periodically inundated."[45] Numerous Senators objected to the proposal as a significant weakening of the law and stressed that excising certain waters would undermine the basic structure of the Act. For example, Senator Baker emphasized that:

> Comprehensive jurisdiction is necessary not only to protect the natural environment but also to avoid creating unfair competition. Unless federal jurisdiction is uniformly implemented for all waters, dischargers located on nonnavigable tributaries upstream from the larger rivers and estuaries would not be required to comply with the same procedural and substantive standards imposed upon their downstream competitors.[46]

To avoid this outcome, the Senate Environment and Public Works Committee developed an amendment that exempted certain activities from needing permits, but which did not backtrack on jurisdiction. Senator Gary Hart then framed the choice for his colleagues:

> The Congress can capitulate. The Congress can abandon the national interest. The Congress can permit activities of a dredge-and-fill nature to go forward on those *small streams, marshes, wetlands, and swamps* which will make their way into the bigger waterways of this country. . . . Or we can establish a program of the sort the committee has established, which will protect all of those water systems; which will protect *all of the elements of those systems*, which will not permit dredge and fill activities to deposit very toxic materials into those waterways."[47]

Even strong opponents of comprehensive coverage under the Act acknowledged that the law, as written, covered a wide variety of aquatic resources. Senator Lloyd Bentsen, who led the charge in the Senate in 1977 to significantly roll back the scope of the Act's restrictions on the discharge of dredged or fill material, objected to the Environment and Public Works Committee's amendment. He complained: "The committee's amendment skirts the fundamental problem: the definition of Federal jurisdiction in the regulation of dredge and fill activities. The program *would still cover* all waters of the United States, including small streams, ponds, isolated marshes, and intermittently flowing gullies."[48] In the same vein, Senator Pete Domenici objected to the then-current "interpretation, saying almost all waters in the country were

[44] *See United States v. Riverside Bayview Homes, Inc.*, 474 U.S. 121, 136-37 (1985) (discussing the 1977 debate and Congress's ultimate abandonment of any effort to narrow the definition of "waters").
[45] *See, e.g.*, Comm. on Env't & Pub. Works, Committee Print, 95th Cong., 2d Sess., Legislative History of the Clean Water Act of 1977, at 901 (Oct. 1978).
[46] *Id.* at 920. *See also id.* at 922 (Senator Baker stating: "Continuation of the comprehensive coverage of this program is essential for the protection of the aquatic environment. The once seemingly separable types of aquatic systems are, we now know, interrelated and interdependent. We cannot expect to preserve the remaining qualities of our water resources without providing appropriate protection for the entire resource."); *id.* at 923 (Senator Baker continuing, "let me emphasize that the protection of water quality must encompass the protection of the interior wetlands and smaller streams.").
[47] *Id.* at 908 (emphasis added).
[48] *Id.* at 903 (emphasis added).

navigable and, therefore, dredge and fill, and the corps ends up being a national permit system."[49] Despite these Senators' criticisms of the law's broad scope, Congress ultimately retained the 1972 definition of "waters of the United States" for all of the Act's key programs.

Thus, the current proposal and the legal uncertainty about the scope of the law must be understood in context. The broad jurisdiction evinced by the Clean Water Act's legislative language and Congress' intent makes clear that EPA and the Corps must of course work within the bounds proscribed by the Supreme Court (which, as discussed in detail below, are modest), but within those bounds they must exercise their remaining authority to the fullest extent to protect streams, wetlands, and other waters.

C. Congress Ratified Certain Elements of the Jurisdictional Rules.

As noted above, Congress amended the Act in 1977, specifically debated the proper scope of the law, and refused to narrow the Act's scope. This debate occurred against a backdrop of regulations that had been adopted by the Corps in 1975.[50] It is critical, therefore, to look at what those rules protected, as that provides the context for Congress's refusal to change course.

The Corps' rules defining the scope of the law read as follows:

> (2) *"Navigable waters"*. (i) The term, "navigable waters," as used herein for purposes of Section 404 of the Federal Water Pollution Control Act, is administratively defined to mean waters of the United States including the territorial seas with respect to the disposal of fill material and excluding the territorial seas with respect to the disposal of dredged material and shall include the following waters:
>
> > (*a*) Coastal waters that are navigable waters of the United States subject to the ebb and flow of the tide, shoreward to their mean high water mark (mean higher high water mark on the Pacific coast);
> >
> > (*b*) All coastal wetlands, mudflats, swamps, and similar areas that are contiguous or adjacent to other navigable waters. "Coastal wetlands" includes marshes and shallows and means those areas periodically inundated by saline or brackish waters and that are normally characterized by the prevalence of salt or brackish water vegetation capable of growth and reproduction;
> >
> > (*c*) Rivers, lakes, streams, and artificial water bodies that are navigable waters of the United States up to their headwaters and landward to their ordinary high water mark;
> >
> > (*d*) All artificially created channels and canals used for recreational or other navigational purposes that are connected to other navigable waters, landward to their ordinary high water mark;

[49] *Id.* at 925.
[50] See 40 Fed. Reg. 31320, 31324-25 (July 25, 1975) (promulgating 33 C.F.R. §209.120(d)(2) definition of "navigable waters" for purposes of section 404 of the Act); *id*. at 31326 (phasing in implementation of portions of regulation from 1975 to 1977).

(*e*) All tributaries of navigable waters of the United States up to their headwaters and landward to their ordinary high water mark;

(*f*) Interstate waters landward to their ordinary high water mark and up to their headwaters;

(*g*) Intrastate lakes, rivers and streams landward to their ordinary high water mark and up to their headwaters that are utilized:

(*1*) By interstate travelers for water-related recreational purposes;

(*2*) For the removal of fish that are sold in interstate commerce;

(*3*) For industrial purposes by industries in interstate commerce;

(*4*) In the production of agricultural commodities sold or transported in interstate commerce;

(*h*) Freshwater wetlands including marshes, shallows, swamps and similar areas that are contiguous or adjacent to other navigable waters and that support freshwater vegetation. "Freshwater wetlands" means those areas that are periodically inundated and that are normally characterized by the prevalence of vegetation that requires saturated soil conditions for growth and reproduction; and

(*i*) Those other waters which the District Engineer determines necessitate regulation for the protection of water quality as expressed in the guidelines [required by section 404(b)(1) of the Act]. For example, in the case of intermittent rivers, streams, tributaries, and perched wetlands that are not contiguous or adjacent to navigable waters identified in paragraphs (*a*)-(*h*), a decision on jurisdiction shall be made by the District Engineer.[51]

It should be readily apparent that even these very early rules – adopted in response to a federal court's rejection of the Corps' initial narrow jurisdictional regulations[52] -- were fairly inclusive.[53]

This history is critical because the Supreme Court specifically considered the scope of these rules and Congress's awareness of them. In *Riverside Bayview*, the Court concluded that Congress – by debating and rejecting amendments to the Act that would have overturned these specific regulations -- acquiesced in the regulations with respect to adjacent wetlands. The Court stated, "[a]lthough we are chary of attributing significance to Congress' failure to act, a refusal by Congress to overrule an agency's construction of legislation is at least some evidence of the

[51] *Id.*
[52] *NRDC v. Callaway*, 392 F. Supp. 685, 686 (D.D.C. 1975).
[53] To be sure, some of the terms in these regulations were not as inclusive as a natural reading of them might suggest. For example, "lakes" were defined to include "natural bodies of water greater than five acres in surface area and all bodies of standing water created by the impounding of navigable waters identified in paragraphs (a)-(h) above," and "headwaters" was defined as generally representing "the point on the stream above which the flow is normally less than 5 cubic feet per second…." 40 Fed. Reg. at 31,325.

reasonableness of that construction, particularly where the administrative construction has been brought to Congress' attention through legislation specifically designed to supplant it."[54]

In keeping with this precedent, the agencies lack the discretion to refuse to protect waters that would have been protected under the 1975 regulations to which Congress acquiesced. That is to say, features included within these rules at least must be included. As discussed below, the law and science establishes that many more waters should be protected as well.

D. The Supreme Court's Decisions in SWANCC and Rapanos Do Not Preclude the Continued Exercise of Broad Jurisdiction.

Despite the clear legislative history and purpose of the Clean Water Act, previous Supreme Court precedent in *Riverside Bayview* and *Ouellette*, and numerous lower court cases broadly interpreting the jurisdictional scope of the law, in 2001, the Supreme Court – in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* ("*SWANCC*")[55] – held that the non-navigable, intrastate, "isolated" waters in that case could not be classified as "waters of the United States" solely based on the government's so-called "Migratory Bird Rule," an interpretation of the jurisdictional regulations that protected aquatic habitat used by migrating birds. Likewise, in *Rapanos v. United States*,[56] the Supreme Court issued several opinions – though no legal rationale commanded a majority of the Court – which have caused strenuous debate over the decision's implications for the legal scope of the Act. Nonetheless, these decisions do not preclude the continued exercise of broad jurisdiction under the Act and should not be read to impose limitations on jurisdiction beyond their narrow holdings.

1. The *SWANCC* Decision

The holding of *SWANCC* was narrow, and was largely limited to the facts of the case or very similarly situated waters. At issue in that case were waters that had been abandoned gravel pits that, over the years, had filled with water and were used as habitat by migrating waterfowl. In asserting jurisdiction over the waters, the Corps cited the presence of migratory birds as the jurisdictional trigger for the Clean Water Act; they did not cite any of the other bases in their regulations that also allowed them to assert Clean Water Act protections over intrastate waters, whether they appear to be "isolated" or not.[57] Accordingly, the Supreme Court did not invalidate any of the regulatory bases for asserting jurisdiction over such water bodies (such as links to interstate commerce). Nor did the Court overturn its earlier unanimous decision in *Riverside Bayview* or alter its prior holding deferring to the expert judgment of the agencies with respect to waters included in the regulatory definition.

The Court's holding was very constrained; it ruled that the Corps' regulations "as clarified and applied to petitioner's balefill site pursuant to the 'Migratory Bird Rule' . . . exceeds the authority granted to respondents under § 404(a) of the CWA."[58] The five-Justice

[54] 474 U.S. at 137.
[55] 531 U.S. 159 (2001).
[56] 547 U.S. 715 (2006).
[57] The term "isolated" does not currently appear in the Act itself or in EPA or Corps jurisdictional regulations.
[58] 531 U.S. at 174 (internal citations omitted). The Migratory Bird Rule was contained in the 1986 preamble to the Corps' regulations, and is not codified in the Code of Federal Regulations. 51 Fed. Reg. 41,206, 41,217 (Nov. 13, 1986).

majority decision did contain gratuitous language – dicta – that was read by industry lawyers and others as inviting additional legal attacks on federal protection for waters that are not traditionally navigable. Fortunately, when those arguments were made, the courts generally did not interpret *SWANCC* broadly, though it still did lead to a cutback on legal protections.[59]

2. The *Rapanos* Decision and Its Three Major Opinions

Although the claims of those opposed to Clean Water Act protections who were trying to expand upon the *SWANCC* decision were largely rejected by the lower courts, in October 2005 the Supreme Court took up two other cases – *United States v. Rapanos* and *Carabell v. U.S. Army Corps of Engineers* – that together questioned the extent to which the law protects wetlands adjacent to tributaries that are not traditionally navigable.

In the *Rapanos* and *Carabell* cases, the Bush administration argued that the Clean Water Act and its implementing regulations properly encompass and protect the non-navigable tributaries of "traditionally navigable" waters and the wetlands adjacent to these tributary streams and rivers. This position was supported by briefs filed by more than 30 states' Attorneys General and nine members of Congress who helped pass the Clean Water Act in 1972, its amendments in 1977, or both. Also filing briefs in favor of the government's position were four former EPA administrators who served under Republican and Democratic administrations; a coalition of hunting and angling groups and businesses; state water pollution control officials, wetland managers, fish and wildlife agencies, and floodplain managers; New York City; numerous western resources councils; Macomb County (MI); and many environmental, public health, and conservation groups.

The *Rapanos* petitioners and some supporting organizations argued that the Clean Water Act does not protect non-navigable tributaries and only covers those wetlands directly adjacent to traditionally navigable waters.[60] For instance, the American Farm Bureau Federation, perhaps the most vocal public opponent of this proposal, argued that the Act only includes "waters that are 'navigable'—that 'were or had been navigable in fact or which could reasonably be so made.'"[61]

In its decision, the Supreme Court reached no majority opinion but split 4-1-4 in its analysis of the Clean Water Act and the extent to which the law covers adjacent wetlands.[62] The Court did not invalidate any provision of the agencies' existing rules defining the "waters of the U.S.," but the various opinions suggested three different tests for determining whether wetlands adjacent to non-navigable tributaries remain under the scope of the Act.

[59] *See, e.g.*, *United States v. Rapanos*, 376 F.3d 629, 638 (6th Cir. 2004) ("[T]he majority of courts have interpreted *SWANCC* narrowly to hold that while the CWA does not reach isolated waters having no connection with navigable waters, it does reach inland waters that share a hydrological connection with navigable waters."), *vacated*, 547 U.S. 715 (2006).

[60] The petitioners in the *Carabell* case advanced a more limited argument, claiming that it was impermissible for the Corps to regulate a wetland as "adjacent" to a protected water body – and therefore subject to the CWA – if it lacked a hydrological connection with the water body. Brief for Petitioner at 12-13, *Carabell v. United States Army Corps of Engineers*, 547 U.S. 715 (2006) (No. 04-1384), 2005 WL 3279898.

[61] Brief for American Farm Bureau Fed. at 10, *Rapanos v. U.S.,* 547 U.S. 715 (2006) (No. 04-1034), available at http://www.appellate.net/briefs/rapanos_amicus.pdf.

[62] *Rapanos v. United States*, 547 U.S. 715 (2006).

The four-justice plurality, in an opinion written by Justice Scalia, would significantly limit the law's scope. Focusing on a 1954 dictionary definition of "waters" more than the language, purpose, or history of the Clean Water Act (a law he characterized as "tedious"), Justice Scalia, joined by Chief Justice Roberts and Justices Thomas and Alito, concluded that:

> [T]he phrase "the waters of the United States" includes only those relatively permanent, standing or continuously flowing bodies of water 'forming geographic features' that are described in ordinary parlance as "streams[,] … oceans, rivers, [and] lakes." The phrase does not include channels through which water flows intermittently or ephemerally, or channels that periodically provide drainage for rainfall.[63]

The opinion also would require wetlands to have a "continuous surface connection" to jurisdictional waters to be protected.[64]

Justice Kennedy concurred that the cases should be remanded, but completely rejected Justice Scalia's reasoning. Indeed, he stated that Justice Scalia's plurality opinion "is inconsistent with the Act's test, structure, and purpose."[65] By contrast, Justice Kennedy would require the agencies to show a physical, biological, or chemical linkage – a "significant nexus" – between wetlands and a more obviously covered water body in order for them to be protected.[66] In particular, Justice Kennedy stated:

> wetlands possess the requisite nexus, and thus come within the statutory phrase "navigable waters," if the wetlands, either alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as "navigable." When, in contrast, wetlands' effects on water quality are speculative or insubstantial, they fall outside the zone fairly encompassed by the statutory term "navigable waters."[67]

Even though the jurisdictional status of tributaries was not at issue in *Rapanos*, Justice Kennedy said that, applied consistently, existing rules "may well provide a reasonable measure of whether specific minor tributaries bear a significant nexus with other regulated waters to constitute 'navigable waters' under the Act."[68] For wetlands adjacent to such non-navigable tributaries, Justice Kennedy suggested that a "significant nexus" could be shown in different ways, depending on the kind of water to which the wetland is adjacent.[69]

Critically for the present rulemaking, Justice Kennedy made clear that water bodies could be shown to have a significant nexus on a categorical basis and that all water bodies within those categories could therefore be protected, even if individual waters did not influence downstream water quality. Specifically, he stated:

[63] *Id.* at 739 (citation omitted).
[64] *Id.* at 742.
[65] *Id.* at 776.
[66] *Id.* at 779.
[67] *Id.* at 780.
[68] *Id.* at 781.
[69] *Id.* at 782 ("When the Corps seeks to regulate wetlands adjacent to navigable-in-fact waters, it may rely on adjacency to establish its jurisdiction. Absent more specific regulations, however, the Corps must establish a significant nexus on a case-by-case basis when it seeks to regulate wetlands based on adjacency to nonnavigable tributaries.").

> Through regulations or adjudication, the Corps may choose to identify categories of tributaries that, due to their volume of flow (either annually or on average), their proximity to navigable waters, or other relevant considerations, are significant enough that wetlands adjacent to them are likely, *in the majority of cases*, to perform important functions for an aquatic system incorporating navigable waters.[70]

Justice Kennedy's categorical approach mirrors that of the unanimous Court in *Riverside Bayview*, which noted:

> Of course, it may well be that not every adjacent wetland is of great importance to the environment of adjoining bodies of water. But the existence of such cases does not seriously undermine the Corps' decision to define all adjacent wetlands as "waters." If it is reasonable for the Corps to conclude that *in the majority of cases*, adjacent wetlands have significant effects on water quality and the aquatic ecosystem, its definition can stand. That the definition may include some wetlands that are not significantly intertwined with the ecosystem of adjacent waterways is of little moment, for where it appears that a wetland covered by the Corps' definition is in fact lacking in importance to the aquatic environment--or where its importance is outweighed by other values--the Corps may always allow development of the wetland for other uses simply by issuing a permit.[71]

This framework underscores another way in which the Supreme Court's rulings do not require a major retreat on jurisdiction: the agencies' ecological judgment about the importance of certain types of waters need not be so refined that each water body within the category contributes to the aggregate effect that such waters have downstream. Indeed, both of these passages reveal that only a majority of waters in the category need to satisfy that condition.

In dissent in *Rapanos*, Justice Stevens, joined by Justices Souter, Ginsburg, and Breyer, said that the existing agency regulations reflected a reasonable interpretation of the statutory phrase "waters of the United States," especially in light of *Riverside Bayview*, which upheld the application of these very same rules.[72] While rejecting the rationale of both of the other opinions, these four justices stated that, since they would protect all of the waters that Justice Scalia's test would protect and all of the ones Justice Kennedy's test would protect, the agencies should continue to protect streams and wetlands if they qualify under either test.

In the wake of *Rapanos*, the agencies and the courts have struggled to apply the various opinions, and have done so inconsistently. At bottom, however, what has emerged from the highly litigious past eight years is that the law protects at least those waters meeting Justice Kennedy's test,[73] and that the plurality test is an additional valid approach to protecting waters

[70] *Id.* at 780-81 (emphasis added).
[71] 474 U.S. at 135 n. 9.
[72] *Rapanos*, 547 U.S. at 792.
[73] No federal court of appeals ruling since *Rapanos* has held that Justice Kennedy's approach may not be used to establish jurisdiction, despite polluter-led arguments to try to establish the plurality test as the sole basis for asserting coverage for a water body. *See generally* Memorandum from Dick Pedersen, President, Environmental Council of the States, ACOEL Memo on Waters of the U.S. Under the CWA, at 8-14 (Sept. 11, 2014) (distributing memo developed by American College of Environmental Lawyers for ECOS, which discusses judicial treatment of *Rapanos*, among other things), available at http://acoel.org/file.axd?file=2014%2f9%2fWaters+of+the+U+S+Final+9_11_14.pdf.

throughout the vast majority of the country.[74] Although working out the precedential effect of the different opinions in *Rapanos* is undoubtedly an interesting legal puzzle,[75] we submit that it is not very important in the context of the present rulemaking, which seeks to establish rules for categories of water bodies, rather than on a case-by-case basis. When viewed in that context, the categories of waters that the science demonstrates to have a significant nexus will entirely subsume the categories of waters that the plurality would have protected. Accordingly, it is appropriate to base the current rulemaking on the significant nexus approach, though we believe that the agencies should also note in the final rule that the plurality's opinion provides an additional rationale to categorically protect certain waters, such as relatively permanent tributaries, ponds, and other waters and wetlands with a continuous surface connection to such waters.

E. Interstate Commerce Provisions of the Existing Rules Remain Intact.

The tests that emerge from *Rapanos* are not the only proper bases for the agencies to protect waters under the Clean Water Act. The current regulations define "waters of the U.S." as including "[a]ll other waters … the use, degradation or destruction of which could affect interstate or foreign commerce. . . ."[76] This provision was not struck down by the Supreme Court in either *SWANCC* or *Rapanos* and, as indicated above, a predecessor version of that

[74] Only the Eleventh Circuit has held explicitly that Justice Kennedy's test is the only approach that may be used to establish jurisdiction. *United States v. Robison*, 505 F.3d 1208 (11th Cir 2007), *cert. denied sub nom*, *U.S. v. McWane, Inc.*, 555 U.S. 1045 (2008).

[75] Our own analysis leads us to conclude that no binding holding results from *Rapanos*. In cases like *Rapanos* where there is no majority decision, the rule expressed in the Supreme Court decision *Marks v. United States*, 430 U.S. 188 (1977), is typically used to arrive at a holding. According to *Marks*, "When a fragmented Court decides a case and no single rationale explaining the result enjoys the assent of five Justices, the holding of the Court may be viewed as that position taken by those Members who concurred in the judgments on the narrowest grounds." *Id.* at 193. However, *Marks* cannot be applied to the opinions in *Rapanos*. The general rule on split opinions from Marks "only works in instances where one opinion can meaningfully be regarded as narrower than another – only when one opinion is a logical subset of other, broader opinions." *United States v. Alcan Aluminum Corp.*, 315 F.3d 179, 189 (2d Cir. 2003) (quoting *King v. Palmer*, 950 F.2d 771, 781 (D.C. Cir. 1991) (en banc)) (internal quotation marks omitted). Applying this analysis to *Rapanos*, Justice Kennedy's reasoning and that of the plurality cannot be considered a logical subset of one another, so the *Marks* analysis is inapplicable. Justice Kennedy underscores his near-complete disagreement with the plurality when he says that "the plurality's opinion is inconsistent with the Act's text, structure, and purpose." *Rapanos*, 547 U.S. at 776. Moreover, the two opinions have entirely disparate rationales that cannot be reconciled; indeed, the opinions' reasoning is primarily based on interpreting different statutory terms – the plurality focuses on the term "waters," whereas Justice Kennedy focuses on the term "navigable." *Compare* 547 U.S. at 731 (plurality opinion) ("We need not decide the precise extent to which the qualifiers 'navigable' and 'of the United States' restrict the coverage of the Act. Whatever the scope of these qualifiers, the CWA authorizes federal jurisdiction only over 'waters.'") *with id.* at 779 (Kennedy, J., concurring) ("Consistent with *SWANCC* and *Riverside Bayview* and with the need to give the term 'navigable' some meaning, the Corps' jurisdiction over wetlands depends upon the existence of a significant nexus between the wetlands in question and navigable waters in the traditional sense."). We therefore submit that no binding holding emerges from *Rapanos*, except that additional fact-finding is needed to assert jurisdiction over the wetlands at issue in the cases before the Court. *Alcan Aluminum*, 315 F.3d at 189 ("When it is not possible to discover a single standard that legitimately constitutes the narrowest ground for a decision on that issue, there is then no law of the land because no one standard commands the support of a majority of the Supreme Court.") (citing *Rappa v. New Castle County*, 18 F.3d 1043, 1058 (3rd Cir. 1994)). At minimum, because the two opinions allow for jurisdiction in some individual cases in which the other may not, each could be considered the "narrowest grounds" in particular circumstances, and it is thus appropriate for the agencies to rely on both the plurality and Kennedy rationales in implementing the decision in advance of revised rules.

[76] *See, e.g.*, 40 C.F.R. § 230.3(s)(3).

provision was contained in the regulations that Congress specifically considered and refused to overturn. Accordingly, interstate commerce connections remain a valid basis for the protection of resources even if they do not have a demonstrable "significant nexus" to navigable waters.

The federal government has "the power to regulate those activities having a substantial relation to interstate commerce, i.e., those activities that substantially affect interstate commerce."[77] Although the Court's opinions spawned significant debate about whether Congress's use of the term "navigable waters" (defined as "waters of the United States") in the Clean Water Act was intended to grant EPA and the Corps the authority to regulate all such commerce-affecting activities, the Supreme Court has never definitively ruled on this question. In *SWANCC*, the Court narrowly limited its holding to the facts of the case, ruling that the Corps' regulations, *as applied pursuant to the Migratory Bird Rule*, exceeded Clean Water Act authority.[78] The Court did not invalidate the regulations themselves or rule that they could never be applied based on other factors beyond the presence of migratory birds. In other words, alternative grounds for jurisdiction pursuant to the "could affect commerce" provision of the regulations remained viable after *SWANCC*. Turning to *Rapanos*, the Court produced no binding holding in that case, as discussed above. The four dissenting Justices voted to uphold the existing regulatory approach, and the plurality and Justice Kennedy disagreed with each other about what the actual bounds of the agencies' jurisdiction should be – and in any event, neither Justice Kennedy nor the plurality ruled to invalidate the regulations. As a result, EPA and the Corps still retain the authority to exercise jurisdiction over waters that substantially affect interstate commerce, as long as the sole basis for that authority is not the mere presence of migratory birds.

A further reason to include a provision that permits jurisdiction over waters with interstate commerce connections is that such a requirement was part of the rules to which the Supreme Court found Congress had acquiesced in preparing, debating, and adopting the 1977 amendments to the Act. Specifically, the rules on the books when Congress acted in 1977 stated that water bodies were protected if they were used "[b]y interstate travelers for water-related recreational purposes; [f]or the removal of fish that are sold in interstate commerce; [f]or industrial purposes by industries in interstate commerce; [or i]n the production of agricultural commodities sold or transported in interstate commerce…."[79]

F. Summary: The Legal Framework for Identifying "Waters of the United States"

Based on the foregoing discussion of the Supreme Court's decisions, several principles emerge that the agencies should follow in establishing rules that set out what kinds of aquatic features are covered by the law:

- Congress intended the law to have a comprehensive scope, because controlling pollution in larger waterways requires protecting the smaller and non-perennial resources upstream.

[77] *United States v. Lopez*, 514 U.S. 549, 558-59 (1995).
[78] *SWANCC*, 531 U.S. at 174.
[79] 40 Fed. Reg. at 31,324.

- Congress specifically considered rolling back protections over various non-navigable waters and rejected that approach, thereby ratifying coverage for certain waters.
- For decades, the law was understood to protect the vast majority of the nation's surface waters consistent with Congress's intent.
- The Supreme Court's decisions in *SWANCC* and *Rapanos* together do not require a significant retreat on comprehensive jurisdiction. Rather, they stand for the proposition that, although use by migratory birds, by itself, is not a sufficient basis to make a water body a "water of the United States," non-navigable waters may continue to be broadly protected under the law, and that is true at least for those categories of waters for which the science shows a majority of waters in the category contribute to an aggregate effect that amounts to a "significant nexus" with interstate or traditionally navigable waters.
- Interstate commerce remains a valid basis for protecting waters under the law.

In the sections that follow, we demonstrate that: the current legal status quo – as reflected in EPA/Corps guidance from 2003 and 2008 – does not protect water consistent with these principles; the proposed rule does a much better job of protecting the waters that Congress demanded be covered; and the proposal needs to be strengthened in several key aspects.

II. EXISTING GUIDANCE MUST BE REPLACED

EXISTING GUIDANCE IS MORE LIMITED THAN THE SUPREME COURT'S DECISIONS REQUIRE, ITS PRACTICAL IMPLEMENTATION HAS FURTHER UNDERMINED PROTECTIONS FOR WATERS THAT SHOULD BE COVERED, AND RULEMAKING IS THE PROPER ADMINISTRATIVE APPROACH FOR ADDRESSING THE LEGAL UNCERTAINTY.

Following both *SWANCC* and *Rapanos*, EPA and the Corps jointly developed guidance for field staff to aid in their implementation of the rules and the Court's decisions. As summarized below, these policies do not square with the legal framework that exists today, even after the Court's opinions, and the evidence suggests that these interpretations are resulting in the loss of aquatic resources.

A. *The 2003 Guidance Has Led the Corps and EPA to Leave Many Legally Protected Waters Unprotected*

In 2003, the agencies published a joint memorandum that discussed *SWANCC* and subsequent case law, which on its face did not represent a major retrenchment on clean water protections. It instructed as follows:

> In light of *SWANCC*, field staff should not assert CWA jurisdiction over isolated waters that are both intrastate and non-navigable, where the sole basis available for asserting CWA jurisdiction rests on any of the factors listed in the "Migratory Bird Rule." In addition, field staff should seek formal project-specific HQ approval prior to asserting jurisdiction over waters based on other factors listed in 33 CFR 328.3(a)(3)(i)–(iii).

> Field staff should continue to assert jurisdiction over traditional navigable waters (and adjacent wetlands) and, generally speaking, their tributary systems (and adjacent wetlands). Field staff should make jurisdictional and permitting decisions on a case-by-case basis considering this guidance, applicable regulations, and any additional relevant court decisions. Where questions remain, the regulated community should seek assistance from the agencies on questions of jurisdiction.[80]

In practice, however, the agencies' implementation of the 2003 policy guidance significantly undermined protections for water bodies that are geographically "isolated" and other intrastate waters. As it has unfolded, the guidance's instruction to get site-specific permission to protect any "other waters" under the existing rules has operated as *de facto* prohibition on protecting any "isolated" waters.

For instance, in September, 2005, the U.S. Government Accountability Office (GAO) issued a report that found, among other things, that the Corps was not adequately documenting its rationale for deciding that certain wetlands, streams, and other waters were no longer covered by the Clean Water Act.[81] In the five Corps' districts covered by the GAO investigation, the report found that only five percent or less of the files in four of the five districts contained a detailed rationale to justify a decision that had been made to decline jurisdiction, and that even in the best district, only 31 percent of the files contained such a rationale.[82] The GAO further found that "[t]he percentage of files that contained *no rationale whatsoever* as to why the Corps did not assert jurisdiction ranged from a low of 12 percent to a high of 49 percent in the five districts. The remaining files contained partial rationales."[83] In contrast, the GAO report found that the Corps' did more thoroughly document cases in which jurisdiction was asserted.[84]

More importantly, the GAO confirmed that the Corps was not using its legal authority to protect intrastate, "isolated" waters under the statute and its still-on-the-books regulations. The report states that:

> In the five districts we reviewed, Corps officials said they generally do not consider seeking jurisdiction over isolated, intrastate, nonnavigable waters on the sole basis of 33 C.F.R. § 328.3(a)(3) because (1) headquarters has not provided detailed guidance on when it is appropriate to use this provision; (2) they believe that headquarters does not want them to use this provision; (3) they were concerned about the amount of time that might be required for a decision from headquarters; or (4) few isolated, intrastate,

[80] 68 Fed. Reg. 1991, 1997-98 (Jan. 15, 2003).
[81] U.S. Government Accountability Office, *Waters and Wetlands: Corps of Engineers Needs to Better Support Its Decisions for Not Asserting Jurisdiction,* Sept. 2005, available at http://www.gao.gov/assets/250/247705.pdf. .
[82] *Id.* at 5. The five Corps districts included in the GAO study are Galveston, St. Paul, Jacksonville, Chicago, and Omaha. *See id.* at 9.
[83] *Id.* at 5 (emphasis added).
[84] *Id*. at 4. This section of the Corps' regulations includes in the definition of "waters of the U.S." those waters described as "[a]ll other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce." 33 C.F.R. § 328.3(a)(3).

> nonnavigable waters were in their districts whose use, degradation, or destruction could affect interstate commerce.[85]

In its conclusions, GAO recommended that the Secretary of the Army, through the Corps, and the Administrator of EPA jointly develop procedures that would provide "greater clarity" to the districts "when using 33 C.F.R. § 328.3(a)(3) as the sole basis for asserting jurisdiction."[86]

The GAO findings are consistent with a report completed by several national environmental organizations the previous year that had also concluded that the EPA and Corps were not fulfilling their obligation under the Act, its regulations, and judicial precedent to use their full legal responsibility to protect all of the waters that they can, leaving unprotected many waters that were, as a matter of law, still covered by the Clean Water Act. The report, issued in August 2004 by Earthjustice, the National Wildlife Federation, the Natural Resources Defense Council, and the Sierra Club, relied upon Corps of Engineers' records and revealed numerous examples of the Corps using the *SWANCC* decision and the 2003 guidance to decline jurisdiction over waters. The case studies in the report indicated that Corps districts around the country refused to assert jurisdiction over obviously significant waters including an 86-acre lake, a 150-mile-long river, a 4,000-acre tract of wetlands, and a 69-mile-long canal – leaving these waters and many others across the nation vulnerable to pollution and destruction.[87]

Indeed, the agencies now readily concede that, under the 2003 guidance, a finding of isolation effectively means that a water body will be treated as non-jurisdictional. In a June 2007 document, for instance, the agencies stated:

> All jurisdictional determinations based on commerce (§ 328.3(a)(3)) must be approved by HQ. Since the [2003] guidance has been in place, we have received 11 requests. Of these 11 requests, 3 cases were determined to be jurisdictional under other parts of the CWA [i.e., (a)(1) waters], 4 cases were determined to be not jurisdictional and 3 cases were withdrawn, and 1 is under review."[88]

[85] *Id.* at 6.
[86] *Id.* at 41.
[87] *See* Earthjustice, NWF, NRDC, and Sierra Club, *Reckless Abandon: How the Bush Administration is Exposing America's Waters to Harm* (Aug. 2004), available at http://vault.sierraclub.org/watersentinels/downloads/ReckelssAbandon.pdf.
[88] U.S. Army Corps of Eng'rs, Questions & Answers for *Rapanos & Carabell* Decision at 19 (June 5, 2007), available at http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/cwa_guide/rapanos_qa_06-05-07.pdf. It is worth noting that the above figure may not be entirely accurate, as it seems slightly inconsistent with a separate estimate. *See* General Accounting Office, Waters & Wetlands: Corps of Engineers Needs to Evaluate Its District Office Practices in Determining Jurisdiction, at 14 n. 14 (Feb. 2004), available at http://www.gao.gov/assets/250/241520.pdf ("Since January 2003, there have been eight cases in which districts sought headquarters' approval to assert jurisdiction over isolated, intrastate, nonnavigable waters, based upon 33 C.F.R. § 328.3(a)(3). In six of these cases, Corps headquarters ultimately determined that the water in question was navigable-in-fact. In one case, headquarters determined the water in question was not jurisdictional; and, in another, the district withdrew its request for headquarters' approval."). Nevertheless, we understand that one bottom line fact remains true – the agencies have not asserted jurisdiction over any water body using their "(a)(3)" authority since the guidance was issued.

In other words, between January 2003 and June 2007, only 11 requests to assert jurisdiction over "isolated" waters based on commerce went to HQ, and *none of them* were approved during that period. And these few were just the tip of the iceberg; this accounting did not tally up the number of cases in which the agencies declined jurisdiction without even bothering to elevate the matter.

Moreover, the Court's decision in *Rapanos* did not alter the agencies' practice with respect to so-called "isolated" waters,[89] even though one of the few things that was clear after *Rapanos* was that at least those waters that significantly affected downstream water quality could be protected, and even though (as discussed below) many kinds of "isolated" waters are critical components of the watersheds in which they are located. In a 2011 document, EPA stated that, since *SWANCC*, "no isolated waters have been declared jurisdictional by a federal agency,"[90] and the economic analysis that accompanied the current proposed rule contains a review of records from the Corps' ORM2 (Operation and Maintenance Business information Link, Regulatory Module) database, which indicates that in a two-year period under current practices, the Corps would likely determine all 8,209 instances of "other waters" it encountered to be non-jurisdictional.[91]

This isolation-equals-non-jurisdiction approach has also been acknowledged in Congressional testimony, as has the fact that it is not required by the case law. At an October 18, 2007 hearing before the House Transportation and Infrastructure Committee hearing – ironically enough, a hearing to mark the 35th anniversary of the Clean Water Act – the then-EPA Assistant Administrator for Water testified about the 2003 guidance and said:

> [T]he basic point there is in the guidance we held open the possibility that there could be circumstances under (a)(3) paragraphs of our regulations where there could be an assertion of jurisdiction over isolated interstate non-navigable waters without relying on the migratory bird rule provisions. As a legal matter, that is still possible, but as a practical matter we had not asserted jurisdiction over those types of wetlands based on that guidance, which is still in place.[92]

Sadly, the 2003 guidance and its *de facto* rule denying protections to intrastate, non-navigable, "isolated" waters are now more than a decade old. Surely many thousands of waters

[89] *See* U.S. EPA & U.S. Army Corps of Eng'rs, "Clean Water Act Jurisdiction Following the U.S . Supreme Court's Decision in *Rapanos v. United States & Carabell v. United States,* at 4 n. 19 (Dec. 2, 2008) (hereinafter "2008 *Rapanos* Guidance), available at http://water.epa.gov/lawsregs/guidance/wetlands/upload/2008_12_3_wetlands_CWA_Jurisdiction_Following_Rapanos120208.pdf ("This guidance does not address SWANCC, nor does it affect the Joint Memorandum regarding that decision issued by the General Counsels of EPA and the Department of the Army on January 10, 2003.").

[90] U.S. EPA, Potential Indirect Economic Impacts and Benefits Associated with Guidance Clarifying the Scope of Clean Water Act Jurisdiction, at 3 (Apr. 27, 2011), available at http://water.epa.gov/lawsregs/guidance/wetlands/upload/cwa_guidance_impacts_benefits.pdf.

[91] U.S. EPA & U.S. Army Corps of Eng'rs, Economic Analysis of Proposed Revised Definition of Waters of the United States, at 12 (Mar. 2014), available at http://www2.epa.gov/sites/production/files/2014-03/documents/wus_proposed_rule_economic_analysis.pdf.

[92] Testimony of Benjamin H. Grumbles, EPA Assistant Administrator for Water, Hearing of House Transportation & Infrastructure Committee: "The 35th Anniversary of the Clean Water Act: Successes and Future Challenges" (Oct. 18, 2007), available at http://www.gpo.gov/fdsys/pkg/CHRG-110hhrg38565/html/CHRG-110hhrg38565.htm.

have been cut out of the Act's pollution protections even though the Supreme Court did not strike down the regulatory basis for their coverage; in essence, the policy that has developed because of the 2003 guidance forces field personnel to disregard the still-lawful rules. This rulemaking presents an opportunity for the agencies to return to a predictable and legal approach to assessing the jurisdictional status of the nation's waterways.

B. Applying the 2008 Guidance to Tributary Streams and Implementing the "Significant Nexus" Framework in a Limited Manner Has Hurt Protections for Many Waters.

Following *Rapanos*, the agencies issued new guidance aimed at addressing the various opinions in the decision. The first post-*Rapanos* guidance came out in June, 2007, and was replaced by a new document in December, 2008. The guidance adds to the confusion created by *SWANCC*, the 2003 guidance, and by the *Rapanos* decision itself by creating new constraints on exercising jurisdiction that were not required by the Court. Specifically, the post-*Rapanos* guidance: (1) inappropriately concluded that categorical protections for tributaries were undermined by *Rapanos*; (2) narrowly limited the scope of the "significant nexus" analysis for those waters to which it applies; and (3) continued the pre-*Rapanos* practice of treating so-called "isolated" waters as *per se* non-jurisdictional, despite the authority in the regulations (and the lack of direction in either *SWANCC* or *Rapanos* to vary from the regulations) authorizing such waters' protection under certain circumstances. Many instances of these policy choices threatening particular water bodies are presented below; NRDC and our partner groups also surveyed examples in a 2009 report.[93]

1. Failing to Protect Tributaries Categorically Leads to Their Pollution and Destruction.

The agencies' post-*Rapanos* guidance does not assert categorical jurisdiction over tributaries, including streams. Rather, it concludes that streams that are not "relatively permanent" must be analyzed under Justice Kennedy's "significant nexus" framework. This approach is wrong as a matter of law and dangerous in fact.

As indicated above, the Supreme Court's decisions did not invalidate *any* provision of the existing regulations, including the provision conferring categorical jurisdiction over tributaries to various kinds of waters. Indeed, the Court would have been unjustified in doing so, as the waters at issue in both *SWANCC* and *Rapanos* were not tributaries themselves.

We have seen a number of examples that indicate that *Rapanos* is being used to deny tributaries protections in the field. For example, in just the few months following the issuance of the 2007 guidance, we identified several examples, including the following:

- The Omaha District found an ephemeral stream to be unprotected based on lack of significant nexus, where the flow of the tributary was unlikely to reach a traditionally

[93] Earthjustice et al., *Courting Disaster: How the Supreme Court Has Broken the Clean Water Act and Why Congress Must Fix It* (2009) (hereinafter "*Courting Disaster*"), available at http://vault.sierraclub.org/watersentinels/downloads/CourtingDisaster.pdf.

navigable water as a result of the intervening presence of "a water-supply reservoir with all impounded water piped to municipal water treatment plants or for re-injection into local bedrock aquifers."[94] This seems completely at odds with the Corps' stated view that "[g]enerally, impoundment of a water of the U.S. does not affect the water's jurisdictional status,"[95] and the existing regulations' separate provision declaring impoundments of certain waters jurisdictional.

- The Nashville District rejected Clean Water Act protections for three ephemeral streams, despite acknowledging the potential importance of such waters. In each case, the district based its assessment of the likelihood of a downstream effect on nothing more than distance and its unsubstantiated conclusion that such distance would attenuate the impact. As the district said in each case: "It is possible during a heavy precipitation event that the unnamed tributary to Horn Springs Branch could carry pollutants and flood waters to TNW along with transferring nutrients and oranic [sic] carbon. However, due to the fact that the water has to travel through two tributaries and between 5-10 river miles to the TNW, the impacts, if any would be very minor."[96]

- The Jacksonville District declared an ephemeral tributary draining a sub-basin approximately 7 acres in size to be non-jurisdictional, with hardly any analysis; rather, the determination states, in a conclusory fashion, that "[t]he frequency and amount of flow in the ditch is not significant enough to provide notable physical, chemical, or biological benefits to downstream waters or a TNW."[97]

Moreover, this practice continues today. In a very incomplete recent review of a few districts' websites, we found an example of an ephemeral tributary draining a 275 acre area that was denied Clean Water Act protection because it was found – by itself – to lack a significant nexus to a downstream navigable water. The determination states:

> Based on the small size of the drainage area (this is a first order stream), the semi-arid conditions, and the distance to the TNW (Arkansas River over 65 miles away) the capacity for this stream to carry pollutants to this TNW is so limited that it is unlikely that any pollutants from this stream would reach the TNW. As a result, any effect this ephemeral non-RPW stream would have on the chemical, physical or biological integrity of the TNW would be speculative and insubstantial.[98]

[94] U.S. Army Corps of Eng'rs, Omaha District, Approved Jurisdictional Determination: Channel Work in the North Tributary of Newlin Gulch at Lagae Ranch, NWO-2007-2195-DEN, at 3 (Nov. 1, 2007 (enclosed in Appendix A).
[95] U.S. Army Corps of Eng'rs, Jurisdictional Determination Form Instructional Guidebook, at 31 (May 30, 2007), available at http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/cwa_guide/jd_guidebook_051207final.pdf.
[96] U.S. Army Corps of Eng'rs, Nashville District, Approved Jurisdictional Determinations: Horn Springs Group, 200701845, 200701844, and 200701843, at 6 (Sept. 5, 2007) (copy not found online or in NRDC files; cited in NRDC et al. comments on EPA-HQ-OW-2007-0282, at 32 (Jan 21, 2008) (hereinafter "NRDC Comments on 2007 Guidance"), available at http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OW-2007-0282-0227).
[97] U.S. Army Corps of Eng'rs, Jacksonville District, Approved Jurisdictional Determination: SAJ-2007-4563, at 5 (Aug. 31, 2007) (enclosed in Appendix A).
[98] U.S. Army Corps of Eng'rs, Kansas City District, Approved Jurisdictional Determination: NWK-2013-00263 (Mar. 6, 2013), available at http://www.nwk.usace.army.mil/Portals/29/docs/regulatory/jd/2013-263-JD.pdf (also enclosed in Appendix A).

2. The Limited Interpretation of the "Significant Nexus" Analysis has Made it More Difficult to Demonstrate that Particular Adjacent Wetlands Are Jurisdictional.

In their post-*Rapanos* guidance materials, the agencies have instructed their staff to implement the law in a way that substantially constrains the evidence relevant to determining whether wetlands adjacent to tributaries not traditionally navigable have a "significant nexus" with traditionally navigable waters, and whether tributaries themselves have such a nexus. In particular, the guidance indicates that it is only appropriate to consider the cumulative effects of those wetlands that are adjacent to the same reach of a single individual tributary, rather than looking more broadly at the effects of similar wetlands over a larger geographic area (e.g., a watershed). With respect to tributaries themselves, the guidance looks only at the specific reach in question and any adjacent wetlands, as opposed to all tributaries in a region.

Long before the guidance was issued, opponents of comprehensive Clean Water Act protections recognized that the degree to which waterways' effects were aggregated would make an important difference in whether water bodies are protected. In urging staff of the White House Council on Environmental Quality not to read *Rapanos* in a way that would preserve broad wetlands protections, an attorney from the law firm Hunton & Williams, which has led the advocacy work of the industry coalition opposing legislation aimed at restoring Clean Water Act jurisdiction,[99] pushed for a limited approach to aggregation:

> The idea is NOT that you add up all the wetlands in the region and see if cumulatively they have a significant effect on traditional navigable waters. (That approach would vitiate Kennedy's case-by-case requirement and the answer to that question will probably always be "yes.")[100]

It is telling that even those urging the government to read *Rapanos* broadly and the scope of Clean Water Act protections more narrowly recognize the premise that wetlands, considered on a regional basis, will significantly impact water quality. Choosing not to look at such impacts therefore can be expected to limit the wetlands found to be significant enough to qualify for protection by EPA and the Corps.

We have found some evidence that the agencies' guidance, which unfortunately adopts a very similar approach to that advocated by Hunton & Williams, is leading to the loss of previously protected wetland resources. In a determination by the New York District of the Corps, a wetland directly abutting an intermittent tributary that flows directly to a traditionally navigable water was found to lack a "significant nexus," despite concluding that "[t]he wetlands are located alongside . . . landfill areas and may retain, convert, and cycle the potential runoff pollutants that would otherwise directly enter the tributary system," and that they "may serve as flood storage areas, retaining flood waters and precluding them from potentially flooding the

[99] *See, e.g.,* Letter from Deidre Duncan, Hunton & Williams LLP, to U.S. EPA Administrator Gina McCarthy & Sec. of Army John McHugh (Sept. 29, 2014) (identifying Ms. Duncan as counsel for the Waters Advocacy Coalition), available at http://www.fb.org/tmp/uploads/wacletter092914.pdf.

[100] Fax from Hunton & Williams to Greg (last name not identified), at 3 (Sept. 21, 2006) (produced in response to Freedom of Information Act by Council on Environmental Quality) (enclosed in Appendix A).

surrounding commercial development."[101] The determination found that the small size and proximity of the wetland to the navigable water made it less likely that the wetland would provide significant pollution attenuation, and found that the site had only one commercial building on the property and that other onsite wetlands might "better serve" the flood control purposes for the property.[102] The determination also found that the wetland would not be particularly good habitat for aquatic species.[103] In other words, the district looked exclusively at the functions performed by the single wetland under consideration, without looking more broadly at similar wetlands in the region.

Similarly, with respect to tributaries, looking only at the single reach in question makes it far harder to establish jurisdiction, even for resources that are collectively critical. For example, the Buffalo District of the Corps found three separate ephemeral tributaries to the Cuyahoga River to be non-jurisdictional based on a lack of "significant nexus," without considering the tributaries collectively (much less similar tributaries in the region).[104]

3. So-Called "Isolated" Waters Are Being Left Unprotected With Little Or No Analysis Of Their Relationship To Commerce And No Analysis Of Justice Kennedy's Significant Nexus Test.

As noted above, when the agencies' staff have found that a water body is "isolated" and does not qualify for protection under some other provision of the jurisdictional regulations (e.g., it is not itself traditionally navigable), that determination amounts to a jurisdictional death sentence for the water. Evidence suggests that this practice has led the agencies to write off literally thousands of water bodies since *SWANCC*, and often to disregard (or simply fail to examine) potential commerce connections in the process. Moreover, even after the Supreme Court's decision in *Rapanos,* in which Justice Kennedy made clear that hydrologic separation between water bodies could provide a significant nexus, so-called "isolated" waters have not been examined for whether they might have a nexus to downstream waters.[105]

Some examples of this practice continuing under the post-*Rapanos* guidance include the following:

- Parowan Creek in Utah, which supplies water for summer homes, for more than 6,500 head of cattle, for irrigation water for over 13,000 acres of alfalfa production, and for hydroelectric power production was initially found to be protected because of connections to interstate commerce. The field offices of the Corps and EPA concurred that these connections satisfied the rules' commerce test. However, EPA and Corps

[101] Army Corps of Eng'rs, New York District, Approved Jurisdictional Determination, NAN-2007,264-EJE-G, at 9 (Oct. 17, 2007) (enclosed in Appendix A).
[102] *Id.* Using a separate wetland's aquatic function to *diminish* the jurisdictional status of a wetland strikes us as exactly the opposite of the kind of cumulative analysis that Justice Kennedy thought the agencies should undertake.
[103] *Id.*
[104] Army Corps of Eng'rs, Buffalo District, Approved Jurisdictional Determination: City of Independence, 2006-00191, Ephemeral Streams 1, 2 & 3 (Nov. 1, 2007) (enclosed in Appendix A).
[105] *See* 547 U.S. at 786 ("Given the role wetlands play in pollutant filtering, flood control, and runoff storage, it may well be the absence of hydrologic connection (in the sense of interchange of waters) that shows the wetlands' significance for the aquatic system.").

headquarters' offices disagreed, and overruled the field determination; no information on the basis of their decision could be established.[106]

- In a non-jurisdictional determination for a five-acre lake in Sedalia, Missouri, the Corps undertook absolutely no analysis of the potential effects of using, degrading, or destroying the water body, instead concluding that the water lacks protection solely because it is an "[u]pland lake, man-made, not connection [sic] to any juridictional [sic] waters or wetlands."[107]

- The Corps found a 15-acre "isolated" lake in Greeley, Colorado to be non-jurisdictional. The lake, according to the determination, is a "private waterskiing lake for use by residents who live adjacent to the lake," but yet the Corps concluded that, among other things, "[t]here is no information available to show that this Ski Lake . . . is or could be used by interstate or foreign travlers [sic] for recreational or other purposes. . . ."[108] But the fact of recreational use by local people, a reasonable person would think, is *per se* evidence that interstate or foreign travelers (e.g., guests of the nearby residents) *could* use the water body.[109]

- The Corps determined a wetland in Peekskill, New York to be "isolated" and non-jurisdictional, despite the fact that it is located only 50 feet from a traditionally navigable water (Annsville Creek), "is situated on top of a former landfill site and may be contributing to the pollution of Annsville Creek," because of its hydrologic connection (albeit by a "non-jurisdictional swale feature") to the creek.[110] The determination finds it to be significant that water only flows from the wetland to the creek, not the other direction. The Corps' analysis of whether the use, degradation, or destruction of the feature could affect interstate commerce is perfunctory.

- The Corps declared a 10-acre wetland in Clay County, Arkansas to be unprotected based entirely on its conclusion that the feature was "isolated." The determination states: "These 10.0 acres of wooded wetland do not have a hydrologic connection to other waters of the US. The area is not within the 100-year floodplain and there is no tributary connection to the TNW."[111] The Corps did not examine what effect the use, degradation, or destruction of the wetland could have.

[106] *Courting Disaster* at 16.
[107] Army Corps of Eng'rs, Kansas City District, Approved Jurisdictional Determination: Menard Inc., 2007-02074, at 1 (Nov. 27, 2007) (enclosed in Appendix A).
[108] Army Corps of Eng'rs, Omaha District, Approved Jurisdictional Determination: Terra Ceia Estates, NWO-2007-2810-DEN, at 7 (Nov. 2, 2007) (enclosed in Appendix A).
[109] In addition, given its use for waterskiing, one would think that the water body would qualify as a "traditionally navigable water." *See* Instructional Guidebook, Appendix D (stating that the "traditional navigable waters" qualify as protected under 33 C.F.R. § 328.3(a)(1), and include "all . . . waters that are navigable-in-fact").
[110] Army Corps of Eng'rs, New York District, Approved Jurisdictional Determination: 9 Corporate Drive Peekskill Development, LLC, NAN-2007-264-EJE-C, at 2-3 (Oct. 17, 2007) (enclosed in Appendix A).
[111] U.S. Army Corps of Eng'rs, Little Rock District, Approved Jurisdictional Determination: Weston, Steve, #2007-00430, at 1 (Oct. 12, 2007) (enclosed in Appendix A).

- EPA and the Corps jointly refused to approve a request by the Portland District to assert jurisdiction over Long Lake in Klamath Falls, Oregon, using the agencies' residual regulatory authority to protect waters.[112] The agencies reached this conclusion despite a suggestion that the area was used to support cattle and perhaps also for bird watching.[113] Moreover, the agencies did not appear to consider the role that Long Lake might play in an issue obviously related to interstate commerce – water storage in the Klamath Basin. At the time, Long Lake reportedly was under consideration to be used as a water storage and potential supply site by the Bureau of Reclamation.[114]

The agencies' practice of denying protections to "isolated" waters has not altered in recent years. For example, we identified several recent examples of this approach, including:

- Last month, the Omaha District declared a 150-acre prairie pothole basin in Mountrail County, North Dakota not to be covered by the Act, after finding it to be geographically "isolated" and asserting that "there is no documentation of an interstate or foreign commerce nexus…."[115]

- This June, a 10.9 acre pond in Hibbing, Minnesota was found not to have any surface connections to other waters. The St. Paul District stated without analysis that the pond was not known to have any interstate commerce connections, and did not perform any kind of significant nexus analysis.[116]

- This February, the Kansas City District found that a 6 acre wetland near Park City, Kansas to be "isolated" and non-jurisdictional. The Corps' form recites without analysis that the wetland's use, degradation, or destruction would not impact interstate commerce. There was no consideration of whether the wetland, which receives sheet flow from nearby fields, could have a significant nexus to other waters

[112] Memorandum from Brian Frazer, Wetlands & Aquatic Resources Regulatory Branch, U.S. EPA & Russell L. Kaiser, Regulatory Community of Practice, U.S. Army Corps of Eng'rs, Declination of Jurisdiction for Jurisdictional Determination NWP-2007-369 (Nov. 15, 2007(enclosed in Appendix A).
[113] U.S. Army Corps of Eng'rs, Portland District, Approved Jurisdictional Determination: NWP-2007-369, at 8 (Nov. 15, 2007) ("A review of the lake being potentially jurisdictional under the commerce connection as defined in 33 CFR 328.3(a)(3) with cattle and bird watching activities are not sufficient commerce to support jurisdiction.") (enclosed in Appendix A).
[114] *See* Herald & News: Viewpoints, "Long Lake part of the answer to water problems," (July 23, 2007), available at http://www.klamathbasincrisis.org/storage/longlake/partofanswer072307.htm. Strangely, the Corps' determination reports that "[t]he proposed project by the bureau of reclamation will create a direct chemical, physical, biological and hydrological connection to Klamath Lake a TNW," but does not seem to consider whether this connection is indicative that the use, degradation, or destruction of the resource could have interstate commerce effects. *See* Portland District, Approved Jurisdictional Determination: NWP-2007-369, at 8.
[115] U.S. Army Corps of Eng'rs, Omaha District, Approved Jurisdictional Determination: Mountrail County; Redmond Township Repair; FEMA-4128-PW 00117(1) Site 1; Isolated Wetland, NWO-2014-2020-BIS (Oct. 3, 2014), available at http://www.nwo.usace.army.mil/Portals/23/docs/regulatory/ND/jds/NWO-2014-2020-BIS.pdf.
[116] U.S. Army Corps of Eng'rs, St. Paul District, Approved Jurisdictional Determination: Hibbing Taconite Company, 2014-00396-DWW, Review Area 5001 Stockpile (June 24, 2014), available at http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/approvjds_mn/2014000396J%20Stockpile%205001.pdf

by, for instance, intercepting runoff.[117]

- This January, the Sacramento District found that several wetlands on a site in Provo, Utah totaling over 6 acres were "isolated" and non-jurisdictional. The form states (without providing any evidence) that there is no link between these waters and interstate commerce, and does not consider whether the wetlands might have a significant nexus to downstream waters.[118]

4. Existing Guidance Frustrates Effective Law Enforcement.

Another major way that water pollution is made easier by the legal chaos unleashed by the Supreme Court and the existing guidance implementing the Court's opinions is the inability of pollution control officials to effectively enforce the law. Because it is extremely time-consuming and resource-intensive to establish that a particular aquatic feature qualifies as a "water of the United States" under the restrictive case-by-case approach embodied in the existing guidance, enforcing the law is difficult. That is particularly true in cases where the aquatic resource in question has been destroyed; consider the difficulty of showing that a particular water body that once existed (but about which little information may have ever been gathered) also had a "significant nexus" to downstream waters when it was there.

The agencies' enforcement dilemma has had tangible effects. Federal officials have been forced to abandon hundreds, if not thousands, of cases in which EPA and/or the Corps believed the law had been violated. Even when the government believes an enforcement case may be maintained under existing policies and guidance, the absence of clear regulations has made it possible for defendants to drag out litigation over many years, wasting enormous resources in the process. In particular:

- EPA acknowledged that it "has had to discontinue all enforcement cases" in tributaries to the San Pedro River "because it was so time-consuming and costly to prove that the Clean Water Act protects these rivers."[119]

- According to EPA, "[c]hallenges in proving jurisdiction hampered enforcement efforts when a large animal feeding operation in Georgia … discharged liquid manure to tributaries. Unhealthy levels of viruses and bacteria were found downstream in Lake Blackshear, used for waterskiing and other water recreation."[120]

[117] U.S. Army Corps of Eng'rs, Kansas City District, Approved Jurisdictional Determination: Herb Greenup - Isolated Wetland, NWK-2014-00090 (Feb. 10, 2014), available at http://www.nwk.usace.army.mil/Portals/29/docs/regulatory/jd/2014-90-JD.pdf.
[118] U.S. Army Corps of Eng'rs, Sacramento District, Approved Jurisdictional Determination: Ironton Development, South, SPK-2013-00840-UO (Jan. 8, 2014), available at http://www.spk.usace.army.mil/Portals/12/documents/regulatory/jd/2014/january/SPK-2013-00840IsolatedJDPacket.pdf.
[119] U.S. EPA, "Waters of the United States: Enforcement of the law has been challenging," available at http://www2.epa.gov/uswaters.
[120] *Id.*

- According to a New York Times investigative story, in a four-year period, more than 1,500 major pollution investigations of "[c]ompanies that have spilled oil, carcinogens and dangerous bacteria into lakes, rivers and other waters [were] not being prosecuted, according to Environmental Protection Agency regulators working on those cases."[121]

- An EPA analysis in 2011 said, "EPA enforcement managers have indicated that enforcement efforts are shifting from protecting small streams high in the watershed and instead are moving down river. In short, EPA is focusing efforts on larger streams and rivers, where there is more certainty of establishing jurisdiction."[122]

- "An estimated total of 489 enforcement cases (Sections 311, 402, and 404 combined) have been affected such that formal enforcement was not pursued as a result of jurisdictional uncertainty, case priority was lowered as a result of jurisdictional uncertainty, or lack of jurisdiction was asserted as an affirmative defense to an enforcement action."[123] The head of EPA enforcement identified similar figures in an internal analysis.[124]

- In the headwaters of the Weweantic River, which flows into Buzzards Bay in Massachusetts, EPA found that the operators of a cranberry production site dredged and filled several dozen acres of freshwater wetlands to create commercial cranberry bogs. EPA initiated an enforcement action in 1999, which led to a trial court order in 2004 fining the defendants $75,000 and requiring restoration of the impacted wetlands. This decision was upheld on appeal despite the Supreme Court's intervening decision in *SWANCC*, but in 2006 and 2007, the defendants were able, in the wake of *Rapanos*, to get the case sent back to the trial court for additional fact-finding. The defendants were found liable again in 2011 and finally settled the litigation in 2012. After this protracted litigation, the settlement requires – again – the defendants to pay a $75,000 fine and restore wetlands to attempt to compensate for the damage they caused well over a decade ago.[125]

[121] Charles Duhigg & Janet Roberts, "Rulings Restrict Clean Water Act, Foiling E.P.A.," *New York Times*, at A1 (Feb. 28, 2010), available at http://www.nytimes.com/2010/03/01/us/01water.html?_r=0.
[122] U.S. EPA, Potential Indirect Economic Impacts and Benefits Associated with Guidance Clarifying the Scope of Clean Water Act Jurisdiction, at 13 (Apr. 27, 2011), available at http://water.epa.gov/lawsregs/guidance/wetlands/upload/cwa_guidance_impacts_benefits.pdf.
[123] U.S. EPA Inspector Gen., *Special Report: Congressionally Requested Report on Comments Related to Effects of Jurisdictional Uncertainty on Clean Water Act Implementation*, Report No. 09-N-0149, at 1 (Apr. 30, 2009), available at http://www.epa.gov/oig/reports/2009/20090430-09-N-0149.pdf.
[124] Letter from Representatives James Oberstar & Henry Waxman to Stephen Johnson, EPA Administrator (July 7, 2008) (attaching internal memorandum from Granta Nakayama, Assistant Administrator for Enforcement & Compliance Assurance to Benjamin Grumbles, Assistant Administrator for Water, which identified hundreds of cases in which EPA chose not to pursue formal enforcement action or lowered the priority of the case, or in which defendants raised jurisdictional defenses) (enclosed in Appendix A).
[125] *Courting Disaster* at 30-31; U.S. EPA, Massachusetts Cranberry Farmers Agree to Restore 26 Acres of Wetlands and Pay $75,000 Penalty (Mar. 5, 2012), available at http://yosemite.epa.gov/opa/admpress.nsf/6427a6b7538955c585257359003f0230/14aa7646dceaf937852579c10063b6f0!OpenDocument.

- In an enforcement action regarding the destruction of nearly 200 acres of wetlands adjacent to Pond Creek and Caney Creek, tributaries to the Green River in Kentucky, legal wrangling over the effects of *Rapanos* protracted the litigation enormously. The dischargers were finally held liable more than 17 years after the defendants' actions triggered government action.[126]

5. Rampant Uncertainty in Implementing and Enforcing the Law Demands Clear Regulations that Citizens, Pollution Control Officials, Dischargers, and Courts Can Follow.

As the preceding overview of the recent history of attempts to implement the Act following the Supreme Court's decisions and the agencies' constrained guidance documents illustrates, the only thing that is clear about what waters the Clean Water Act covers today is that there is very little clarity.

Soon after *SWANCC* and continuing for many years, clean water advocates urged Congress to restore the clear protections that once existed in the law by legislatively overruling the Supreme Court's misinterpretation of the law. In 2009, the Administrator of EPA, the Secretaries of Agriculture and Interior, the Acting Assistant Secretary of the Army for Civil Works, and the Chair of the Council on Environmental Quality wrote to Senate Environment and Public Works Chairman Boxer, strongly supporting legislation to restore protections.[127] Later that year, the Environment and Public Works Committee voted out a bill that sought to codify the scope of protections in place immediately before the Supreme Court ruled.[128]

For their part, opponents of legislation consistently argued that Congress did not need to act, but rather EPA and the Corps should adopt regulations identifying covered waters that accounted for the Supreme Court's rulings. For instance, a representative of the Waters Advocacy Coalition testified in 2008 that the agencies should promulgate new regulations.[129] People on all sides of the issue similarly have called for regulatory action over many years, even while vigorously debating what the content of such rules should be.[130] Likewise, Supreme Court

[126] *Courting Disaster* at 34-35 (describing history of case culminating in *U.S. v. Cundiff*, 555 F.3d 200 (6th Cir. 2009)).
[127] Letter from Nancy Sutley, Council on Environmental Quality Chair, et al. to Senator Barbara Boxer (May 20, 2009), available at http://www.epw.senate.gov/public/index.cfm?FuseAction=Files.View&FileStore_id=293a81f3-7df6-4319-ac22-ce0ed1611e78.
[128] U.S. Senate Comm. on Env't & Pub. Works, Rpt. No. 111-361, 111th Cong., 2d Sess. (Dec. 10, 2010), available at http://www.gpo.gov/fdsys/pkg/CRPT-111srpt361/pdf/CRPT-111srpt361.pdf.
[129] *See, e.g.*, Testimony of Virginia Albrecht, Hunton & Williams, on behalf of the Waters Advocacy Coalition, Hearing of the Committee on Transportation & Infrastructure, U.S. House of Representatives, titled "The Clean Water Restoration Act of 2007," at 16-17 (Apr. 16, 2008), available at http://maplight.org/files/map_research/2012-01/US_111_S787_Oppose_WAC_0.pdf.
[130] U.S. EPA, Fact Sheet: Persons and Organizations Requesting Clarification of "Waters of the United States" By Rulemaking (undated), available at http://www2.epa.gov/sites/production/files/2014-03/documents/wus_request_rulemaking.pdf.

justices have both called explicitly for new rules,[131] and chastised the agencies for not developing them.[132] We are grateful that the agencies have moved forward with a proposed rule to establish enforceable standards for identifying protected waters.

In the sections that follow, we discuss the proposed rule. In general, we believe the proposed rule to be a strong step forward that is largely consistent with the law's central purpose and broad jurisdiction. The proposal appropriately safeguards tributaries and nearby waters categorically based on their myriad impacts on downstream waters. However, it falls short with respect to "other waters," which likewise are critical components of watersheds around the country. The proposal also exempts categories of waters without adequate justification, and maintains an existing exemption that has long been inappropriate. Next, we respond to several specific requests for comment. Finally, we offer some suggestions with respect to documenting future jurisdictional decisions pursuant to the rule.

III. THE PROPOSED CATEGORICAL PROTECTIONS ARE JUSTIFIED

THE PROPOSED CATEGORICAL PROTECTIONS FOR TRIBUTARIES AND ADJACENT WATERS ARE LEGALLY AND SCIENTIFICALLY JUSTIFIED AND MUST BE INCLUDED IN THE FINAL RULE.

As discussed above, the rule must at least afford the protections of the law to the waters that pass Justice Kennedy's "significant nexus" test. Under this test, a water is jurisdictional under the Clean Water Act if there exists "a significant nexus between the [water] in question and navigable waters in the traditional sense."[133] Jurisdiction can be established based on an analysis of a water's "ecological functions vis-à-vis other covered waters."[134] This test allows for waters to be protected not just singly, but also categorically. Justice Kennedy specifically mentioned in his opinion that, "[t]hrough regulations or adjudication, the Corps [or EPA] may choose to identify *categories*" of waters that pass the test, based on scientific considerations.[135] The agencies must "establish a scientific nexus on a case-by-case basis" only in the absence of "more specific regulations" that provide appropriate justification for categorical protections.[136]

[131] *See Rapanos*, 547 U.S. at 812 (Breyer, J., dissenting) ("In the absence of updated regulations, courts will have to make ad hoc determinations that run the risk of transforming scientific questions into matters of law. That is not the system Congress intended. Hence I believe that today's opinions, taken together, call for the Army Corps of Engineers to write new regulations, and speedily so.").
[132] *Rapanos*, 547 U.S. at 758 (Roberts, C.J., concurring) ("Agencies delegated rulemaking authority under a statute such as the Clean Water Act are afforded generous leeway by the courts in interpreting the statute they are entrusted to administer. *** Rather than refining its view of its authority in light of our decision in SWANCC, and providing guidance meriting deference under our generous standards, the Corps chose to adhere to its essentially boundless view of the scope of its power. The upshot today is another defeat for the agency."); *Sackett v. EPA*, 132 S.Ct. 1367, 1375 (Alito, J., concurring) (discussing ambiguity of term "waters of the United States" and stating, "the EPA has not seen fit to promulgate a rule providing a clear and sufficiently limited definition of the phrase").
[133] *Rapanos*, 547 U.S. at 779.
[134] *Id.* at 780.
[135] *Id.* at 780-81 (emphasis added).
[136] *Id.* at 782.

The proposed categorical protections for tributaries and adjacent waters are a commonsense approach on firm scientific and legal ground.[137] EPA's "Connectivity Report" establishes definitively that tributaries and adjacent waters categorically pass the "significant nexus" test with ease. These findings were confirmed by the independent Science Advisory Board. Therefore, these categorical protections must be included in the final rule.

A. Tributaries

EPA and the Corps propose to define the term "waters of the United States" as including all tributaries of traditionally navigable waters, interstate waters, the territorial seas, and impoundments of those same waters, thereby categorically extending legal protections to all such tributaries. This approach is fully consistent with Justice Kennedy's "significant nexus" test, even though – as discussed above – the Supreme Court's decisions do not require any change in the existing regulations concerning tributaries.[138]

The scientific justification for categorically protecting tributaries is extremely robust. This conclusion is supported by a review and synthesis of more than 1,000 publications from the peer-reviewed scientific literature, often referred to as the Connectivity Report.[139] In that report, EPA concluded that tributaries, as a class, have an undeniable impact on downstream navigable waters, stating:

> The scientific literature demonstrates that streams, individually or cumulatively, exert a strong influence on the character and functioning of downstream waters. All tributary streams, including perennial, intermittent, and ephemeral streams, are physically, chemically, and biologically connected to downstream rivers via channels and associated alluvial deposits where water and other materials are concentrated, mixed, transformed, and transported. Headwater streams (headwaters) are the most abundant stream type in most river networks and supply most of the water in rivers. In addition to water, streams transport sediment, wood, organic matter, nutrients, chemical contaminants, and many of the organisms found in rivers. Streams are biologically connected to downstream waters by the dispersal and migration of aquatic and semiaquatic organisms, including fish, amphibians, plants, microorganisms, and invertebrates, that use both up- and downstream

[137] These comments focus on the categories of water bodies that have most been in dispute under the current legal regime. We of course support the continued categorical protection of traditionally navigable waters, interstate waters, the territorial seas, and impoundments of specified waters, and the agencies' proposal amply supports maintaining longstanding safeguards for these as well.

[138] Justice Kennedy indicated that an existing regulatory provision that uses the presence of an ordinary high water mark to identify the lateral limits of a tributary could itself "provide a reasonable measure of whether specific minor tributaries bear a sufficient nexus with other regulated waters to constitute 'navigable waters' under the Act." 547 U.S. at 781. However, Justice Kennedy did not say that the presence of an OHWM is a necessary prerequisite to jurisdiction, and it certainly is not needed if tributaries are shown to have a significant nexus without regard to whether a OHWM is present. As proposed, the rule would use OHWM as a guidepost; it proposes to define "tributary," with respect to flowing waters, as any water that: (1) is "physically characterized by the presence of a bed and banks and ordinary high water mark," and that it (2) "contributes flow, either directly or through another water," to a traditionally jurisdictional water. *See, e.g.*, 79 Fed. Reg. at 22,263 (proposed 33 C.F.R. § 328.3(c)(5). As discussed below, we are not convinced that these requirements are necessary, but they are certainly sufficient.

[139] U.S. EPA, Office of Research & Development, *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence* – External Review Draft (Sept. 2013) (hereinafter "Connectivity Report").

> habitats during one or more stages of their life cycles, or provide food resources to downstream communities. Physical, chemical, and biological connections between streams and downstream waters interact via processes such as nutrient spiraling, in which stream communities assimilate and chemically transform large quantities of nitrogen (N) and other nutrients that would otherwise increase nutrient loading downstream.[140]

These conclusions apply equally to very small and infrequently flowing tributary streams. According to the Connectivity Report, "Even infrequent flows through ephemeral or intermittent channels influence fundamental biogeochemical processes…."[141] And headwater streams, which are the smallest channels where stream flows begin, are the source of approximately 60% of the total mean annual flow to all northeastern U.S. streams and rivers, making their impact on the chemical, physical, and biological integrity of our waters indisputable.[142]

These findings have been confirmed by the Science Advisory Board in its peer review of the Connectivity Report. In its final report to EPA, the SAB wrote:

> The Report concludes that these streams exert a strong influence on the character and functioning of downstream waters, and indeed that all tributary streams are physically, chemically, and biologically connected to downstream waters. Strong scientific support has been provided for this overall conclusion and related findings. The SAB notes that there is a gradient of connectivity that is a function of the frequency, duration, magnitude, predictability, and consequences of physical, chemical, and biological connections. The SAB recommends that the conclusions and findings concerning ephemeral, intermittent, and perennial streams be quantified when possible, related to the four dimensions of connectivity (longitudinal, lateral, vertical and temporal), and discussed with additional detail on biogeochemical transformations and biological connections. In addition, some hydrologic aspects of connectivity require additional detail; these include descriptions of key linkages and exchanges in tributary streams, such as groundwater-surface water interactions, and the role of transition areas between uplands and headwaters. Likewise, the Report should explain how hydrologic connectivity sustains both streams and aquifers, particularly in alluvial systems in the Southwest and in karst systems in the eastern United States.[143]

Although this conclusion should surprise nobody, the fact that the Connectivity Report's assessment that tributaries have a "strong influence" on downstream waters is backed by "[s]trong scientific support" is a more than adequate basis on which to conclude that tributaries, as a class, have a significant nexus to other covered waters and thus should be categorically protected. Indeed, in providing advice to EPA on the proposed rule (as opposed to the

[140] *Id.* at 1-3.
[141] *Id.* at 1-7.
[142] *Id.*
[143] U.S. EPA Science Advisory Board, SAB Review of the Draft EPA Report *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence*, EPA-SAB-15-001, at 3-4 (Oct 17, 2014) (hereinafter "SAB Connectivity Review"), available at http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/AF1A28537854F8AB85257D74005003D2/$File/EPA-SAB-15-001+unsigned.pdf.

Connectivity Report), the SAB stated, "[t]here is strong scientific evidence to support the EPA's proposal to include all tributaries within the jurisdiction of the Clean Water Act."[144]

Ensuring that tributaries are covered under the Clean Water Act's pollution control programs frequently means cleaner water for larger downstream rivers, estuaries, and oceans. Even when they are not helping to make downstream waters better, tributaries have significant impacts on the biological, chemical, and physical condition of downstream waters: pollution dumped into streams high up in the watershed can cause harm in larger water bodies (a classic example being the Gulf of Mexico "Dead Zone"); and filling in upstream tributaries can dramatically alter the physical hydrology of downstream waters (a simple example is a dam built to divert flow from the tributary to an industrial use). It is both intuitive and demonstrably true that processes occurring upstream within these small bodies of water affect the entire river network's structure and function. As the Connectivity Report shows, the science conclusively establishes that tributaries have not only significant but overwhelming effects on downstream navigable waters. The proposal's categorical protections for tributaries are both justified and compelled by these findings, and they must be included in the final rule.

B. Adjacent Waters

EPA and the Corps further propose to define the term "waters of the United States" as including all waters, including wetlands, adjacent to traditionally navigable waters, interstate waters, the territorial seas, impoundments of those same waters, and tributaries.[145] Wetlands, in turn, are defined (as they long have been) as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." And "adjacent" means "bordering, contiguous or neighboring," including waters that are separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes, and the like.[146] This proposal amply satisfies the criteria that Justice Kennedy laid out in his *Rapanos* opinion.

First, Justice Kennedy stated that wetlands' significant nexus can be analyzed "either alone or in combination with similarly situated lands in the region."[147] In other words, the significant nexus test can justify jurisdiction over either individual wetlands or categories of

[144] U.S. EPA Science Advisory Board, Science Advisory Board (SAB) Consideration of the Adequacy of the Scientific and Technical Basis of the EPA's Proposed Rule titled "Definition of Waters of the United States under the Clean Water Act," EPA-SAB-14-007, at (Sept. 30, 2014) (hereinafter "SAB Rule Review"), available at http://yosemite.epa.gov/sab/sabproduct.nsf/0/518D4909D94CB6E585257D6300767DD6/$File/EPA-SAB-14-007+unsigned.pdf.

[145] *See* 79 Fed. Reg. at 22,269 (proposed 40 C.F.R. § 230.3(s)(6)). We strongly support the agencies' inclusion of adjacent waters generally, as opposed to simply adjacent wetlands, in this provision. Both the Connectivity Report and the SAB find that adjacent waters have a variety of critical connections to downstream waters, without limiting that analysis to adjacent wetlands.

[146] We support the agencies' proposal to eliminate the confusing parenthetical expression "other than waters that are themselves wetlands" from the adjacent waters provision. As proposed, the rule would not provide jurisdiction over waters adjacent to so-called "isolated" waters based solely on their adjacency. As that was the purpose of the provision initially, *see* 79 Fed. Reg. at 22,209, the provision is unneeded. Moreover, because the proposal recognizes that wetlands can serve as tributaries, wetlands and other waters adjacent to those tributary wetlands should be jurisdictional by rule, something that this outdated provision would have prevented.

[147] *Rapanos*, 547 U.S. at 780.

wetlands. Next, Justice Kennedy noted that jurisdiction over waters adjacent to navigable-in-fact waters is "sustainable under the Act by showing adjacency alone," as adjacency to such waters supports a "reasonable inference of ecologic interconnection."[148] According to Justice Kennedy, it may also be reasonable to infer a significant nexus, and therefore CWA jurisdiction, for waters adjacent to "certain major tributaries" if the agencies determine that such tributaries are "significant enough that wetlands adjacent to them are likely, in the majority of cases, to perform important functions for an aquatic system incorporating navigable waters."[149] For wetlands adjacent to other, "minor" tributaries, however, the agencies cannot assume without evidence that adjacent wetlands play an important enough "role in the integrity of an aquatic system."[150] For this reason, Justice Kennedy required a case-by-case analysis for such waters "*absent more specific regulations*."[151] This limited requirement – designed "to avoid unreasonable applications of the statute"[152] – thus permits the agencies to reasonably assert jurisdiction over waters adjacent to non-navigable tributaries through regulations, based on scientific evidence.

EPA and the Corps have put forth those "more specific regulations," supported by overwhelming scientific evidence, in this proposal.[153] With regard to waters adjacent to tributaries, the agencies have now determined, using their expert judgment and the available science, that waters adjacent to *all* tributaries have a significant nexus to traditionally navigable waters. The proposed provision is consistent with Justice Kennedy's interpretation of the Clean Water Act, as jurisdiction is not based on "assumptions" like the ones against which he warned, but rather on a detailed review of relevant science.

EPA's Connectivity Report explains the reasons why adjacent waters – which it refers to as waters located in floodplains and riparian areas with "bidirectional hydrologic exchanges with streams or rivers" – have important effects on downstream waters as follows:

> Wetlands and open-waters in landscape settings that have bidirectional hydrologic exchanges with streams or rivers (e.g., wetlands and open-waters in riparian areas and floodplains) are physically, chemically, and biologically connected with rivers via the export of channel-forming sediment and woody debris, temporary storage of local groundwater that supports baseflow in rivers, and transport of stored organic matter. They remove and transform excess nutrients such as nitrogen and phosphorus (P). They provide nursery habitat for breeding fish, colonization opportunities for stream invertebrates, and maturation habitat for stream insects. Moreover, wetlands in this landscape setting serve an important role in the integrity of downstream waters because they also act as sinks by retaining floodwaters, sediment, nutrients, and contaminants that could otherwise negatively impact the condition or function of downstream waters.[154]

[148] *Id.*
[149] *Id.* at 780-81.
[150] *Id.* at 781.
[151] *Id.* at 782.
[152] *Id.*
[153] We do not discuss here the assertion of jurisdiction over waters adjacent to the first four types of waters listed in the proposed definition: navigable-in-fact waters, interstate waters, the territorial seas, and impoundments of those waters. Those provisions were not at issue in *Rapanos* and we submit that *Riverside Bayview* provides the applicable precedent for jurisdiction over those kinds of features.
[154] Connectivity Report at 1-3.

These conclusions are irrefutable based on the literature summarized in Chapter 5 of the report. The material presented in the report is more than sufficient to conclude that adjacent waters, including wetlands, are highly connected to downstream waters. For example, "Riparian areas act as buffers that are among the most effective tools for mitigating nonpoint source pollution."'[155] These adjacent waters "connect upland and aquatic environments through both surface and subsurface hydrologic flow paths," and they "can reduce flood peaks by storing and desynchronizing floodwaters."[156]

These findings have been confirmed by the Science Advisory Board in its peer review of the Connectivity Report. The SAB found "that the literature review substantiates the Report's conclusion that floodplains and waters and wetlands in floodplain settings support the physical, chemical and biological integrity of downstream waters."[157] In its review of the proposed rule, the SAB reaffirmed this conclusion: "adjacent waters and wetlands have a strong influence on the physical, chemical, and biological integrity of navigable waters."[158]

Critically, the definition of "adjacent" that the agencies have proposed is consistent with the Connectivity Report's scientific criteria for "bidirectional" waters in riparian areas and floodplains, the criteria that circumscribe the waters to which the above conclusions apply.[159] The regulatory proposal defines "adjacent" to mean "bordering, contiguous or neighboring." "Neighboring" is the most inclusive of these terms and is defined as "waters located within the riparian area or floodplain of a water identified in paragraphs (1) through (5) of this section [traditionally navigable waters, interstate waters, the territorial seas, impoundments of those same waters, and tributaries], or waters with a shallow subsurface hydrologic connection or confined surface hydrologic connection to such a jurisdictional water." The Connectivity Report, in turn, draws the above-stated conclusions about waters "in landscape settings that have bidirectional hydrologic exchanges with streams or rivers (e.g., wetlands and open-waters in riparian areas and floodplains)."[160]

Finally, the proposal's definitions for riparian areas and floodplains also closely align with those used in the Connectivity Report.[161] The upshot is that there is enormous overlap

[155] *Id.* at 1-9.
[156] *Id.*
[157] SAB Connectivity Review at 4.
[158] SAB Rule Review at 2.
[159] Although the SAB recommends that the final Connectivity Report move away from using the term "bidirectional" and instead refer to "waters and wetlands in floodplain settings" to better reflect the geographic position of the waters in question, and although it also suggests discussing riparian areas largely in the Report's section on streams, SAB Connectivity Review at 4, it is noteworthy that the SAB did not question the inclusion of riparian waters in the definition of "adjacent" waters. *See* SAB Rule Review at 2-3.
[160] Connectivity Report at 1-9.
[161] *Compare* the proposal's definition of "riparian area" ("transitional areas between aquatic and terrestrial ecosystems that influence the exchange of energy and materials between those ecosystems") with Connectivity Report at 3-4 ("Riparian areas are transition zones between terrestrial and aquatic ecosystems … [and] include those portions of terrestrial ecosystems that that significantly influence exchanges of energy and matter with aquatic ecosystems.") (internal citations omitted); *compare* the proposal's definition of "floodplain" ("an area bordering inland or coastal waters that was formed by sediment deposition from such water under present climatic conditions and is inundated during periods of moderate to high water flows") with Connectivity Report at 3-4 ("Floodplains are level areas bordering stream or river channels that are formed by sediment deposition from those channels under present climatic conditions. These natural geomorphic features are inundated during moderate to high water events.").

between the proposal's "adjacent waters" and those waters that the Connectivity Report states "are physically, chemically, and biologically connected" with navigable waters.[162] The Connectivity Report therefore amply supports, as it does with regard to tributaries, the conclusion that adjacent waters have scientifically proven effects, which are beyond significant, on other covered waters. These findings justify and in fact require that the proposal's categorical protections for adjacent waters be included in the final rule.

IV. THE RULE SHOULD BE STRENGTHENED

IN ORDER TO ENSURE NECESSARY PROTECTIONS FOR CRITICAL WATERS, AND TO ENSURE THE RULE'S CONSISTENCY WITH THE CLEAN WATER ACT, THE PROPOSAL MUST BE STRENGTHENED IN THREE KEY WAYS.

Although the proposed categorical protections for tributaries and adjacent waters are both justified and compelled, three other aspects of the proposal are deficient and must be revised prior to finalization. First, the rule should include categorical protections for a host of so-called "other waters." Second, the rule should not exclude man-made tributaries without a scientific basis for doing so. Third, the rule should limit the current exemption for waste treatment systems.

A. The Rule Should Categorically Protect Certain "Other Waters"

EPA and the Corps propose to continue the current case-by-case "significant nexus" analysis for all "other waters, including wetlands" that do not fit the definitions of the other six categories of protected waters (and that are not explicitly exempted from regulation). The agencies propose this approach because they conclude that the connectivity of "'other waters' … varies within a watershed and over time, making it difficult to generalize about their connections to, or isolation from, traditional navigable waters, interstate waters, and the territorial seas."[163]

This proposed approach is not legally or scientifically justified. EPA and the Corps seem to recognize this fact, asking in the Federal Register notice that stakeholders provide "comment and information … on how the science could support other approaches that could provide greater regulatory certainty regarding the jurisdictional status of 'other waters,' including expanding the list of waters jurisdictional by rule …"[164] Furthermore, the agencies acknowledge that the Connectivity Report "indicates that there is evidence of *very strong connections* in some subcategories that are not included as jurisdictional by rule."[165]

We propose that certain additional categories of "other waters" should be jurisdictional by rule under two distinct rationales. First, some "other waters" have a significant nexus to

[162] Connectivity Report at 1-9.
[163] 79 Fed. Reg. at 22,197.
[164] *Id.* at 22,212.
[165] *Id.* at 22,198 (emphasis added).

navigable waters and thus must be protected under Justice Kennedy's *Rapanos* test. Second, as discussed above, the agencies can still rely on their Commerce Clause authority to exercise jurisdiction over "other waters" that affect interstate commerce, even if they do not pass the "significant nexus" test.

1. Some "Other" Waters Have a Significant Nexus to Navigable Waters and Should Be Categorically Protected Under Justice Kennedy's Test.

The agencies correctly interpret the Clean Water Act and Supreme Court opinions as supporting jurisdiction over "other waters" (including so-called "isolated" waters) if they have a significant ecological nexus to navigable waters.[166] Scientific evidence shows that several types of "other waters" pass the "significant nexus" test as a class, and the agencies should extend categorical protections to those waters, while relying on case-by-case analysis only for the "other waters" whose categorical nexus cannot yet be established (and those which cannot be protected under alternative rationales as discussed below).

In the notice accompanying this proposed rule, the agencies stated that they were interested in feedback on the following alternative approach for "other waters": "Determine by rule that certain additional subcategories of waters would be jurisdictional rather than addressed with a case-specific analysis … The agencies could choose to determine that there is science available to determine by rule that certain additional subcategories of 'other waters' are similarly situated and have a significant nexus …."[167] Given that there is in fact science available to make such a determination for several subcategories of "other waters," this approach is completely appropriate, and we urge the agencies to adopt it. There is no legal impediment to EPA and the Corps categorically protecting "other waters," including so-called "isolated" waters (or those that the Connectivity Report refers to as "unidirectional wetlands," and that the SAB refers to as "waters in non-floodplain settings"), when they can be shown to pass the "significant nexus" test. In *Rapanos*, Justice Kennedy explicitly rejected the plurality's requirement that wetlands have a "continuous surface connection" to navigable waters,[168] and the dissent agreed with him.[169] Moreover, he noted that physical separation can provide the significant nexus that he deemed to be the crux of Clean Water Act jurisdiction, saying, "[g]iven the role wetlands play in pollutant filtering, flood control, and runoff storage, it may well be the absence of hydrologic connection (in the sense of interchange of waters) that shows the wetlands' significance for the aquatic system."[170]

[166] Although the plurality would deny jurisdiction to wetlands lacking a "continuous surface connection" to a "relatively permanent water," 547 U.S. at 742, only four Justices adopted this position, and therefore it is not binding.
[167] 79 Fed. Reg. at 22,216.
[168] *Rapanos*, 547 U.S. at 773-74.
[169] *Id.* at 804-05.
[170] *Id.* at 786.

From a scientific perspective, there are several mechanisms through which even seemingly "isolated" waters can have a significant nexus to navigable waters. The Connectivity Report states, "'geographic isolation' should not be confused with functional isolation, because geographically isolated wetlands can still have hydrological and biological connections to downstream waters."[171] The Report goes on to explain:

> Isolation is the opposite of connectivity; it is the degree to which system components are not joined. Both connectivity and isolation have important effects on downstream waters. For example, … wetlands that lack output channels can reduce flooding and store excess sediment.[172]
>
> Wetlands in landscape settings that lack bidirectional hydrologic exchanges with downstream waters (e.g., many prairie potholes, vernal pools, and playa lakes) provide numerous functions that can benefit downstream water quality and integrity. These functions include storage of floodwater; retention, and transformation of nutrients, metals, and pesticides; and recharge of groundwater sources of river baseflow. … [F]or certain functions (e.g., sediment removal and water storage), downstream effects arise from wetland isolation rather than connectivity.[173]
>
> Biological connectivity can occur between unidirectional wetlands and downstream waters through movement of amphibians, aquatic seeds, macroinvertebrates, reptiles, and mammals, including colonization by invasive species. Many species in those groups that use both stream and wetland habitats are capable of dispersal distances equal to or greater than distances between many unidirectional wetlands and river networks.[174]

However, while the Connectivity Report generally supports the idea of a significant nexus potentially existing between "isolated" or "unidirectional" waters and navigable waters, it gives short shrift to the evidence supporting a conclusive significant nexus finding for such waters, stating that it is too difficult to generalize about their effects.[175] Given the numerous ways documented in the Report that "unidirectional" waters affect the physical, chemical, and biological state of downstream waters, it is clear that they are significant components of the aquatic ecosystem.

The Science Advisory Board's review confirms that the Connectivity Report understates the agencies' ability to make categorical findings about the significant nexus between "unidirectional" waters and larger downstream waters. The SAB states:

[171] Connectivity Report at 1-12.
[172] *Id.* at 1-5.
[173] *Id.* at 1-10.
[174] *Id.* at 1-12.
[175] *Id.* at 1-4.

> The SAB disagrees with the overall conclusion in Section 1.4.3 of the Report (Conclusion 3) indicating that, "The literature we reviewed does not provide sufficient information to evaluate or generalize about the degree of connectivity (absolute or relative) or the downstream effects of wetlands in 'unidirectional' landscape settings." This statement is inconsistent with the text immediately preceding it, which describes numerous scientifically established functions of non-floodplain wetlands that can benefit the physical, chemical, and biological integrity of downstream waters. Furthermore, the conclusion largely overlooks the effects of deep aquifer connections and non-hydrologic biological connections on downstream waters. The SAB finds that the scientific literature, including references cited in the EPA [Connectivity] Report, provides ample information to support a more definitive statement, and strongly recommends that the authors revise this conclusion to focus on what is supported by the scientific literature and then articulate the specific gaps in our knowledge that must be resolved…[176]

Furthermore, the SAB disagreed with the approach in the agencies' proposed rule of subjecting all "other waters" to case-by-case review. It stated:

> There is … adequate evidence to support a determination that certain subcategories and types of "other waters" in particular regions of the United States (e.g.., Carolina and Delmarva Bays, Texas coastal prairie wetlands, prairie potholes, pocosins, western vernal pools) are similarly situated (i.e., they have a similar influence on the physical, biological, and chemical integrity of downstream waters and are similarly situated on the landscape) and thus are waters of the United States.[177]

As described in detail below, the available science supports a "more definitive statement" about the impact of certain subcategories of "other waters" on downstream water bodies. This conclusion is supported not only by the Connectivity Report, but also by two independently commissioned academic reports reviewing supplementary evidence about so-called "isolated" waters. These reports were developed by students in the River Basin Center at the University of Georgia, and were reviewed and found highly credible by independent experts. The UGA reports and the experts' reviews of them can be found in the docket for this rulemaking.[178] Together with the Connectivity Report, they show that vernal pools, pocosins, sinkhole wetlands in karst regions, Rainwater Basin wetlands, Sand Hills wetlands, playa lakes, interdunal wetlands, Carolina and Delmarva bays, other coastal plain depressional wetlands, and prairie potholes all have a significant nexus to traditionally navigable waters and deserve protection under the law. The agencies must take this scientific evidence into account in determining which waters warrant categorical coverage.

[176] SAB Connectivity Review at 58.
[177] SAB Rule Review at 3.
[178] *See* Letter from Jon Devine, NRDC & William Sapp, Southern Environmental Law Center, to Water Docket, Comment No. EPA-HQ-OW-2011-0880-10578 (Oct. 17, 2104) (cover letter and attachments), available at http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OW-2011-0880-10578.

In the sections that follow, we describe some of the evidence showing how these waters impact downstream water bodies. We respectfully urge the agencies to review all of the available science, including the Connectivity Report, the SAB reviews of the Report and the proposal, the UGA reports, and any other credible scientific information submitted to the docket of this rulemaking or to the SAB in its evaluation of the science supporting this initiative.[179]

a. Vernal Pools Have a Significant Nexus to Downstream Waters.

Vernal pools are shallow, seasonal wetlands that accumulate water during colder, wetter months and gradually dry down during warmer, drier months.[180] They typically do not have surface water connections to permanent waters and are usually situated on underlying substrate that impedes water infiltration.

The Connectivity Report acknowledges several common features of vernal pools that provide scientific evidence of hydrologic connectivity to other waters: temporary or permanent outlets, frequent filling and spilling of higher pools into lower elevation swales and stream channels, and conditions supporting subsurface flows through pools without perched aquifers to nearby streams.[181] The Report cites studies showing that western vernal pools were connected via surface flows 10-60% of the time, and that surface water flowed through swales connecting low-elevation vernal pools to streams during 60% of inundation periods.[182] Additionally, temporary storage of rainfall and snowmelt in vernal pool systems can attenuate flooding, provide a reservoir for adjacent vegetation during the spring growth period, and increase nutrient availability.[183] The Report concludes: "Documented evidence of surface flows connecting western vernal pool complexes to the river network via swales and seasonal streams is available in the literature. Indirect evidence indicates that surface and subsurface flows connect northern pools without perched aquifers to shallow groundwater and thus to nearby streams."[184]

The Report also highlights evidence of biological connections to downstream waters, including the fact that insects and amphibians use glaciated vernal pools as breeding habitat, refuge from predators or other stressors, hunting or foraging habitat, or stepping-stone corridors for dispersal and migration. The Report concludes that nonglaciated vernal pools in western states "are current reservoirs of biodiversity connected genetically to other locations and aquatic

[179] In particular, NRDC and the Southern Environmental Law Center submitted approximately 150 documents to the docket for the SAB's review proceedings. These documents contain relevant information about connectivity from state and federal agencies, public interest organizations, and academics. *See* Letter from Jon Devine, NRDC & Navis Bermudez, SELC, to Science Advisory Board & Water Docket, Comment No. EPA-HQ-OA-2013-0582-1319 (Nov. 5, 2013) (hereinafter "NRDC/SELC SAB Letter"), available at http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OA-2013-0582-1319. We incorporate these materials by reference in these comments, but also separately submitted virtually all of these materials to the docket of the current rulemaking.
[180] Connectivity Report at 5-66.
[181] *Id.* at 5-67.
[182] *Id.* at 5-70.
[183] *Id.* at 5-72.
[184] *Id.* at 5-74.

habitats through continuing dispersal."[185] Consistent with this evidence, as noted above, the SAB specifically identified western vernal pools as deserving of treatment as "waters of the United States."[186]

The UGA report titled "Physical, Chemical, and Biological Impacts of Geographically Isolated Wetlands on Waters of the United States" echoes and confirms these findings.[187] It concludes that vernal pools in the northeastern United States have many physical, chemical, and biological impacts on navigable waters, based on the following facts. During high precipitation events, northeastern vernal pools can have surface water connections to nearby navigable waters and may provide groundwater input to adjacent waters or aquifers. Those that do not share connections to navigable waters impact hydrology in river networks by intercepting and storing water before either discharging it slowly or exporting it via evapotranspiration. Northern vernal pools likely retain pollutants and toxins and prevent them from entering downstream waters. Many migratory invertebrates are also found in northern vernal pools, along with birds, reptiles and mammals that transfer nutrients, energy, and genetic material between vernal pools and navigable waters.[188]

Likewise, the same UGA report finds that vernal pools in the western United States also have a variety of significant impacts on navigable waters, for several reasons. Western vernal pools typically have predictable hydrologic cycles that regulate runoff flow and volume; nutrient, carbon, and salt export; and facilitate nutrient cycling among uplands, wetlands, and navigable waterways. Storage of stormwater and sediment in vernal pools limits erosion and runoff that would otherwise reduce water quality of navigable waters. Animals migrating between western vernal pools and navigable waters carry invertebrate species to navigable waters, where they help maintain genetic diversity.[189]

This evidence shows that vernal pools have a significant nexus to downstream waters and should be categorically protected in the final rule.

b. Pocosins Have a Significant Nexus to Downstream Waters.

While the Connectivity Report does not specifically discuss pocosins, the UGA report evaluating so-called "isolated" wetlands finds evidence of a significant nexus to traditionally navigable waters.[190] Pocosins are bogs that naturally occur in broad swaths of flat or slightly depressed land on the Atlantic coastal plain. They are rainwater-fed bogs defined by their

[185] *Id.*
[186] SAB Rule Review at 3.
[187] Sam Woolford, Shannon Bonney, & Ross Pringle, *Physical, Chemical, and Biological Impacts of Geographically Isolated Wetlands on Waters of the United States* (October 2014), *available at* http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OW-2011-0880-10578 (hereinafter "*Isolated Wetlands*").
[188] *Id.* at 5-12.
[189] *Id.* at 12-15.
[190] *Id.* at 16-25.

vegetation communities and usually are not connected or adjacent to navigable surface water, have relatively long hydroperiods with temporary inundation, and are a source of water on the coastal landscape due to their topographically high position. Pocosins are among the kinds of "other waters" that the SAB concludes should be protected as "waters of the United States."[191]

Physical impacts of pocosins on downstream waters include the determination of runoff patterns and volume, and changes in sediment loading in coastal and downstream waters. Pocosins affect the quantity and pattern of water delivery to streams and coastal waters by sequestering and losing (through evapotranspiration) the majority of precipitation entering the systems, and exporting the remainder by overland sheet flow. Studies have shown that natural pocosins regulate water flow and promote slow release of sheet-flow surface runoff to navigable waterways, while drainage of pocosins dramatically increases high-flow events. The increases in both overall runoff volume and peak flows following pocosin development sheds light on the physical impact of pocosins on downstream waters: they serve as water pumps, by sequestering water that is later exported by evapotranspiration instead of draining to navigable waterways, and they serve as water storage, slowing and diffusing water discharge to streams and coastal waters, especially after high precipitation events.

The physical impacts of pocosins on navigable waters are inextricably linked to the chemical impacts they have: natural water storage and sequestration in these systems provides for nutrient retention and organic carbon export to streams and coastal waters. Pocosins are important sources of organic nitrogen and organic carbon to navigable waters, and they retain phosphorus that would otherwise be exported with runoff. As pocosins lose on average two thirds of their hydrologic input to evapotranspiration and export the remainder through sheet-flow surface runoff, they play a large role in maintaining the brackish salinity of coastal streams and estuaries.

While there has been a limited study of pocosin biota in the literature, many mammals, birds, amphibians, reptiles, and fish are known to use both pocosin and riparian areas as habitat, and their movement between those two systems represents a transfer of energy and nutrients that affects the integrity of both.

This evidence shows that pocosins have a significant nexus to downstream waters and should be categorically protected in the final rule.

c. Sinkhole Wetlands in Karst Regions Have a Significant Nexus to Downstream Waters.

Although the Connectivity Report does not specifically discuss karstic sinkhole wetlands, the UGA report evaluating so-called "isolated" wetlands finds evidence of a significant nexus to

[191] SAB Rule Review at 3.

traditionally navigable waters.[192] Sinkhole wetlands in karst regions occur in topographic depressions, which are formed when limestone bedrock is dissolved and the overlying soil collapses.

While they can be classified into several different categories, sinkhole wetlands of each category generally have significant impacts on downstream waters. They can mediate flooding and stormwater runoff and reduce peak flows by retaining water on the landscape before it reaches navigable waterways. Some types can slow water infiltration to aquifers and allow for sediment and pollutant removal. Studies have demonstrated that stream flows downstream of karstic sinkhole wetlands are characterized by peak discharges that are of a lesser volume and longer duration than those upstream.

An additional scientific review by Ducks Unlimited, which can also be found in the docket for this rulemaking, reaffirms these conclusions about the physical impacts of karstic sinkhole wetlands, stating: "'Other waters' that exist in karst topography are often directly linked to subsurface water flows of relatively high velocity, moving easily through underground channels, caves, streams, and cracks in the rock. There tend to be many springs and seeps, many with surface connections, which are the source of some large streams (Winter et al. 1998), and Winter (1998) stated that groundwater recharge in karst terrain is efficient. Entire streams can go subsurface and reappear in other areas and connect directly with wetland basins, and contaminants deposited in 'other waters' are easily mobilized in these regions."[193]

The UGA "isolated" waters report also describes the chemical and biological impacts of karstic sinkhole wetlands.[194] These wetlands maintain water quality by transforming nutrients and organic compounds and cycling organic carbon. While specific studies on biodiversity in karst regions are less numerous than other studies, these have shown strong evidence of biological connectivity. Many sinkhole wetlands are home to a diversity of invertebrates and other migratory species, including many species of birds, amphibians, and reptiles. Many of these species migrate between wetlands and navigable waters.

This evidence shows that sinkhole wetlands in karst regions have a significant nexus to downstream waters and should be categorically protected in the final rule.

d. Rainwater Basin Wetlands Have a Significant Nexus to Downstream Waters.

Although the Connectivity Report does not specifically discuss Rainwater Basin wetlands, the UGA report evaluating so-called "isolated" wetlands finds evidence of a significant nexus to traditionally navigable waters.[195] The wetlands of the Rainwater Basin in south-central

[192] *Isolated Wetlands* at 25-30.
[193] Ducks Unlimited, Comment Letter to EPA & Army Corps of Engineers, Docket ID No. EPA-HQ-OW-2011-0880 at 63 (Nov. 5, 2014).
[194] *Isolated Wetlands* at 26-30.
[195] *Id.* at 30-35.

Nebraska range in size from less than 1 to over 100 acres and are typically shallow depressions with little connection to groundwater or surface water because of a clay soil later that impedes infiltration. Nonetheless, these wetlands exhibit various physical, chemical, and biological impacts on navigable waters similar to those of other depressional wetlands.

Rainwater Basin wetlands provide important water storage functions and regulate the timing and volume of flow to downstream waters. Studies show they reduce soil erosion by lessening peak flows associated with storm events and decreasing the total amount of runoff leaving the watershed. These wetlands also improve downstream water quality when vegetation stabilizes soil at the water's edge, a process known as shoreline anchoring, which reduces soil erosion.

Wetlands in the Rainwater Basin improve downstream water quality by retaining and transforming nutrients into less polluting forms, and by retaining toxins and pollutants in herbicides and pesticides washing off the heavily farmed landscape. Birds, reptiles, and amphibians move between Rainwater Basin wetlands and navigable waters, representing a direct transfer of nutrients, energy, organic matter, and genetic material. In particular, these wetlands are a primary staging area for many migrating bird species using the North American Central Flyway in spring and fall; many of these species move between Rainwater Basin wetlands and traditionally jurisdictional waters.

An additional review by Ducks Unlimited echoes these findings regarding biological connections:

> Folk and Tacha (1990) documented patterns of use of the North Platte River and the region's temporary and semipermanent palustrine wetlands by sandhill cranes. The North and Central Platte River valley provides the primary spring staging habitat for about 80% of the entire midcontinent population of the species (Pearse et al. 2010), and the cranes typically roost in the river channel or nearby wetlands for safety during the night. They found that the cranes were collectively interdependent upon the shallow navigable river and the region's wetlands, providing a biological nexus between the two types of waters. Taken together, these and other studies (Gersib et al. 1989; Tacha et al. 1994; Bishop et al. 2010; Pearse et al. 2011) indicate that the Platte River and the wetlands of the rainwater basin and surrounding landscape function as a complex of aquatic habitats for a diversity of species, and as the 'other waters' of the region are negatively impacted, so too is the biological integrity of the navigable Platte River.[196]

This evidence shows that Rainwater Basin wetlands have a significant nexus to downstream waters and should be categorically protected in the final rule.

e. Sand Hills Wetlands Have a Significant Nexus to Downstream Waters.

[196] Ducks Unlimited at 58.

While the Connectivity Report does not specifically discuss Sand Hill wetlands, the UGA report evaluating so-called "isolated" wetlands finds evidence of a significant nexus to traditionally navigable waters.[197] Wetlands in the Sand Hills region of Nebraska exist in valleys between large sand dunes and are fed primarily by groundwater from the Ogallala aquifer due to permeable sand and gravel soils. Of over 3,000 wetlands in the Sand Hills totaling 1.3 million acres, about 2,000 of them are small ephemeral pools. Yet these wetlands have a broad variety of impacts on navigable waters.

Wetlands in the Sand Hills are areas of significant aquifer discharge and recharge. These waters serve important functions as groundwater discharge constitutes a major component of stream flows in the region. In fact, approximately 98% of the Dismal River and 95% of the Middle Loup River flows are derived from groundwater seepage.[198] A review of additional scientific studies by Ducks Unlimited underscores this important function:

> LaBaugh (1986) also documented interconnections and flow between sandhill wetlands and lakes and groundwater as water in this interconnected system flowed toward lower elevations. Novacek (1989) stated that the sandhill wetlands in Nebraska (including wet meadows) are important to water table and aquifer recharge, with the region containing five principal drainage basins that all ultimately empty into the Platte and Missouri rivers. It has also been stated that most sandhill wetlands are also interconnected with the important Ogallala aquifer as well as the local groundwater (Tiner 2003)… In summary, the scientific evidence is clear that the Sandhill wetlands are, in the aggregate and generally, connected via groundwater linkages to navigable waters and their tributaries in this region of the country.[199]

Sand Hill wetlands also have important chemical interactions with groundwater, the primary source of water in the region. Geographically "isolated" wetlands contribute dissolved organic carbon to underlying aquifers and affect the composition of major ions in adjoining groundwater. Sand Hill wetlands are also sites of nutrient uptake, particularly phosphate and nitrate. Their biological connections are significant as well: many birds, reptiles, amphibians, mammals, and invertebrates migrate between Sand Hill wetlands and permanent navigable waters. These movements represent a direct transfer of nutrients, energy, organic matter, and genetic material.[200]

This evidence shows that Nebraska's Sand Hill wetlands have a significant nexus to downstream waters and should be categorically protected in the final rule.

f. Playa Lakes Have a Significant Nexus to Downstream Waters.

[197] *Isolated Wetlands* at 35-39.
[198] *Id.* at 36.
[199] Ducks Unlimited at 54-55.
[200] *Isolated Wetlands* at 37-39.

Although the Connectivity Report does not specifically discuss playa lakes, the UGA report evaluating so-called "isolated" wetlands finds evidence of a significant nexus to traditionally navigable waters.[201] Playa lakes are ephemeral isolated wetlands of the southern High Plains. They are shallow, roughly round depressions of unknown origin that dry for the majority of the year due to limited rainfall in this arid region; they are inundated only during periods of heavy precipitation during summer and fall. As some of the only water bodies in the region, playa lakes play a large role in maintaining biodiversity and sustaining populations of birds, as well as in groundwater recharge, nutrient cycling, and water quality enhancement.

Playa lakes are known to recharge aquifers, mitigate floods, and reduce sediment inputs to nearby waterways. Playas in the Southern High Plains of New Mexico and Texas were shown to play a significant role in recharging aquifers by collecting runoff and focusing rapidly flowing surface waters through macropores. In fact, playas represent the only sites for aquifer recharge in some areas.[202] A separate scientific review by Ducks Unlimited echoes the importance of these functions:

> Conceptual models have recognized for years that the playas are critical recharge zones for the Ogallala (e.g., Wood 2000). Gurdak and Roe (2009; 2010) recently provided a comprehensive synthesis of the related literature (approximately 175 studies) and concluded that playas are pathways of relatively rapid recharge and provide an important percentage of recharge to the Ogallala aquifer. Thus, playas are, in the aggregate, critical to supplying water to an important, interstate water body, and they therefore impact the water quantity of the underlying aquifer….Weeks and Gutentag (1984) stated that groundwater from this aquifer discharges naturally into flowing streams and springs, and that the aquifer and valley-fill deposits and associated streams comprise a stream-aquifer system that links the High Plains aquifer to surface tributaries of the Platte, Republican and Arkansas rivers, as well as the Pecos and Canadian rivers (Kreitler and Dutton 1984)….Thus, the significant nexus between the playa wetlands and navigable waters is created by their direct linkage via the Ogallala aquifer.[203]

Playa lakes also have significant chemical impacts on navigable waters. They gather and store nutrients that are carried in surface water runoff. Once runoff is stored, biological and chemical processes may reduce nutrient and pollutant concentrations. Playa lakes have been shown to improve water quality; one study showed concentrations of nitrate and chemical oxygen demand in a Texas playa decreasing with time to levels that were less than nearby aquifers.[204]

[201] *Id.* at 40-43.
[202] *Id.* at 40.
[203] Ducks Unlimited at 56-57.
[204] *Isolated Wetlands* at 40.

Finally, the biological connections between playa lakes and traditionally navigable waters are considerable. Many waterfowl, shorebirds, and wading birds use playa lakes either as a wintering residence or as a stopover location while migrating to points further north or south within the North American Central Flyway. The biological connections that playa lakes share with waters of the surrounding areas as well as distant locales have been well documented through tagging, tracking, studying, and observing these birds. In addition to birds, macroinvertebrates also provide biological connectivity, which other organisms transport between playa lakes and permanent bodies of water.[205]

This evidence shows that playa lakes have a significant nexus to downstream waters and should be categorically protected in the final rule.

g. Interdunal Wetlands Have a Significant Nexus to Downstream Waters.

While the Connectivity Report does not specifically discuss interdunal wetlands, the UGA report evaluating so-called "isolated" wetlands finds evidence of a significant nexus to traditionally navigable waters.[206] Isolated interdunal wetlands exist in all of the country's major coastal regions, interspersed among sand dunes. They are commonly connected to groundwater sources, but rainwater and surface runoff from surrounding dunes are also important sources of water in these wetlands. They have important impacts on navigable waters, typically rivers and streams flowing through dunal landscapes and nearby oceans and lakes.

The physical impacts of interdunal wetlands on navigable waters are due to groundwater flow between wetlands and nearby waters (streams, lakes, and oceans), direct surface water connections with streams or nearby lakes and oceans, and storage and sink functions for water and sediment. For example, groundwater flow from interdunal wetlands to the Great Lakes (and the reverse) is common. They also exhibit hydrologic connectivity during temporary periods of surface water connections to navigable waters, often in the form of overtopping or erosion caused by storm surges or high winds. Interdunal wetlands that receiving incoming surface water either slow flow rates or prevent these flows from entering nearby Great Lakes, as much of the water is exported through groundwater seepage or evapotranspiration.[207]

The chemical impacts of interdunal wetlands on navigable waters stem from their ability to retain and transform nutrients such as nitrogen and phosphorus. Dynamic hydrology in interdunal wetlands allows for both aerobic and anaerobic microbial processes that promote denitification, which can allow wetlands to function as a nitrogen sink and prevent excess N from entering downstream waters. Open water interdunal wetlands can also trap phosphorus

[205] *Id.* at 41-42.
[206] *Id.* at 43-50.
[207] *Id.* at 44-45.

bound to suspended solids as they retain incoming sediment, as well as other heavy metals and pollutants entering through surface water channels and runoff.[208]

Finally, interdunal wetlands support a wide variety of life: some 1,400 species of living organisms, split about equally between plant and animal species. Many animals move between interdunal wetlands and navigable waters like streams and rivers. These wetlands are extremely important staging and breeding areas for waterfowl, shore birds, and wading birds that migrate along the Atlantic, Mississippi, and Pacific flyways. Population-level changes due to limited wetland resources likely have ecosystem impacts in navigable waters used by migrating birds in other seasons due to changes in nutrient and energy cycling. Mammals, reptiles, fish, and invertebrates also move between these habitats and navigable waters, transferring energy, nutrients, genetic materials, and organic matter.[209]

This evidence shows that interdunal wetlands have a significant nexus to downstream waters and should be categorically protected in the final rule.

h. Carolina and Delmarva Bays, and Other Coastal Plain Depressional Wetlands Have a Significant Nexus to Downstream Waters.

Carolina and Delmarva bays are ponded depressional wetlands that occur along the Atlantic coastal plain from northern Florida to New Jersey. Most bays receive water through precipitation, lose water through evapotranspiration, and lack natural surface outlets. The Connectivity Report identifies several features of these bays that provide evidence of significant physical, chemical, and biological connections with traditionally navigable waters. As the Report states:

> Both mineral-based and peat-based bays have shown connections to shallow groundwater. Bays typically are in proximity to each other or to permanent waters, providing the potential for surface water connections in large rain events via overland flow. Fish are reported in bays that are known to dry out, indirectly demonstrating surficial connections. Amphibians and reptiles use bays extensively for breeding and for rearing young. These animals can disperse many meters on the landscape and can colonize, or serve as a food source to, downstream waters. Similarly, bays foster abundant insects that have the potential to become part of the downstream food chain. Humans have ditched and channelized a high percentage of bays, creating new surface connections to other waters and allowing transfer of nutrients, sediment, and methylmercury.[210]

However, despite acknowledging these connections, the Report goes on to state that "the literature that we reviewed does not provide sufficient information to fully evaluate the impact of

[208] *Id.* at 45-46.
[209] *Id.* at 46-50.
[210] Connectivity Report at 5-49.

Carolina and Delmarva bays on rivers and estuaries at this time."[211] By contrast, the SAB identifies Carolina and Delmarva Bays as "other waters" that should be protected as "waters of the United States."[212]

The UGA report titled "Evidence of Significant Impacts of Coastal Plain Depressional Wetlands on Navigable Waters" finds, to the contrary: "While no specific type of significant nexus can be assumed to exist between every [Coastal Plain Depressional Wetland, a category including Carolina and Delmarva bays] and navigable waters, enough evidence exists to presuppose that each CPDW, individually and/or as part of a wetland complex, significantly affects the biological, chemical, and/or physical integrity of federally jurisdictional waters."[213]

Throughout most of the year Carolina and Delmarva Bays exhibit limited physical connections to downstream navigable waterways, but several studies have shown groundwater and potential surface water connections during extreme weather events. When neither of these connections exist, Carolina and Delmarva Bays influence the physical integrity of downstream waters by acting as water and sediment storage on the landscape, and often as "water pumps" by allowing water entering the wetlands to leave through evapotranspiration. Whether serving as water and sediment sources or sinks, Carolina and Delmarva Bays have a significant effect on the integrity of downstream navigable waters.[214] Because most Carolina Bays are linked through groundwater interactions or periodic, high surface water flows, these connections allow depressional wetlands to function as a high quality water source, important water storage, and/or significant nutrient sink to navigable waters downstream. Ephemeral wetland hydrology supports the bacteria necessary for denitrifcation; thus, ephemeral Carolina Bays likely reduce ammonia and nitrate levels in navigable waters and maintain ecosystem health. Studies have also shown that Carolina Bay soils retain excess nutrients and heavy metals from long-term additions of agricultural water.[215]

Evidence of biological connections is also abundant. Many invertebrates have specific evolutionary adaptations that cause a significant transfer of energy and nutrients between isolated ephemeral wetlands and navigable waters. Cyclic colonizer insects, common in Carolina bays, can play an important role in the trophic dynamics, nutrient cycling, and ecological stability of the permanent waters they inhabit during a portion of the year, including large rivers and their tributaries, interstate waters, navigable lakes, and their adjacent wetlands. Carolina and Delmarva bays also have a substantial impact on the biological integrity of permanent waters due to the production of other insects such as midges and the migration of birds, including several duck species. Amphibians use Carolina and Delmarva bays, upland, and river networks for

[211] *Id.* at 5-57.
[212] SAB Rule Review at 3.
[213] Sam Woolford & Matt Carroll, *Evidence of Significant Impacts of Coastal Plain Depressional Wetlands on Navigable Waters* (July 2014), *available at* http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OW-2011-0880-10578 at 3-4 (hereinafter "*Coastal Wetlands*").
[214] *Id.* at 4-5.
[215] *Id.* at 6-8.

breeding, foraging, dispersal, and overwintering. Because they move among these habitats, they facilitate critical flows of nutrients, energy, and genetic information, and serve as links in an interconnected food web. The same is true of numerous birds and mammals.[216]

Additionally, other coastal plain depressional wetlands beyond Carolina and Delmarva bays significantly affect downstream navigable waters. The UGA report evaluating coastal wetland science finds "that Carolina and Delmarva Bays should be grouped with other depressional wetlands of the Coastal Plain to form a broader class of wetlands called Coastal Plain Depressional Wetlands."[217] Limiting the evaluation of coastal depressional wetlands to merely Carolina and Delmarva Bays excludes many depressional wetlands on the southeastern coastal plain that are similar ecologically, and perhaps more importantly, share similar connections to downstream waters. Wetlands that have regional names such as limesinks, citronelle ponds, cypress domes, oak domes, grady ponds, and flat-bottom ponds have been considered by many researchers as some variant of "Southeastern Depressional Wetlands" due to their ecological similarity. The UGA report references numerous scientific studies explaining the physical, chemical, and biological connections that these other wetlands have with traditional navigable waters, similar to the connections found in Carolina and Delmarva bays.[218]

The UGA report concludes, "we posit that geographically isolated depressional wetlands on the southeastern coastal plain, including those called Carolina and Delmarva bays, clearly impact the physical, chemical, and biological processes and functions in river networks, lakes, and coastal waters. Thus, they should be considered a class of Waters of the United States."[219]

This evidence shows that depressional wetlands on the southeastern coastal plain have a significant nexus to downstream waters and should be categorically protected in the final rule.

i. Prairie Potholes Have a Significant Nexus to Downstream Waters.

Prairie potholes are a complex of glacially formed wetlands, usually occurring in depressions that lack permanent natural outlets, that are found in the central United States and Canada. The Connectivity Report emphasizes the variability of both the area they occupy and their range of hydrologic permanence, and states that "individual prairie potholes span the entire continuum of connectivity to and isolation from the river network and other bodies of water."[220]

Yet the Report also notes significant features common to many prairie potholes that demonstrate connectivity:

> Potholes generally accumulate and retain water effectively due to the low permeability of their underlying soil, which can modulate flow characteristics of nearby streams and

[216] *Id.* at 10-14.
[217] *Id.* at 2.
[218] *See id.* at 5-6, 8-9, 14-18.
[219] *Id.* at iii.
[220] Connectivity Report at 5-57.

> rivers. Potholes also can accumulate chemicals in overland flow, thereby reducing chemical loading to other bodies of water. When potholes are artificially connected to streams and lakes through drainage, isolation is eliminated and they become sources of water and chemicals. Potholes also support a community of highly mobile organisms, from plants to invertebrates to birds, that travel among potholes and that can biologically connect the entire complex to the river network.[221]

And the Report ultimately concludes that, "when proper climatic or topographic conditions occur, or biotic communities are present that promote potential or observed connections, measurable influence on the physical, chemical, and biological condition and function of downstream waters is highly likely."[222] In its review of the proposed rule, the SAB specifically identified prairie potholes as a type of "other water" warranting treatment as "waters of the United States."[223]

An independent review of the scientific literature by Ducks Unlimited shows that, in fact, wetlands in the prairie pothole region (PPR), in the aggregate, possess a significant nexus with navigable waters. Prairie potholes are connected to downstream waters primarily due to the abundance and density of potholes on the PPR landscape, in conjunction with their general lack of direct surface water connection to streams and rivers. Prairie potholes "serve the function of storing water that would otherwise flow to downstream waters and thereby affect the downstream navigable waters by decreasing flood flow."[224] Ducks Unlimited documents many studies finding that the presence of these isolated wetlands decreases runoff velocity and volume by capturing high magnitude short duration flows and releasing water through groundwater and evaporation over an extended period.[225] In addition, studies of areas where prairie potholes have been drained have demonstrated the decrease in the cumulative storage capacity of the wetlands, and this decease has been linked to increases in the frequency of flooding in and around the PPR. As Ducks Unlimited observes:

> In most cases, … when a pothole is drained or filled, the water that would have otherwise been retained in the basin is diverted to a ditch or other conveyance and makes its way to a navigable waterway much more rapidly than when the wetland was intact. The significant nexus between the intact pothole and the nearest navigable water, described by Justice Kennedy as the 'absence of [direct] hydrologic connection,' then becomes apparent as the altered flow pattern … brings more water, carrying more sediment, nutrients and other pollutants, much more rapidly, to the navigable water and downstream communities, farms, and other landowners.[226]

[221] *Id.* at 5-57 to 5-58.
[222] *Id.* at 5-66.
[223] SAB Rule Review at 3.
[224] Ducks Unlimited at 40.
[225] *Id.* at 40-42.
[226] *Id.* at 42.

In contrast to the nexus created by the lack of direct connection, sometimes "a 'fill and spill' type of connectivity is exhibited when the wetland fills to capacity and then spills over into other wetlands and/or to downstream waters."[227] This phenomenon results in temporary but direct hydrologic connections among and between potholes, and between complexes of potholes and the streams and rivers in the region, with associated impacts on regional water regimes in navigable waters and their tributaries.

Ducks Unlimited also reviews several scientific studies demonstrating that prairie potholes "can, and very often do, contribute to groundwater recharge, and this groundwater often continues to move downslope toward intermittent or flowing streams ultimately discharging into navigable waters or their tributaries."[228] Some potholes have a net seepage outflow (groundwater recharge basins), others have a net seepage inflow (groundwater discharge basins), and many basins function alternately, at times having a net outflow into the groundwater and at other times having a net inflow. Critically, Ducks Unlimited notes, "the groundwater to which the pothole wetlands are linked subsequently provides input to lower-lying wetlands and stream valleys."[229]

Prairie potholes also have significant chemical connections with navigable waters. According to Ducks Unlimited's literature review, "Potholes act as sinks for nutrients and other chemicals, including those widely used for agricultural purposes, and thereby affect and improve the quality of runoff water."[230] That review discusses multiple studies showing the impact on downstream water quality when prairie potholes are drained:

> [W]hen as a result of the ditching or filling of wetlands the retention time is shortened or eliminated and the associated biochemical processes are thereby altered, the cleansing or filtration function of the former wetland is lost or degraded, with direct negative impacts on the quality of the downstream navigable waters. Similarly, water retained in a pothole is cleansed of much of its load of pollutants via biochemical processes before it enters groundwater and flows laterally to other areas and other waters, or downward into deeper aquifers….[231]

Finally, prairie potholes have a significant biological nexus to traditional navigable waters. These wetlands are biologically significant on a continental scale due to their importance as a breeding landscape for waterfowl and other migratory birds. Additionally, Ducks Unlimited discusses studies showing that:

> The increased flows in downstream waters resulting from drainage or filling of potholes … would also affect the capability of those waters to sustain populations of organisms

[227] *Id.* at 40.
[228] *Id.* at 45.
[229] *Id.* at 46.
[230] *Id.* at 47.
[231] *Id.*

more suited to the lower flows, decreased concentrations of nutrients and other solutes, and lower sedimentation rates of waters not impacted by drainage. Thus, the biological impacts to aquatic life in navigable waters that result from the increased hydrological connectivity and corresponding increases in stream flow and erosiveness, sediment loads, and nutrient and pesticide concentrations, cannot be ignored as an important component of the significant nexus evaluation for the ecoregion."[232]

This evidence shows that prairie potholes have a significant nexus to downstream waters and should be categorically protected in the final rule.

j. For "Other Waters" that Are Not Categorically Protected, the Agencies' Approach to Assessing "Significant Nexus" is Sensible.

We recognize that the foregoing categories of "other waters" do not encompass all such water bodies in the country. Accordingly, we understand there will be a continuing need for some case-by-case assessments of water bodies' jurisdiction in the future. For those assessments, we believe the agencies have proposed a generally reasonable framework for implementing the "significant nexus" test. The regulatory definition closely tracks Justice Kennedy's test, and the agencies have, for the most part, described a strategy for implementing that test in a way with which we agree.

First, we agree with treating the single point of entry watershed in which a water body being evaluated is located as the "region" governing the analysis.[233] This appears to us to be a reasonable scale on which to evaluate the impacts of similarly situated waters. At the same time, we believe that the rules should allow for the consideration of impacts at a larger scale when waters in separate single point of entry watersheds contribute to water quality further downstream – such as a larger water body to which each of those single point of entry watersheds contribute.

Second, we urge the agencies to consider, in evaluating whether waters are "similarly situated," whether "they perform similar functions," as proposed, but we caution about focusing too narrowly on whether such waters "are located sufficiently close together or sufficiently close to a 'water of the United States' so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a [navigable or interstate] water…."[234] We believe, as the separate comments of Ducks Unlimited also stress, that surficial proximity is not a critical element of this assessment.[235]

[232] *Id.* at 49.
[233] 79 Fed. Reg. at 22,212.
[234] *Id.* at 22,213.
[235] We believe this is consistent with the advice provided by the SAB. Although the SAB indicated that "[s]patial proximity is *one important determinant* of the magnitude, frequency and duration or connections between wetlands and streams that will ultimately influence the fluxes of water, materials and biota between wetlands and downstream waters," SAB Connectivity Review at 60 (emphasis added), it did not suggest that proximity alone is relevant. To the contrary, in discussing the proposed rule's provision on adjacent wetlands, the SAB noted that "the available

Third, we strongly support the agencies' attention, in explaining how "significant nexus" assessments will be made, to a wide variety of physical, chemical, and biological impacts, and especially the agencies' attention to the fact that hydrologic separation can create the requisite nexus. [236]

k. Conclusion

In sum, as the available science demonstrates, all of these subcategories of "other waters" have a significant nexus to navigable waters. In other words, they significantly affect the chemical, physical, and/or biological integrity of navigable waters, interstate waters, and the territorial seas, in ways that are more than speculative or insubstantial. Although it is certainly true that not every specific water body in the "other waters" categories discussed above will perform every function or affect water quality downstream in a significant way (or, sometimes, even a perceptible way), it is legally sufficient that a majority of waters in the category contribute to an aggregate effect that is significant. We respectfully submit that the foregoing evidence (especially when considered alongside other evidence in the record of this rulemaking) definitely meets this standard. Accordingly, these waters must be categorically protected under the Clean Water Act and treated as jurisdictional by rule.

2. Other "Isolated" Waters Substantially Affect Interstate Commerce and Should be Categorically Protected Under the Agencies' Commerce Clause Authority.

As noted above, Justice Kennedy's "significant nexus" test is not the only legitimate basis for exercising jurisdiction over a water body under the Clean Water Act. The current regulations' definition of "waters of the U.S." as including "[a]ll other waters … the use, degradation or destruction of which could affect interstate or foreign commerce"[237] was not struck down by the Supreme Court, and it allows for the protection of resources even if they do not have a demonstrable "significant nexus" to navigable waters. The agencies should continue to protect those categories of "other waters" that have substantial effects on interstate or foreign commerce, especially where it may be difficult to find that waters in the category have a significant nexus, either individually or in the aggregate.

For example, closed or terminal ("endorheic") basins in the Southwest – streams that do not reach other water bodies due to evaporation or percolation – may not have a clear connection to downstream waters, but they may serve as a source of irrigation water for crops that are sold in interstate commerce, or other similar commercial purposes. Indeed, in response to a

science supports defining adjacency or determination of adjacency on the basis of functional relationships, not on how close an adjacent water is to a navigable water." SAB Rule Review at 2-3. The same could be said for "other waters."

[236] *See generally* 79 Fed. Reg. at 22,213-14.

[237] 33 C.F.R. § 328.3(a)(3).

rulemaking initiative in the wake of *SWANCC* in 2003, Governor Bill Richardson of New Mexico urged EPA and the Corps not to roll back the rules, and particularly pointed to closed basin streams as critical resources to protect.[238] Governor Richardson's comments noted that "[w]aters within the closed basins of New Mexico provide recreation and fishing for interstate and foreign travelers, as well as water for industry."[239]

Similarly, different types of geographically isolated "other waters" recharge the Ogallala aquifer, the source of water supplies for millions of people and businesses. As discussed above, the evidence supports finding that these waters have a significant nexus to navigable waters. But even without that basis for protecting these resources, their critical linkages to interstate commerce would authorize their protection.

B. The Rule Should Not Exempt Ditches Without a Scientific Basis

EPA and the Corps propose to exempt ditches from regulation as "waters of the United States" if they "are excavated wholly in uplands, drain only uplands, and have less than perennial flow." The agencies propose this exemption despite the fact that they explicitly recognize elsewhere in the proposal that ditches often perform the same functions as tributaries – a class of waters that the agencies agree should be categorically protected because of their significant nexus to traditionally jurisdictional waters. Because the science does not demonstrate a functional difference between natural and manmade tributaries, or support the idea that upland ditches can never have a significant nexus to navigable waters, the wholesale exemption of upland ditches from ever being treated as "waters of the United States" is arbitrary and capricious.

In the Federal Register notice accompanying the proposal, the agencies describe in some detail the criteria for what qualifies as an "upland ditch," but without providing a scientific explanation for *why* such ditches should be exempted from Clean Water Act regulation. The Federal Register states:

> The proposed rule would exclude from jurisdiction upland ditches with less than perennial flow. The scientific concept of perennial flow is a widely accepted and well understood hydrologic characteristic of tributaries. Perennial flow means that water is present in a tributary year round when rainfall is normal or above normal. Identifying upland ditches with perennial flow is straightforward and will provide for consistent, predictable, and technically accurate determinations at any time of year. … Site characteristics may also be present to inform the determination of whether the water body is a ditch, such as shape, sinuosity, flow indications, etc., as ditches are often created in a

[238] Letter from NM Gov. Bill Richardson to U.S. EPA, Comments in Response to the Advance Notice of Proposed Rulemaking Regarding the U.S. Supreme Court Decision in Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers et al. (SWANCC). No. 99-1178 Argued October 31,2000 -Decided January 9, 2001, (Mar. 5, 2003) (attached to NRDC/SELC SAB Letter, supra & enclosed in Appendix A).
[239] *Id.*

> linear fashion with little sinuosity and may not connect to another "water of the United States."[240]

While consistency and predictability are worthy goals, they cannot take precedence over the science. And the agencies do not provide a scientific rationale for this exemption in the Federal Register notice because, in fact, there is none.

The agencies concede that many ditches can function as tributaries. "Ditches" are listed in the proposal's definition of "tributary": "A tributary, including wetlands, can be a natural, man-altered, *or man-made* water and includes waters such as rivers, streams, lakes, ponds, impoundments, canals, and *ditches* not excluded in paragraph (t)(3) or (4) of this section" (emphasis added). The Federal Register notice further states: "Other ditches not excluded under paragraphs (b)(3) or (b)(4), if they meet the new proposed definition of 'tributary,' would continue to be 'waters of the United States,' as they have been under the longstanding implementation of the statute and regulations by the agencies."[241] And, in discussing the importance of allowing for man-made tributaries to be protected as such, the agencies state:

> Natural, man-altered, and manmade tributaries provide many of the same functions, especially as conduits for the movement of water and pollutants to other tributaries or directly to traditional navigable waters, interstate waters, or the territorial seas. The discharge of a pollutant into a tributary generally has the same effect downstream whether the tributary waterway is natural or manmade.[242]

A ditch would meet the definition of "tributary" if it has a bed and banks and an ordinary high water mark, and if it contributes flow to a traditionally jurisdictional water. Indeed, the agencies note in the excerpt above that some ditches may "connect to another 'water of the United States.'" In fact, if an upland ditch never functioned as a tributary by contributing flow to a water of the U.S., then the upland ditch exemption would not even be necessary; there is already another exemption in the proposal for ditches that do not contribute flow. Thus, the inclusion of the upland ditches exemption in the proposal is an admission that some upland ditches do contribute flow and can function as tributaries.

The Connectivity Report does not distinguish between natural and manmade tributaries (i.e., between natural streams and ditches). The Report defines rivers and streams as flowing

[240] 79 Fed. Reg. at 22,203.
[241] *Id.* at 22,219.
[242] *Id.* at 22,202. Indeed, when discussing why the proposal treats manmade tributaries as ditches in certain circumstances, the agencies explain that these features have numerous and significant impacts on downstream waters, some of which are magnified by the fact that they are ditches. *See id.* at 22,206 ("Due to the often straightened and channelized nature of ditches, these tributaries quickly move water downstream to (a)(1) through (a)(3) waters. Ditches and canals, like other tributaries, export sediment, nutrients, and other materials downstream. Due to their often channelized nature, ditches are very effective at transporting water and these materials, including nitrogen, downstream."). The agencies point to no evidence in this discussion that upland ditches that flow less than perennially do not have similar impacts.

water "within a visible channel," in turn defining "channels" as "natural *or constructed* passageways or depressions of perceptible linear extent that convey water and associated materials downgradient."[243] And throughout the Report's discussion of the ecological functions of tributaries, the distinction between natural and manmade channels is never mentioned. In other words, a tributary is a tributary from a functional perspective. When a ditch functions as a tributary, it should be regulated as such.

Limiting the exemption to ditches with less than perennial flow does not save it, as the agencies have stated quite clearly that other types of ephemeral and intermittent tributaries nonetheless have a significant nexus to traditional navigable waters. The agencies offer no evidence on which to conclude this is less true when the tributary takes the form of a manmade ditch.

From a legal perspective, many courts have recognized that ditches can be regulated as tributaries if they perform the same functions as tributaries – even if they are artificial.[244] Many of these decisions were issued before *SWANCC* and *Rapanos*, but the ability to regulate ditches was unaffected by those two cases, which did not hold in any way that the law distinguishes between natural and manmade tributaries.[245] In fact, Justice Kennedy's opinion in *Rapanos* not only authorizes but compels the regulation of ditches that function as tributaries given the agencies' finding that *all* tributaries have a significant nexus to navigable waters.

Achieving our water quality goals critically depends on protecting waters as expansively as the Clean Water Act allows. Excluding waters without a scientific basis for doing so is unjustified and undermines the achievement of these goals. The proposed exemption for all upland ditches is overly broad: EPA and the Corps may not exempt ditches that function as tributaries. The agencies must reject this wholesale exemption and provide for upland ditches to be considered "waters of the United States" whenever they meet the definition of tributaries.

C. The Rule Should Limit the Current Exemption for Waste Treatment Systems

The proposal excludes "[w]aste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act" from being considered Waters of the United States and therefore jurisdictional under the Act. This aspect of the proposal is

[243] Connectivity Report at 3-1, 3-2, A-3 (emphasis added).
[244] *See U.S. v. Holland*, 373 F. Supp. 665, 673-74 (M.D. Fla. 1974), *Headwaters, Inc. v. Talent Irrigation Dist.*, 243 F. 3d 526, 533-34 (9th Cir. 2001); Answering Brief of Defendants-Appellees, *Nat'l Ass'n of Home Builders v. U.S. Army Corps of Eng'rs*, No. 10-5169 (D.C. Cir., June 10, 2011) at 42 ("a ditch may be a tributary if it contributes flow to a larger body of water"), 42-43 (collecting cases "that have upheld regulatory authority pursuant to the Clean Water Act over channels, canals, drains, and ditches").
[245] *See generally Nat'l Assn. of Home Builders*, 663 F.3d 470, 475 (D.C. Cir. 2011) (noting "the Corps's persistent view that some upland ditches may be jurisdictional"); 2008 *Rapanos* Guidance at 1 (indicating that some upland ditches with seasonal or perennial flow would be jurisdictional); Jon Devine et al., *The Historical Scope of Clean Water Act Jurisdiction*, Natl. Wetlands Newsletter, Vol. 3, No. 6, at 13 (discussing historical protections for a variety of disputed features, including ditches) (enclosed in Appendix A).

unchanged from the current regulations. Because EPA and the Corps are not proposing to do anything new, the Federal Register notice accompanying the proposal contains no commentary or explanation for the exemption.[246]

We have considerable concern with the agencies' current practice with regard to this exemption for waste treatment systems. Since the exemption was written into the regulations, EPA and the Corps have attempted to expand it to cover waters for which it plainly was not intended. In 1980, EPA amended its regulations to provide that:

> Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of the Act … are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as a disposal area in wetlands) nor resulted from the impoundment of waters of the United States.[247]

Clearly, the exclusion was limited. In view of the fact that the Act "was not intended to license dischargers to freely use waters of the United States as waste treatment systems, the definition makes clear that treatment systems created in those waters or from their impoundment remain waters of the United States."[248] Although the second sentence of the regulatory exclusion was suspended in order to dispel concerns that pre-existing treatment systems would be retroactively brought into the regulatory system,[249] the exemption was not meant to be a wholesale authorization of anything described as a "waste treatment system." To the contrary, EPA's initial implementation of the rules rejected a sweeping interpretation; the agency argued in litigation that in-stream disposal of coal mining waste did not qualify for the exemption.[250]

[246] Indeed, the agencies appear to be trying to wall off this exemption from public comment and perhaps even judicial review. *See* 79 Fed. Reg. at 22,190 (discussing exemptions and stating, "the agencies do not seek comment on these existing regulatory provisions"). However, this exemption is centrally related to the core elements of this rulemaking, especially because many so-called waste treatment systems would qualify as impoundments of jurisdictional waters, such that they should be categorically protected under this proposal. Moreover, as the history recounted in the text indicates, the exemption as currently implemented has not been subjected to notice-and-comment rulemaking, such that it is only fair to the public that the provision be examined in this rulemaking. Accordingly, the agencies must carefully consider comments on this exemption, and should ensure that any final provision exempting waste treatment systems is consistent with the original intent of the regulatory provision.
[247] *W.Va. Coal Ass'n v. Reilly*, 728 F. Supp. 1276, 1289 (S.D. W.Va. 1989) (quoting 40 C.F.R. § 122.3 (1980)).
[248] *Id.* (quoting 45 Fed. Reg. 33,298 (May 19, 1980)).
[249] *Id.* (citing 45 Fed. Reg. 48,620 (July 21, 1980)).
[250] *Id.* at 1289-90 (deferring to EPA's interpretation that treatment ponds were regulated "impoundments," not excluded "waste treatment systems"). *See also* Memorandum from Marcia Williams, EPA Office of Solid Waste Director, to James H. Scarbrough, EPA Region IV Residuals Management Branch Chief, attachment B (Apr. 2, 1986) ("EPA applies a standard which treats newly created impoundments of waters of the U.S. as 'waters of the U.S.,' not as 'waste treatment systems designed to meet the requirements of the CWA,' whereas impoundments of 'waters of the U.S.' that have existed for many years and had been issued NPDES permits for discharges from such impoundments are 'wastewater treatment systems designed to meet the requirements of the CWA' and therefore are not 'waters of the U.S.'"), *available at* http://yosemite.epa.gov/osw/rcra.nsf/documents/4BD7508AD59EA15F852565DA006F0A63.

Unfortunately, over time, EPA and the Corps have reversed this interpretation, and now allow sources to use the regulatory exemption to treat new waste treatment facilities in protected waters as excluded from the Clean Water Act. Under the agencies' revised interpretation, a new impoundment of waters of the United States is able to qualify for the waste treatment system exclusion if it is established via a section 404 permit.[251] This position has since been upheld in litigation.[252]

We strongly oppose this approach – nothing is more inconsistent with the basic premise of the Clean Water Act and its foundational goal of eliminating discharges of pollutants into waterways[253] than allowing polluters to convert the nation's waters into waste dumps. The agencies should use the opportunity of this rulemaking to explicitly limit the application of the waste treatment systems exemption to pre-existing facilities.

V. THERE ARE SIMPLE ANSWERS TO MANY QUESTIONS POSED BY THE AGENCIES IN THEIR PROPOSAL.

The agencies' Federal Register notice raises a host of issues, including several specific questions, on which they seek public input. Our reactions to these inquiries are discussed in turn below.

A. Public Input About Tributaries

1. Request for comment on not treating waters without an ordinary high water mark as tributaries, even when they function as such.

The agencies request comment on whether features without an ordinary high water mark (OHWM) that contribute flow to downstream waters, such as wetlands and ponds, should be eligible to be considered tributaries, or if they should be treated exclusively as adjacent waters. The notice states:

> An alternate approach would be to clarify that wetlands that connect tributary segments are adjacent wetlands, and as such are jurisdictional waters of the United States under (a)(6). In this approach, a tributary would be defined as having a bed and bank and OHWM, and the upper limit of the tributary would be defined by the point where these features cease to be identifiable. *** The agencies request comment on this alternate approach, as well as any other suggestions commenters may have on how to clarify the

[251] Memorandum from LaJuana S. Wilcher, EPA Assistant Administrator, to Charles E. Findley, Director, Water Div., Region X, U.S. Army Corps of Eng'rs, on Clean Water Act Regulation of Mine Tailings Disposal (Oct. 2, 1992); *see also* State Program Requirements; Approval of Application to Administer the NPDES Program; Texas, 63 Fed. Reg. 51,164, 51,183-84 (Sept. 24, 1998); U.S. EPA, Guiding Principles for Constructed Treatment Wetlands at 16 (Oct. 2000), *available at* http://water.epa.gov/type/wetlands/constructed/upload/guiding-principles.pdf.
[252] *See Ohio Valley Envtl. Coal. v. Aracoma Coal Co.*, 556 F.3d 177, 211-16 (4th Cir. 2009) (upholding the agencies' interpretation).
[253] 33 U.S.C. § 1251(a)(1) ("it is the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985").

definition of tributaries and provide a clear explanation of their lateral and upstream extent"[254]

We strongly disagree with treating features that function as tributaries as anything but. Historically, the OHWM was used to establish the spatial limits of flowing waters in the Corps' section 404 regulations,[255] but was not a defining characteristic for "waters of the United States" more broadly. The proposal elevates this feature as an essential component of the definition of "tributary" for all Clean Water Act programs.

In our judgment, the primary import of OHWM (and bed and banks) in the proposal is to reflect the agencies' intent that the rules apply only to real and permanent aquatic features (which includes waters that lack perennially flowing or standing water). That is, OHWM is an indicator of a geographic feature the shape of which is determined by the action over many years of hydrologic forces like flowing water. We support the goal of focusing these rules on recognized types of surface waters; doing so reflects the agencies' longstanding practice of distinguishing between permanent aquatic features and places where water temporarily collects, like puddles or sheet flow.

Viewed in this context, we urge the agencies not to require wetlands and ponds that function as tributaries to have an OHWM in order to be considered tributaries under the rule.[256] Rather, those features should continue be treated as tributaries, as in the proposed rule, and the definitions of various types of water bodies should include indicia of long-term hydrologic processes. For wetlands, for instance, the existing regulatory definition would suffice.

In addition to ignoring the functional role that tributary wetlands and ponds play, treating them only as adjacent waters could create a significant loophole in the rules. If tributary ponds were treated as adjacent waters, they would still be jurisdictional categorically, but wetlands adjacent to such ponds would not be categorically covered; instead, they could only be protected as "other waters."

2. "The agencies request comment on all aspects of the proposed definition of tributaries and in particular on whether and how this definition can be revised to provide increased clarity as to the distinction between jurisdictional tributaries, as defined, and non-jurisdictional features such as gullies, rills and non-wetland swales."[257]

[254] 79 Fed. Reg. at 22,203.
[255] 33 C.F.R. § 328.4(c).
[256] Indeed, we suggest that OHWM not be a threshold condition for flowing waters to be considered tributaries either. The SAB had similar advice, urging "EPA to reconsider the definition of tributaries because not all tributaries have ordinary high water marks. An ordinary high water mark may be absent in ephemeral streams within arid and semi-arid environments or low gradient landscapes where the flow of water is unlikely to cause an ordinary high water mark. The Board advises the agency to consider changing the wording in the definition to 'bed, bank, and other evidence of flow.'" SAB Rule Review at 2.
[257] 79 Fed. Reg. at 22,203.

We view this request for comment as an extension of the prior one. Again, we support the concept of including real aquatic features, and excluding those things that are not the result of the regular presence of water over a long period of time. Accordingly, where features that could be classified as "gullies," "rills," or "non-wetland swales" in fact are permanent aquatic features that actually convey water that reaches downstream navigable or interstate waters, they should be treated as tributaries and protected as such. The agencies have received some advice from the SAB to develop this distinction further; in its review of the Connectivity Report, the SAB differentiated between "erosional features like rills and gullies, which are initiated by human or natural disturbance, and longer-term, integrated headwater channels with more ecologically effective connectivity to downstream waters," and points EPA to studies that provide information "on the transition from gullies to headwater streams."[258]

B. *Public Input About "Adjacency"*

> 1. "The agencies seek comment on specific options for establishing additional precision in the definition of 'neighboring' through: explicit language in the definition that waters connected by shallow subsurface hydrologic or confined surface hydrologic connections to an (a)(1) through (a)(5) water must be geographically proximate to the adjacent water; circumstances under which waters outside the floodplain or riparian zone are jurisdictional if they are reasonably proximate; support for or against placing geographic limits on what waters outside the floodplain or riparian zone are jurisdictional; determining that only waters within the floodplain, only waters within the riparian area, or only waters within the floodplain and riparian area (but not waters outside these areas with a shallow subsurface or confined surface hydrologic connection) are adjacent; identification of particular floodplain intervals within which waters would be considered adjacent; and any other scientifically valid criteria, guidelines or parameters that would increase clarity with respect to neighboring waters."[259]

In general, we support the overarching approach the agencies have proposed for defining adjacency – considering waters to be "adjacent" if they are within the floodplain of a covered water, are in the covered water's riparian area, or are connected to the covered water by confined surface or shallow subsurface flow. The agencies have no reasonable basis for requiring a certain degree of proximity in order for a water body to qualify as "adjacent," or for disregarding shallow subsurface connections. Indeed, the Science Advisory Board expressly explained why doing so would be unreasonable:

> Importantly, the available science supports defining adjacency or determination of adjacency on the basis of functional relationships, not on how close an adjacent water is to a navigable water. The Board also notes that local shallow subsurface water sources

[258] SAB Connectivity Review at 31.
[259] 79 Fed. Reg. at 22,209.

and regional groundwater sources can strongly affect connectivity. Thus, the Board advises the EPA that adjacent waters and wetlands should not be defined solely on the basis of geographical proximity or distance to jurisdictional waters.[260]

With respect to defining floodplain by reference to a specified interval, we support incorporating a more standardized process into the rule and relying less on the judgment of field staff. Because the SAB points out that important aspects of physical connectivity -- such as storage, peak flow attenuation, and sediment and wood transport and/or deposition -- occur due to low-frequency flooding and occur "on a decadal or centennial return interval,"[261] we suggest that the 100-year floodplain be seriously considered as a component of defining adjacency. We understand, however, that existing Federal Emergency Management Agency maps are both incomplete and in many places inaccurate, such that they should not be the conclusive basis for identifying waters' floodplains; instead, the agencies' definition should encourage the use of all available and reliable evidence to identify the extent of the 100-year floodplain.

C. *Public Input About "Other Waters"*

1. Request for comment on whether agencies should "[d]etermine by rule that 'other waters' are similarly situated in certain areas of the country."[262]

As these comments discuss in detail above, the available evidence readily supports a conclusion that certain kinds of "other waters" that are prevalent in particular parts of the country significantly impact downstream waters' physical, chemical, and biological integrity and therefore must be protected categorically as "waters of the United States."

Moreover, we support, in addition to – not in place of – finding the categories of water bodies listed above to be jurisdictional by rule, the agencies' proposal to assess the combined effect of "other waters" in several identified ecoregions, and to find such waters to be jurisdictional by rule.[263]

2. Request for comment on whether agencies should "[d]etermine by rule that certain additional subcategories of waters would be jurisdictional rather than addressed with a case-specific analysis, and that other subcategories of waters would be non-jurisdictional."[264]

Although the science supports a finding that many kinds of "other waters" have significant downstream effects, it does not support the conclusion that any category of waters lacks such relationship to covered waters. The record of this rulemaking contains no support of which we are aware that specific categories could not possibly significantly impact water quality in downstream waters. For this reason, and especially because "the science continues to

[260] SAB Rule Review at 2-3.
[261] SAB Connectivity Review at 41.
[262] 79 Fed. Reg. at 22,215.
[263] *Id.*
[264] *Id.* at 22,216.

develop," the SAB cautioned EPA not to make categorical exclusions, saying, "the science does not support excluding groups of 'other waters' (or subcategories of them, e.g., Great Plains playa lakes) that may influence the physical, chemical and biological integrity of downstream waters."[265]

3. Request for comment on whether the agencies should "determine that no 'other waters' are similarly situated, and all significant nexus analyses would be made on a case-specific basis for each individual 'other water'…."[266]

We do not support this approach. In the first instance, determining that no "other waters" are similarly situated is simply counterfactual; we know from the literature, and the SAB confirms, that many types of other waters – which, again, we discuss in detail above – are located in similar settings and perform similar functions. Accordingly, it would be arbitrary and capricious to make a determination that there are not similarly situated other waters.

4. Request for comment on "all 'other waters' in a single point of entry watershed being evaluated as a single landscape unit with regard to their effect on traditional navigable waters, interstate waters, and the territorial seas."[267]

Analyzing all the types of "other waters" together for a given "single point of entry watershed" basis seems to us to be a reasonable addition to the method discussed above, namely, protecting certain kinds of "other waters" in particular geographic areas categorically. That is, if there is not today a robust scientific record about the impacts of certain kinds of "other waters" in a particular region, such that those waters might be categorically protected, it would then be appropriate to examine whether all of the "other waters" in single point of entry watersheds in that region have significant downstream impacts. To be clear, however, this approach is not an adequate substitute for making the categorical determinations we have urged.

D. *Public Input About Waters that are not "Waters of the United States"*

1. "The agencies specifically seek comment on the appropriate flow regime for a ditch excavated wholly in uplands and draining only uplands to be covered by the exclusion in paragraph (b)(3). In particular, the agencies seek comment on whether the flow regime in such ditches should be less than intermittent flow or whether the flow regime in such ditches should be less than perennial flow as proposed."[268]

[265] SAB Rule Review at 3.
[266] 79 Fed. Reg. at 22,217.
[267] *Id.* at 22,217.
[268] *Id.*at 22,219.

As discussed above, we reject the premise that "ditches" should be treated specially under these rules. The decision to exclude some man-made tributaries without any scientific basis for distinguishing between them and other tributaries – rather than the particular flow regime that the exclusion uses – should be changed in the final rule.

VI. THE AGENCIES MUST DO A BETTER JOB AT DOCUMENTING JDS AND NJDS AND MAKING THAT INFORMATION READILY AVAILABLE TO ENSURE TRANSPARENCY AND ACCOUNTABILITY.

It is critically important, with respect to any type of water body that is not categorically protected (or excluded) under the final rule, that the federal agencies, interested groups, and the public have ready access to as much information as possible and practicable about jurisdictional determinations (both those asserting and those declining to assert jurisdiction). The agencies should learn from and correct numerous problems that developed in the last decade-plus of implementing some form of case-by-case review.

A. Corps Districts Must Post JD/NJD Forms on Their Websites in a Timely and Consistent Manner

Key to the ability of the public to watchdog and understand the actions of the EPA and Corps is the regular posting by the Corps districts of the jurisdictional determination forms. RGL 07-01 specifies that completed jurisdictional forms "shall be posted within 30-days of completion,"[269] but it is difficult to discern whether this is followed in practice without monitoring district websites regularly. We reviewed a sampling of websites, and it appears as though some districts may not be following this direction. For instance, as of November 7, the Omaha District had no determinations posted for South Dakota dated later than June 26, even though there were multiple determinations posted for both May and June.[270] Likewise, there is not a single determination posted for 2014 for all of New England.[271]

It is critically important that Corps and EPA headquarters ensure that jurisdictional decisions are publicly available in a timely way. All districts should be required to post all

[269] U.S. Army Corps of Eng'rs, Regulatory Guidance Letter No. 07-01, Practices for Documenting Jurisdiction under Sections 9 & 10 of the Rivers & Harbors Act (RHA) of 1899 and Section 404 of the Clean Water Act (CWA), at 7 (June 5, 2007), available at http://www.usace.army.mil/Portals/2/docs/civilworks/RGLS/rgl07-01.pdf. Although some aspects of this RGL were updated by RGL 08-02, this website posting provision was not. *See* U.S. Army Corps of Eng'rs, Regulatory Guidance Letter No. 08-02, Jurisdictional Determinations (June 26, 2008), available at http://www.usace.army.mil/Portals/2/docs/civilworks/RGLS/rgl08-02.pdf.

[270] Omaha District, South Dakota Jurisdictional Determination, available at http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/SouthDakota/JurisdictionalDetermination.aspx. We recognize that this could in fact represent when determinations occurred for South Dakota in this district; indeed, we observe that the same district has posted determinations from Nebraska dated as recently as October 24. *See* U.S. Army Corps of Eng'rs, Omaha District, Nebraska Jurisdictional Determination, available at http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/Nebraska/JurisdictionalDetermination.aspx.

[271] *See* U.S. Army Corps of Eng'rs, New England District, Jurisdictional Determinations by State, available at http://www.nae.usace.army.mil/Missions/Regulatory/JurisdictionalLimits/JurisdictionalDeterminations.aspx

completed determinations at least once a week; there is no point – and little or no workload savings – to posting only monthly compared to weekly.[272]

B. The Corps Should Keep Jurisdictional Determinations Available On-Line for Five Years.

We do not support, and urge the reform of, the agencies' current policy to allow jurisdictional determinations – which are good for up to five years[273] – to be removed from Corps' websites after being posted for only three months.[274] Although not all districts remove determinations quickly, our review of districts' websites indicates that several do not post the last five years of determinations, whereas some districts today responsibly post forms going back many years. At a minimum, forms should remain available on Corps websites for the five-year period of time in which these determinations are in effect, which is typically five years.[275]

C. The Agencies Need a System to Track Which Water Bodies Have Been the Subject of an Approved JD.

The proposed rule does not include any mechanism by which it will memorialize, and incorporate into subsequent decisions, case-by-case determinations that particular water bodies have a significant nexus with downstream waters and thus are covered by the law. It is essential that the agencies establish such a process. Compiling, maintaining, and making public a list of waters that have been found to be jurisdictional using the case-by-case approach would help identify which other waters – ones that are "similarly-situated" and in the same region – must also be considered to be covered going forward. Given that the agencies indicate that finding types of water bodies to be "similarly situated" (and therefore that their impacts on downstream waters can be aggregated) will result in all such waters in a single point of entry watershed being found to have a significant nexus,[276] a JD that concludes a particular water body is similarly situated to others in a watershed and they collectively are found to have a significant nexus is effectively a JD for all of those waters. For administrative convenience and consistency, the agencies should identify the categories of such waters and the relevant watersheds publicly, such that any subsequent determinations in the watershed need only refer to the prior determination.

The agencies should also consider incorporating into the final rule a provision that authorizes the EPA Regional Administrator that oversees a given area to find that a certain

[272] Some districts seem to have no problem posting JD forms promptly. *See, e.g.* U.S. Army Corps of Eng'rs, Seattle District, Jurisdictional Determinations, available at http://www.nws.usace.army.mil/Missions/CivilWorks/Regulatory/JurisdictionalDeterminations.aspx (as of November 7, most recent determination dated October 23).

[273] *See* U.S. Army Corps of Eng'rs, Regulatory Guidance Letter No. 08-02, Jurisdictional Determinations, at 2 (June 26, 2008) (JDs "can be relied upon by a landowner, permit applicant, or other 'affected party' … who receives an approved JD for five years (subject to certain limited exceptions explained in RGL 05-02)"), available at http://www.usace.army.mil/Portals/2/docs/civilworks/RGLS/rgl08-02.pdf.

[274] U.S. Army Corps of Eng'rs, Regulatory Guidance Letter No. 07-01, Practices for Documenting Jurisdiction under Sections 9 & 10 of the Rivers & Harbors Act (RHA) of 1899 and Section 404 of the Clean Water Act (CWA), at 7 (June 5, 2007), available at http://www.usace.army.mil/Portals/2/docs/civilworks/RGLS/rgl07-01.pdf.

[275] This should not be difficult, and some districts do so already. *See, e.g.*, U.S. Army Corps of Eng'rs, Vicksburg District, Approved Jurisdictional Determinations, available at http://www.mvk.usace.army.mil/Missions/Regulatory/JurisdictionalDeterminations/ApprovedJDs.aspx.

[276] 79 Fed. Reg. at 22,215.

category of other waters prevalent in the region has a significant nexus to navigable and/or interstate waters and therefore individual waters in that category are "waters of the United States." We recommend that this process provide for public notice of, and comment on, a proposed determination, and that final determinations be reflected as additions to the regulatory definition of categorically protected waters, perhaps via a periodically-updated appendix in the Code of Federal Regulations.[277]

D. The Format for Documenting JDs and NJDs is Outdated and of Little Use to the Public, Regulated Entities, and Practitioners, and Should be Updated.

In 2014, it is remarkable that jurisdictional determinations are maintained in an extremely user-unfriendly format. Standard practice today is for JD forms to be converted into Adobe Acrobat files and then posted (for varying lengths of time, as noted above) on individual districts' websites. As a result, there is no unified public database reflecting where decisions have been made, what resources they affect, and the rationale for different decisions. It is therefore essentially impossible to analyze these decisions meaningfully, much less use these decisions to quantitatively assess the impact on the nation's waters. The agencies should overhaul the current approach and require Corps' district personnel (and, where applicable, EPA field staff) to use a common, publicly-accessible, database. Such a tool will enable concerned citizens, resource managers, and others to assess whether similar waters are being treated similarly across the country, track the amount of resources found non-jurisdictional (and therefore more likely to receive pollutant discharges without benefit of pollution control officials' review), and consider whether to make policy or regulatory changes to adequately protect important resources.

We recognize that the agencies' goal with the present rulemaking is to dramatically reduce the number of case-by-case determinations that are necessary by developing categorical inclusions and exclusions. However, it seems unlikely that the agencies' final rules will be entirely categorical; although we would support rules that categorically included the resources covered prior to the Supreme Court-induced confusion, we would not support categorically exempting any types of waters not previously excluded.[278] If the agencies do not pursue a comprehensive approach to categorical inclusions, therefore, they will continue to make case-by-case determinations, and these should be memorialized in a useful format.

[277] Please note that we do not think that including a process to add protected categories later is a substitute for making that determination in this rulemaking where the evidence supports it. We would also strongly oppose relying on the adoption of a provision allowing the agencies to add new categories as a reason today to *exclude* any categories of water bodies. The agencies indicate that they may be considering the approach of excluding waters that are not categorically protected, and allowing for later additions. *See id.* at 22,217 ("If waters are categorized as non-jurisdictional because of a lack of science available today, the agencies request comment on how to best accommodate evolving science in the future that could indicate a significant nexus for these 'other waters.' Specifically, the agencies request comment as to whether this should be done through subsequent rulemaking, or through some other approach, such as through a process established in this rulemaking.").

[278] Nor could such an approach reasonably be squared with the scientific evidence before the agency. As the Science Advisory Board stated in reviewing the proposed rule, "The Board notes … that the existing science does not support *excluding* groups of 'other waters' or subcategories thereof." Letter from Dr. David T. Allen, Chair Science Advisory Board, to Gina McCarthy, Administrator, U.S. EPA, at 3 (Sept. 30, 2014) (emphasis in original), available at http://yosemite.epa.gov/sab/sabproduct.nsf/0/518D4909D94CB6E585257D6300767DD6/$File/EPA-SAB-14-007+unsigned.pdf.

* * *

In conclusion, we urge the agencies to finalize this proposed rule, with the strengthening changes described above, without delay. If you have any questions about this submission, please contact Jon Devine at NRDC at (202) 289-2361. Thank you in advance for considering our views.

Sincerely,



Jon P. Devine, Jr.
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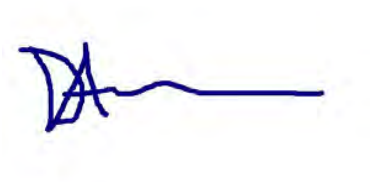

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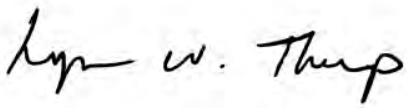
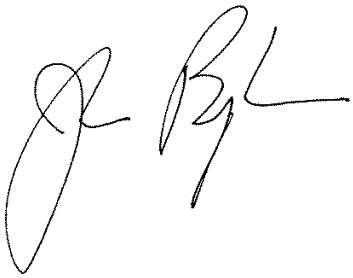


Lynn Thorp
National Campaigns Director
Clean Water Action



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November 14, 2014

Water Docket
Environmental Protection Agency
Mail Code: 2822T
1200 Pennsylvania Ave. NW
Washington, DC 20460
Docket ID No. EPA-HQ-OW-2011-0880

Attention: Docket ID No. EPA-HQ-OW-2011-0880: Definition of "Waters of the United States Under the Clean Water Act"

Dear Administrator McCarthy and Assistant Secretary Darcy:

Thank you for the opportunity to comment on the proposed rule to clarify the definition of the "waters of the United States," which determines which waters, including wetlands, are protected under the Clean Water Act. The Nature Conservancy acknowledges the need to clarify the definition in a manner grounded in science and consistent with the statute and the subsequent court decisions and, after careful consideration of the comments received, complete this rulemaking effort.

The Nature Conservancy is a national and global non-profit conservation organization whose mission is to conserve the lands and waters on which all life depends. Our on-the-ground conservation work is carried out in all 50 states and over 30 foreign countries and is supported by approximately one million members. Our work is science based and undertaken in collaboration with individuals, local communities, businesses, public agencies, and other nonprofit groups. We work closely with farmers, ranchers and other landowners, and we own and manage large areas of land across the country.

Waters and wetlands are critically important to the health and well-being of the people, the economy, and the environment of our country. These are shared, interconnected resources that waters supply our drinking water, help grow our food, transport our goods, and provide our energy, and support our communities and economy. These waters also support a broad range of biodiversity, including fish and wildlife and the natural areas on which they depend. The threats to our waters and wetlands are well documented. Over 50 percent of our waters do not meet their state water quality standards. [1] In the lower 48 states, we have lost over 50 percent of the wetlands that existed when our country was first formed. [2] Despite the progress we have made, we continue to see declines in aquatic health and the sustainability of our waters,[3] with over 40 percent of our freshwater fish species now imperiled.[4] While many factors contribute to these trends, protecting our waters wetlands, including small streams and wetlands, is necessary for these resources to continue to support our communities, our economy, and our environment.

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[1] U.S. EPA, National Summary of State Information, from: Watershed Assessment, Tracking & Environmental Results, http://ofmpub.epa.gov/waters10/attains_nation_cy.control, accessed Oct 6, 2014.
[2] Dahl, T.E. 1990. *Wetland Losses in the United States: 1780's to1980's.* U.S. Department of the Interior, Fish and Wildlife Service, Washington D.C.
[3] Dudgeon et al. 2006. Freshwater biodiversity: importance, threats, status and conservation challenges. Biological Reviews 81: 163-182
[4] Jelks, Howard L. et al. *Conservation Status of Imperiled: North American Freshwater and Diadromous Fishes*, Fisheries, Vol. 33, no. 8, August 2008. www.fisheries.org.

Protection of our water resources under the federal Clean Water Act is one of the most fundamental and important environmental protections in the United States. This federal statute establishes the national standards for the protection of water resources. Many rivers, streams, wetlands and other waterbodies cross state lines and the Clean Water Act helps ensure these shared waters are protected so that downstream states are not unduly burdened. In addition, half of all states have no state-level wetlands protection beyond that provided by the Clean Water Act under Section 401[5]-- the authority of states to review and approve federal permits. Therefore, it is critical that the rulemaking ensures that our water resources are protected in a manner that meets the goals of the Act, in an equitable and sustainable way that includes states retaining the ability to have their own statutes that parallel and complement the federal statute.

General Comments on proposed rule:

We support the position expressed in the Science Advisory Board (SAB) letter[6] on the rule that there is a strong scientific basis for key parts of the rule, including the inclusion of tributaries, adjacent waters and wetlands, and other waters. While many of the elements remain unchanged from the current rules and guidance and the proposal makes a number of important adjustments, the proposed rule does not, as drafted, achieve the desired clarity of jurisdiction that is a goal for this regulatory revision. We urge the agencies to consider the specific recommendations of the SAB, such as comments on how tributaries can play an important aspect of connectivity that can be a significant nexus between various surface waters and wetlands.

We therefore urge to further refine the rule in a few key areas to achieve better clarity of the jurisdiction of the Act. We also recommend the agencies outline the specific types of technical guidance that will be developed to help implement the final regulation. To the extent this guidance can be issued simultaneously with the revised rule, or shortly thereafter, the sooner the specific questions landowners have about the water resources on their properties can be answered.

This rule is focused on the 'significant nexus' test as provided by the Supreme Court (i.e., more than speculative or insubstantial). The scientific basis for the rule appropriately bases the determination of 'significant nexus' on the physical, chemical and biological processes that connect waters and wetlands to each other and which affect the integrity of downstream waters. This focus on key processes is well-grounded in the science of freshwater and coastal systems and was supported by the Science Advisory Board in their review of EPA's report on connectivity.[7] This approach is also the foundation TNC uses to protect and restore freshwater systems.[8]

Specific comments on proposed rule:
We support many of the specific changes made in the draft, and we highlight areas where additional clarity is needed. With regard to providing additional clarity, we distinguish between suggested changes in the regulation and instances where implementation guidance will be the appropriate means to achieve such clarity.

Need for Supporting Technical guidance: In the past, implementation of various aspects of the Clean Water Act has been clarified through associated technical guidance issued by the agencies. Implementation guidance is a critical and appropriate way to clarify technical aspects related to the implementation of the rule – a level of detail that is not appropriate to include in the rule itself.

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[5] America's Vulnerable Waters: Assessing the Nation's Portfolio of Vulnerable Aquatic Resources since *Rapanos v. United States,* 2011 Environmental Law Institute, Washington, D.C.

[6] EPA-SAB-14-007, Science Advisory Board (SAB) Consideration of the Adequacy of the Scientific and Technical Basis of the EPA's Proposed Rule titled "Definition of Waters of the United States under the Clean Water Act", Sept. 30, 2014.

[7] EPA-SAB-15-001 SAB Review of the Draft EPA Report Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence, Oct. 17, 2014.

[8] Active River Area: A Conservation Framework for Rivers and Streams, The Nature Conservancy, 2008.

For example, the U.S. Army Corps of Engineers has issued extensive guidance on how to delineate wetlands, clarification that is appropriately provided through guidance rather than regulation. Similarly, technical guidance issued by the agencies will be important to further clarify the implication of how jurisdiction is defined in the final rule. We therefore urge the agencies to: (i) clarify the types of guidance that will be forthcoming and, to the extent possible, (ii) have such guidance ready for use when the final rule is promulgated – or as shortly thereafter as possible.

Tributaries: We support the inclusion of tributaries as jurisdictional however, additional clarity is needed in how to distinguish a jurisdictional tributary from non-jurisdictional erosional features such as swales and washes. Such clarification is may be appropriate for technical guidance, and such clarity is important to properly implement the rule. In addition, as discussed by the SAB, the agencies should consider whether the 'ordinary high water mark' is an appropriate attribute in all cases.

The proposed definition of tributaries is consistent with the existing regulatory status of most ditches and canals, which the courts have generally agreed are jurisdictional. However, the implication and requirements of jurisdiction varies under different parts of the Clean Water Act – such as the discharge of pollutants, the maintenance of these conveyance features, and dredge and fill activities – and these differences are not always clear to those who own and manage such structures. The agencies should consider developing technical guidance to provide clarification about what activities are, and are not, subject to any agency review or approval.

Waters and water bodies: The rule would benefit from a definition for the term "waters" (or water bodies) in the rule. The term "waters" (as opposed to the term "waters of the United States,") has not been defined and has led to much confusion about what types of water bodies are covered. We note that the term "wetlands" has long had a definition (and supporting guidance) that has helped to minimize such confusion. Such a definition should be consistent with the definition of tributaries under the rule, but should also include other water bodies such as lakes, ponds, and oxbows.

Upland: Consider including a definition for the term "upland". This term is used particularly in the context of whether ditches should be considered jurisdictional but is also relevant to supporting a definition of the term "waters" (or "water bodies"). For example, the rule or subsequent guidance could help clarify whether the term 'upland' includes areas that are wet but not considered jurisdictional wetlands.

Significant Nexus: The proposed rule is grounded in the significant nexus test provided by the Supreme Court. The Conservancy supports the definition as proposed, with one comment.

The determination of whether groups of wetlands and waters are "similarly situated" should not be related to their proximity to "waters of the United States". Currently, the draft states that waters are "*similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a 'water of the United States' so that they can be evaluated as a single landscape unit*". The test for jurisdiction as proposed is significant nexus – that is, the impact they have to the integrity of downstream waters. Proximity in this context is primarily relevant to whether they are similarly situated on the landscape and the definition should reflect this fact. The term "adjacent" already covers the issue of proximity to a water of the United States.

Implementation of the final rule will benefit if the rule is accompanied by technical guidance on the methods appropriate to be used to determine significant nexus. There are any number of ways that such a connection can be determined and, as noted by the SAB, these ways should include consideration of all four aspects of connectivity - longitudinal, lateral, vertical, and temporal - and physical, hydrological (surface and subsurface), chemical, and biological flowpaths, as well as aspects of the frequency, duration, magnitude, predictability, and consequences of these connections. In addition, the guidance should include a focus on the role of groundwater (in addition to shallow subsurface flows) in linking surface waters and wetlands in providing connections that meet the significant nexus test, even though groundwater itself is not under CWA jurisdiction.

Floodplains and riparian areas: We support the concept of using floodplains and riparian areas as an important aspect of the definition of 'adjacent' based on the physical, chemical, and biological processes that connect these areas to traditional navigable waters and their tributaries. However, while the definitions are generally adequate, additional clarity through technical guidance is needed on how to delineate the extent of floodplains and/or riparian areas that will be used for determining adjacency. Including guidance on how to determine "moderate and high" water would provide helpful clarification.

Other Waters: The EPA connectivity report includes case studies on the connectivity of Carolina/Delmarva bays, prairie potholes, and vernal pools to jurisdictional waters. Similar research and documentation should be undertaken for other such resource types to determine if they meet the significant nexus test that will determine whether they are jurisdictional or not.

We also agree that the jurisdiction of "other waters" should also be able to be determined on a case-by-case basis – either individually or by grouping 'similarly situated waters and wetlands. Because of the importance of site-specific conditions as to whether there is a significant nexus to downstream waters, "other waters" should only be considered non-jurisdictional after an affirmative agency decision that they do not have a significant nexus and therefore are not covered by the act. A clear definition of 'waters' or 'water bodies', as suggested above, will help ensure such determinations are only required where appropriate.

Similarly situated: In the federal register notice, the agencies ask a number of questions about how they might approach determining wetlands and waters to be "similarly situated" in an effort to make an aggregate jurisdictional determination. A number of alternative approaches were discussed, including Level III ecoregions. We submit that these ecoregions are generally not the best choice as they largely reflect landscape patterns in terrestrial vegetation and do not relate to the connections between waters, including wetlands.

One scientifically appropriate way to aggregate "other waters" within a given geography that should be considered by the agencies is to group them by hydro-geologic setting (HGS), which is a useful framework for connecting them to their surrounding landscapes[9]. HGS is defined by factors that control the flow and chemistry of surface water and groundwater from watersheds to wetlands, including (1) forms and amounts of precipitation and evapotranspiration within the watershed and wetland; (2) topography, slope, and composition and stratigraphy of subsurface geological materials in the watershed and underlying the wetland; (3) amounts, chemistry, and timing of surface waters flowing into and out of the wetland; and (4) depth, chemistry, and discharge rates of groundwater flow systems. These factors control surface water and groundwater flows, wetland water chemistry, organic matter production and decomposition, and, ultimately, plant and microbial community composition and diversity. These concepts are similar to Brinson's Hydrogeomorphic Classification of Wetlands[10].

Given the purpose of the Clean Water Act – the protection of the physical, chemical, and biological integrity of the nation's waters – we believe such an approach is a sound, science-based framework appropriate for determining which waters, including wetlands, are similarly situated within a landscape. Such an assessment can be done as a desktop exercise using available spatial and empirical data, with in-the-field ground-truthing targeted in certain watersheds or in certain parts of the country where results are less clear.

Conclusion: The protection of our nation's water resources depends heavily on a scientifically sound and legally defensible definition of "waters of the United States." With further refinement to improve clarity and to

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[9] **Winter, T. C. 1988.** A conceptual framework for assessing cumulative impacts on the hydrology of nontidal wetlands. Environmental Management 12: 605-620. **Bedford, B. L. 1996.** The need to define hydrologic equivalence at the landscape scale for freshwater wetland mitigation. Ecological Applications 6: 57-68. **Bedford, B. L. 1999.** Cumulative effects on wetland landscapes: links to wetland restoration in the United States and Canada. Wetlands 19: 775-788.

[10] Brinson, M.M. 1993. A hydrogeomorphic classification for wetlands, Technical Report WRP–DE–4, U.S. Army Corps of Engineers Engineer Waterways Experiment Station, Vicksburg, MS.

ease implementation, the final rule will help achieve the goal of providing a protective, fair, and efficient definition to guide the administration of the Clean Water Act.

Some of the concern that has been expressed about the proposed new rule is, in part, a result of the frequent difficulty and frustration associated with the implementation of the wetland protection and other programs, including the speed with which jurisdictional determinations are made, permits are issued, and other decisions are made. We urge the agencies to continue to work to make these processes as efficient, transparent, and effective as possible so that landowners and land managers can appropriately use and develop their lands while protecting these important national resources.

Thank you for the opportunity to comment on these proposed regulations. We urge you to carefully consider our comments and the many comments submitted by others and to work to finalize a rule that brings the desired clarity to the jurisdiction of the Clean Water Act and provide appropriate protection to these essential natural resources.

Sincerely,



Lynn Scarlett
Managing Director for Public Policy

The Honorable Gina McCarthy
Administrator
Environmental Protection Agency
Mail Code 1101A
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Docket number: EPA-HQ-OW-2011-0880

Dear Administrator McCarthy,

On behalf of 585 co-workers and fellow employee owners of New Belgium Brewing Company in Fort Collins, Colorado, I am writing to express our support for the Environmental Protection Agency (EPA) Proposed Rule: Clean Water Act; Definitions: Waters of the United States.

As brewers we depend on clean water for our success. Beer is 90% water. That's why we're pleased that the EPA issued new draft rules to clarify protections for water bodies under the Clean Water Act. This action gives us the confidence that our growing brewery needs. We will continue to grow if we can count on clean water which is essential to brewing our beers and being prosperous.

It makes sense to protect tributary streams and nearby waters because the science shows, without doubt, that they are linked to downstream water quality. And other waters should be protected when they have similar impacts downstream. Keeping water upstream clean and minimizing our collective impact is good for business and good for communities.

Clarity in regulation and the protection of natural resources are keys to economic development.

Over the past 23 years we've learned that with smart regulation business thrives. We've grown from the basement of our co-founders' house in Fort Collins to a 1 million barrel per year brewery in Fort Collins, Colorado. We're also building a new 500,000 barrel brewery in Asheville, North Carolina. We have been able to grow from 2 to 585 co-workers aided by the protection that the EPA and Army Corps of Engineers guarantee for our water supply.

The administration's proposed rule would restore clear national protections against unregulated pollution and destruction to nearly two million miles of streams and tens of millions of acres of wetlands in the continental US. These water bodies prevent flooding, filter pollution, supply drinking water to millions of Americans, and provide critical fish and wildlife habitat. What's more, they provide these valuable services for free. In fact, the cost-benefit analysis done for the Clean Water Rule estimates that it would generate between $388 million and $514 million per year in economic benefits, far exceeding expected costs ($162 to $278 million annually).

Clean water is a part of our own triple bottom line business model. We focus on making profit, caring for the planet and doing what is right for people. Our journey has led us to take innovative steps to reduce our own impact on the water supply. We've built an onsite process wastewater treatment plant. We've cut water use. In 2013 we gave grants to 22 groups engaged in water conservation and restoration activities. We advocate for sound policies.

Our beer lovers appreciate and respect our work with philanthropy and advocacy for clean water. They know that our efforts result in making great beer, protecting drinking water and having great recreational waters. They appreciate that we take steps to make sure our business, our country and our planet are on a course that can be sustained for future generations.

Ours is not the only brewery that depends on clean and abundant water for success. The craft beer industry in the United States is thriving. In Colorado alone we have over 242 licensed breweries employing over 5,000 people. Nationwide there are 2,768 craft breweries employing 110,000 people. We rely on clean, plentiful water supplies to craft great beers and employ tens of thousands of Americans. These jobs cannot be outsourced and they range from production technicians to brewers to microbiologists and chemists to sales and marketing, human resources, bottlers, managers and other professionals and skilled trades. These are good jobs at growing companies. We rely on responsible regulations that limit pollution and protect water at its source for our growth.

In addition to water as a beer ingredient we also rely on clean water nationwide to be available for barley, hops and other agricultural products that we use.

Under these new proposed safeguards hundreds of communities will now enjoy the full protections of our nation's clean water laws. Bringing these streams and wetlands under the umbrella of the Clean Water Act will also help protect drinking water for 117 million people. According to the EPA's analysis, approximately 3.7 million Coloradans get their drinking water, in whole or part intermittent, ephemeral or headwater streams. The clarified regulations will also safeguard natural flood protection, since wetlands and streams help catch and soak up rain. This is no small benefit; 9.6 million homes and $360 billion dollars-worth of properties lie in flood-prone areas. We witnessed firsthand in the last two years in Colorado how wildfires and floods can affect the water supply. We do not need the added anxiety of human introduced pollutants in wetlands, headwaters and streams.

Thriving businesses like New Belgium have the opportunity and the responsibility to do everything in our power to protect the water that we need to grow our company and expand the local economies in which we work

Sincerely,

Jenn Vervier

Director of Sustainability and Strategy

New Belgium Brewing Company

Senator Jeff Merkley
313 Hart Senate Office Bldg.
Washington, DC 20510

Representative Peter DeFazio
2134 Rayburn Office Building
Washington, DC 20515

January 30th, 2015

Re: Letter for the Record for February 4th Joint Hearing on the "Waters of the United States" Clean Water Rulemaking

Dear Senator Merkley and Representative DeFazio:

The Association of Northwest Steelheaders, representing our 1,600 active members, strongly urges you to support the Clean Water Rule and the rulemaking process during your February 4th joint hearing and in your forthcoming congressional deliberations. We strongly oppose any legislation that would derail or delay the positive efforts of the U.S. Army Corps of Engineers (the Corps) and Environmental Protection Agency (EPA) to clarify the jurisdictional coverage of the Clean Water Act. The U.S. Supreme Court and stakeholders on all sides recognize the need for a clear "Waters of the U.S." rule. We applaud the agencies for their deliberate and expert rulemaking process and we urge you to work with your colleagues to support this much-needed rule and consider further measures that improve the health of the nations' waters instead of undercutting them.

Oregon's anglers and conservationists rely on clean, cold, healthy streams to support our sport fishery and our outdoor recreation economy. Most of these streams do not "float a boat." They are headwater streams or streams that do not flow year round that provide crucial water filtration, flood storage, and fish habitat. In Oregon, 45% of stream miles within salmon/steelhead range are intermittent or ephemeral; 61 % are headwater streams. In the Deschutes River Basin, a major tributary to the Columbia River and a significant trout and steelhead fishery, 69% of stream miles are intermittent while 55% are headwaters. The current uncertainty regarding whether these waters are "waters of the United States" subject to the Clean Water Act, leaves them vulnerable to increased pollution and destruction. These same smaller, at risk streams provide drinking water for more than 1.7 million Oregonians. Loss of protections for these smaller streams and wetlands jeopardizes downstream water quality as well.

The Corps and EPA's Clean Water Act proposal makes a strong effort to more clearly define—better than ever before in the history of the law—what waters and activities are and are not regulated by the law. All activities currently exempted under current law are fully exempted under the proposal. Nobody, including the agencies, wants to regulate puddles in farmers' fields or our neighbors' birdbaths.

Oregon's anglers are committed to protecting Oregon's streams and its sportfishery for future generations. Furthermore, sportfishing is an industry here in Oregon, and it's a business that depends on clean cold water. Rivers need water. For every acre of water that we have, we return 11 to 13 spawning adults back to the watershed, depending on water temperatures and habitat quality. The more water you have, the more 'pastureland' you have for cold water fish. Sportfishing in Oregon generates more than $680 million dollars in annual retail sales and contributes more than $1 billion dollars overall to the Oregon economy. It supports more than 11,000 Oregon jobs, supporting rural communities in particular.

As Oregon anglers, fishing guides, and conservationists, we ask you to represent our interests: Vote for a more effective Clean Water Act, not a weaker one! Please support the Clean Water Rulemaking and reject any legislation that would delay or derail this much-needed clarification of the Clean Water Act.

Sincerely,

Robert Rees

Bob Rees, Executive Director
Association of NW Steelheaders



November 14, 2014

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Ave., NW
Washington, DC 20460
E-mail: OW-Docket@epa.gov

Re: EPA-HQ-OW-2011-0880: NWF et al Comments on Proposed Rule Definition of "Waters of the United States" under the Clean Water Act

To Whom It May Concern:

Please accept for the record these comments on the proposed Environmental Protection Agency ("EPA") and the Army Corps of Engineers ("Corps") Proposed Rule Definition of "Waters of the United States" under the Clean Water Act ("Proposed Rule"). 79 Fed. Reg. 22188 (April 21, 2014). The agencies extended the deadline for submitting comments to November 14, 2014.

The National Wildlife Federation (NWF) represents over 4 million conservation-minded hunters, anglers, and outdoor enthusiasts nationwide. Conserving our Nation's wetlands, streams, and rivers is at the core of each organization's mission. Our organizations also have years of experience protecting these resources and dealing with the legal and other tools available to help us protect such resources. We have been active in advocating for Clean Water Act protections since the Act was passed in 1972.

Through comments to agencies, participation in the legislative and rulemaking processes regarding the Act, litigation, and in other forums, we have gained valuable expertise in the Act and how it is used to protect our waters. Additionally, we have been actively involved for more than a decade in the lengthy deliberations on the question of what are "waters of the United States," such as commenting on the Advance Notice of Proposed Rulemaking in 2003, the 2007 *Rapanos* guidance, and the draft 2011 "waters of the United States" guidance; and participation as Amici Curiae in the *Rapanos* Supreme Court case, and participation in numerous other federal court cases concerning the issue of "waters of the United States."

For the reasons set forth below, our organization strongly supports the proposed rule with respect to tributaries and adjacent waters, and urge the agencies to issue a final rule that includes as "waters of the United States" categories of non-adjacent "other waters" consistent with the scientific evidence of connectivity. We urge the agencies to move swiftly to finalize the "waters

of the United States" rule and to formally withdraw the 2003 *SWANCC* Guidance and the 2008 *Rapanos* Guidance.

For ease of navigation, and to highlight our main points, here are our headings and sub-headings with page numbers in parentheses:

I. This Rule is Necessary and Offers the Best Opportunity in a Generation to Clarify the Waters that Are – and Are Not – Subject to Clean Water Act. (6)

A. *SWANCC, Rapanos,* and subsequent agency guidance have created a decade-long, untenable status quo of uncertainty, confusion, wasteful litigation, and lost clean water protections. (6)

B. At stake in this rulemaking are millions of stream miles and wetland acres, drinking water supplies for 117 million Americans, healthy waters to support a healthy economy, and the effectiveness of the Clean Water Act itself. (8)

C. The clean water rule is the product of four years of rigorous and transparent scientific and public policy deliberation and offers the best chance in a generation to clarify the "Waters of the United States." (10)

II. The proposed definition of "Waters of the United States" is consistent with the goals of the Clean Water Act and with legal precedent. (12)

III. There Is a Strong Scientific Foundation for the Proposed Definition of "Waters of the United States." (18)

A. Kennedy's significant nexus test calls for more than speculative or insubstantial scientific evidence of connectivity to downstream waters. (18)

B. EPA has compiled a rigorous, accurate, and comprehensive science synthesis that supports categorical findings of significant nexus for the entire tributary system, adjacent waters, and several categories of non-floodplain "other waters." (19)

IV. The Overall Approach to the Proposed Rule Increases Clarity and Consistency with the Clean Water Act, the science, and the legal precedent. (23)

V. The Proposed Rule Definition of Traditional Navigable Waters is Well-Supported by Statute and Case Law. (24)

A. TNWs include waters currently used, used in the past, or susceptible of use in interstate commerce. (24)

B. Susceptibility for future use may properly be based on capacity for use and future use for waterborne recreation. (26)

C. The final rule regarding TNWs could be improved by further clarifying the TNW case law and improving available TNW mapping data. (26)

VI. The Proposed Rule's Treatment of Interstate Waters is Well-Supported by Statute, Regulations, and Case Law. (28)

A. The Clean Water Act and the agencies' existing rules provide for categorical protection of interstate waters. (28)

B. The agencies' treatment of tributaries, adjacent wetlands, and other waters in relation to interstate waters is well-supported. (29)

VII. The Agencies' Definition and Treatment of Tributaries is Scientifically and Legally Sound. (29)

A. The agencies' definition of tributary is consistent with existing law and science, and does not expand Clean Water Act jurisdiction. (31)

1. ***The agencies' use of the existing OHWM definition helps clarify the definition of tributary and tributary boundaries.*** **(32)**
2. ***Any further clarifications of the tributary definition must respect connectivity science and the goals of the Clean Water Act, and must not exclude wetlands, lakes, and ponds that function as tributaries and are integral elements of the tributary system.*** **(32)**

B. The Proposed Rule, much like the 2008 Guidance, properly treats many non-tidal ditches as tributaries where they clearly function as tributaries. (34)

C. The Proposed Rule excludes from the definition of tributary many ditches and certain other features that are not considered tributaries. (36)

1. ***The perennial flow requirement is not consistent with the connectivity science and should be revisited.*** **(37)**

D. The agencies' treatment of headwater and ephemeral streams is scientifically and legally sound. (38)

E. The 2008 Guidance has undermined protections for ephemeral streams and must be withdrawn. (40)

VIII. The Proposed Rule Properly Asserts Jurisdiction Over Adjacent Waters. (42)

A. The Agencies' proposal to revise the existing "adjacent wetlands" jurisdictional category to include "adjacent waters" provides additional clarity and is scientifically and legally sound. (44)

B. The agencies' definition of "neighboring," "floodplain," and "riparian area" to support and clarify the existing definition of adjacent is scientifically and legally sound. (45)

1. *Efforts to further clarify the definition of "floodplain" must be scientifically sound and not place undue emphasis on geographic proximity.* (46)
2. *The Agencies' proposal defining "neighboring" to include waters with hydrological connections in determining adjacency is scientifically and legally sound.* (48)
3. *The Agencies' consideration of options for additional precision in defining "neighboring" should be informed by science and should not place undue emphasis on geographic proximity to the floodplain or tributary.* (49)

C. The agencies should determine adjacency on the basis of functional relationships, not proximity to (a)(1) through (a)(5) waters. (50)

D. The Agencies' proposed "adjacent waters" provision improves the term's clarity by deleting the confusing phrase "other than waters that are themselves wetlands." (52)

E. The 2003 SWANCC and 2008 Rapanos guidances have put millions of adjacent wetland acres at risk and must be replaced with a scientifically and legally sound waters of the U.S. rule. (52)

IX. The Final Rule should define categories of non-adjacent waters as "waters of the United States" where the scientific evidence of connectivity satisfies Justice Kennedy's Significant Nexus Test. (54)

A. The proposed rule significantly limits the scope of jurisdictional "other waters", is far more restrictive than the limits set by the Supreme Court, ignores the scientific evidence of connectivity, and runs counter to the goals of the Clean Water Act. (54)

1. *The single point of entry watershed is a reasonable basis for interpreting "in the region" for purposes of aggregating "other waters" to determine their collective effect on the nearest TNW, IW, or territorial sea.* (56)
***2. The single point of entry watershed approach should provide for more flexible application where region-specific science warrants.* (56)**
***3. The agencies must reject the 2008 Guidance's flawed and harmful stream segment approach to aggregation.* (57)**

B. In categorizing waters as "similarly situated" the final rule should focus on the similar functions of non-adjacent water bodies in the region and less on proximity to TNWs, IWs, and territorial seas. (58)

C. The agencies' definition of significant nexus is legally and scientifically sound. (60)

D. The final rule should define categories of "other waters" as "waters of the United States" based on the current scientific evidence of connectivity. (61)

E. The agencies have the legal authority to make a categorical determination for subcategories of "other waters" when a majority of those waters meet the significant nexus standard. (63)

F. The agencies should determine by rule that "other waters" are similarly situated in certain areas of the country. (65)

G. The agencies should determine by rule that certain "other waters" have a significant nexus and are jurisdictional by rule. (67)

H. The agencies should not categorically exclude from aggregation or jurisdiction "other waters" that are not located in these identified ecoregions. (67)

I. Retaining the case-specific approach where the science is inconclusive is scientifically sound and helps to accommodate evolving science that could establish significant nexus in the future. (68)

J. The final rule should establish a process by which emerging scientific evidence of connectivity can be incorporated into a cumulative body of scientific information and used to inform both case-specific and categorical significant nexus determinations over time. (69)

K. Summary of Science-based Comments Supporting Findings of Significant Nexus and Jurisdiction by Rule for Other Water Subcategories in Specific Regions (69)

1. *Prairie Pothole Region Wetlands* (71)
2. *Texas and Southwest Louisiana Coastal Prairie Wetlands* (78)
3. *Carolina Bays, Delmarva Bays, Pocosins and Similar Coastal Depressional Wetlands* (81)
4. *Northern Vernal Pools* (85)
5. *Western Vernal Pools* (86)
6. *Sinkhole Wetlands in Karst Regions* (86)
7. *Nebraska Sand Hill Wetlands* (87)
8. *Playa Wetlands, Rainwater Basins, and Platte River Region Wetlands* (88)
***9. Interdunal Wetlands* (91)**

L. Significant Nexus; Additional Science-based Comments Regarding Connectivity (92)

1. ***Surface Water Storage and Flood Abatement* (92)**
2. ***Groundwater Recharge and Base Flow Maintenance* (94)**
3. ***Water Quality Relationships* (95)**
4. ***Biological Nexus* (98)**

M. The 2003 and 2008 Guidances leave millions of acres of lakes, potholes, and wetlands at risk of pollution and destruction. (99)

N. For the first time, the proposed rule is expressly excluding many ditches and other water features from CWA jurisdiction. (101)

***1. Further clarification of excluded erosional features and other waters must not be at the expense of ephemeral streams and groundwater connections.* (101)**

X. Clarifying and Restoring Clean Water Act Protections Fosters Strong Local Economies and Millions of Jobs. (102)

DETAILED COMMENTS

I. This Rule is Needed and Offers the Best Opportunity in a Generation to Clarify the Waters that Are – and Are Not – Subject to Clean Water Act Protections.

The Waters of the United States rule is necessary to revise the longstanding definition of "waters of the United States" subject to the Clean Water Act in light of the Supreme Court's decisions in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers ("SWANCC")*,[1] and *Rapanos v. United States* and *Carabell v. United States* (consolidated as *Rapanos v. United States*, hereinafter referred to as *Rapanos*).[2]

The final rule must address the *SWANCC* and *Rapanos* decisions in a manner that is consistent with the Clean Water Act, its goals, and the applicable aquatic ecosystem science. Such a revised regulation will establish a binding rule that will provide for restoring longstanding clean water protections, and will provide greater certainty and consistency in jurisdictional determinations for landowners, agency field staff, and the courts. Courts generally give little deference to agency guidance or pronouncements that are not formal rules. [3] Rule-making to address this definition was clearly called for by at least two of the Supreme Court Justices in their *Rapanos* concurring opinions: Chief Justice Roberts[4] and Justice Breyer.[5]

A. *SWANCC, Rapanos,* and subsequent agency guidance have created a decade-long untenable status quo of uncertainty, confusion, wasteful litigation, and lost clean water protections.

In its 2001 *SWANCC* decision, the Court decided certain ponds in northern Illinois were not

[1] 531 U.S.159 (2001).
[2] 126 S. Ct. 2208 (2006).
[3] *See*, *e.g.*, *Precon Development Corp. v. U.S. Army Corps of Engineers*, 633 F.3d 278 290 n.10 (4th Cir. 2011) (finding that guidance documents are not entitled to the increased deference afforded rules).
[4] 547 U.S. at 757-58.
[5] 547 U.S. at 812.

covered under the Act when jurisdiction was based solely on their use by migratory birds.[6] The *SWANCC* decision was narrow. It simply precluded the Corps from asserting jurisdiction over certain ponds based solely on their use by migratory birds. It did not overturn any aspect of the waters of the U.S. regulatory definition, including (a)(3) other waters provision, or any other regulatory provision of the Corps.[7]

Nevertheless, in 2003, the Bush Administration's EPA issued SWANCC guidance (immediately effective without advance public notice and comment) with an advanced notice of proposed rulemaking to potentially remove from Clean Water Act jurisdiction many non-navigable, intrastate wetlands, streams and other waters. That spring, 39 state agencies and hundreds of thousands of individuals and organizations submitted comments urging the EPA and the Corps not to reduce the historic scope of waters protected under the Clean Water Act. Later that year, **o**ver 200 members of Congress from both parties (including Rep. Paul Ryan among others) wrote a letter to President Bush urging him "not to pursue any policy or regulatory changes that would reduce the scope of waters protected under the Clean Water Act." In the face of such strong opposition, the Bush Administration abandoned its rulemaking to reduce the scope of waters covered by the Clean Water Act, but retained the SWANCC Guidance, effectively removing CWA protections for an estimated 20 million so-called "isolated" wetland acres.

In 2006 in *Rapanos*, the Supreme Court issued a fractured (4-1-4) decision involving wetlands adjacent to non-navigable tributaries of traditional navigable waters. Importantly, the Court issued five opinions, none of which garnered a majority. The cases were ultimately sent back to the lower courts for further review because a plurality of the Court (Justices Scalia, Alito, Thomas, and Chief Justice Roberts) and Justice Kennedy, concurring separately, agreed that the cases should be remanded. However, the plurality and Justice Kennedy's concurrence conflicted on almost every major point. While the plurality and Justice Kennedy expressed skepticism regarding the legality of the breadth of the government's regulatory definition of waters covered by the Act, the Court did not facially invalidate any of those regulations. Justice Kennedy's concurring opinion disagreed with the plurality opinion, and concluded that "waters of the U.S." includes wetlands that possess a "significant nexus" with navigable waters. He finds that wetlands possess the requisite significant nexus if they "either alone or in combination with similarly situated [wet] lands in the region, significantly affect the chemical, physical, and biological integrity" of other covered waters more readily understood as navigable. In addition, a four-member dissent, authored by Justice Stevens, argued for broad protection of waters under the Act as prescribed by the current regulations.

Recognizing the confusion wrought by their fractured decision, three of the various opinions urged the agencies to initiate a rulemaking clarifying the "waters of the U.S". While the federal courts await a revised waters of the U.S. rule, federal court litigation on "Waters of the U.S" mounts in the wake of *Rapanos*, leading to costly litigation, uncertainty, delay, and hampered Clean Water Act enforcement.

[6] 531 U.S.159 (2001).

[7] The Migratory Bird Rule was contained in the 1986 preamble to the Corps' regulations, and is not a rule. 51 Fed. Reg. 41206, 41217 (Nov. 13, 1986). It is also important to note that *SWANCC* did not state migratory bird use cannot be considered as a factor in deterring the Act's jurisdiction over waters.

On June 5, 2007, nearly a year after the *Rapanos* decision, the Corps and the EPA issued its 2007 *Rapanos* Guidance without advance notice and public comment. The agencies amended this guidance in December 2008. This guidance largely ignores the Kennedy direction to base significant nexus determinations based on the combination of similarly situated waters and imposes a confusing and burdensome case-by-case jurisdictional requirement on most wetlands and streams. The 2008 guidance is contrary to sound science and creates an unworkable, time-consuming, expensive process that unnecessarily burdens decision makers and applicants.

From 2002 through 2010, bills languished in Congress that would have amended the Clean Water Act to clarify the Act's jurisdiction over the Waters of the United States. The Clean Water Restoration Act (CWRA) would have restored the historical scope of the Clean Water Act to those waters protected by the Act prior to the 2001 SWANCC decision, but would not have expanded the scope of jurisdiction beyond those covered at that time.

B. At stake in this rulemaking are millions of stream miles and wetland acres, drinking water supplies for 117 million Americans, healthy waters to support a healthy economy, and the effectiveness of the Clean Water Act itself.

The stakes related to the *SWANCC* and *Rapanos* Guidance are enormous. The 2003 *SWANCC* Guidance and the 2008 *Rapanos* Guidance have placed millions of wetland acres and tens of thousands of stream miles at risk of pollution and destruction. Given the interrelationship between waters, the existing Guidance has put all of the Nation's waters at risk by retreating from the comprehensive protections needed to achieve the Act's goals. The resources most at risk of losing the Act's protections as a result of the existing guidance are intermittent and ephemeral streams, many wetlands adjacent to such streams and other tributaries, and so-called "isolated" waters. In a 2009 Inspector General Report, EPA Region 5's Watersheds and Wetlands Branch Chief reported that "a lot of EPA Region 5 surface waters that would be considered Aquatic Resources of National Importance by EPA (e.g., fens, bogs, dunes/swales) are seen as non-jurisdictional to the Army Corps of Engineers due to *Rapanos* and *SWANCC."* [8] EPA acknowledged in its economic analysis of the 2011 draft guidance that "[s]ince *SWANCC*, no isolated waters have been declared jurisdictional by a federal agency." [9]

EPA has estimated that intermittent or ephemeral streams comprise fifty-nine percent of all streams miles in the United States, excluding Alaska.[10] In the arid west, as much as ninety-six

[8] *See* Congressionally Requested Report on Comments Related to Effects of Jurisdictional Uncertainty on Clean Water Act Implementation, Report No. 09-N-0149 at 8 (2009) (hereinafter, 2009 EPA OIG Report), at 5, *available at* http://www.epa.gov/oig/reports/2009/20090430-09-N-0149.pdf.

[9] U.S. Environmental Protection Agency, *Potential Indirect Economic Impacts and Benefits Associated with Guidance Clarifying the Scope of the Clean Water Act Jurisdiction*, at 3 (April 27, 2011) (2011 EPA Economic Analysis) *available at* http://www.epa.gov/owow/wetlands/pdf/wous_cost_benefit_estimate_summary.pdf.

[10] Letter from Benjamin H. Grumbles, Assistant Administrator, U.S. Environmental Protection Agency to Jeanne Christie, Executive Director, Association of State Wetland Managers (Jan. 9, 2006) [mistakenly date stamped Jan. 9, 2005] at 2.

percent of all stream miles in some states are intermittent or ephemeral.[11] These headwater, intermittent, and ephemeral waters feed the public drinking water supplies of an estimated 117 million Americans.[12]

Moreover, twenty million acres of wetlands in the lower forty-eight states are considered "isolated."[13] Many more acres are adjacent to small streams that are not navigable, and therefore at risk.

Science has demonstrated that these waters that are losing protection are some of the most important waters to maintaining the integrity and health of larger waters and the aquatic ecosystem as a whole. If they are polluted, degraded or destroyed, the health of wildlife and people that depend on these resources will suffer. Wetlands also help combat global warming and their preservation as habitat, sources for water storage, flood control and the like will be vital to the ability of wildlife to adapt to the challenges of a warming planet.[14]

Since the 2001 *SWANCC* decision, depressional wetlands like prairie potholes are no longer being protected. Many intermittent and ephemeral streams and their adjacent wetlands have been put at risk of losing protections and are the subject of increased risk of pollution. According to the most recent national wetlands status and trends report, since 2004 the rate of wetland loss has increased by 140% over the previous report period. This is the first acceleration of wetland loss over a 50-year period, and the first since the passage of the 1972 Clean Water Act. This is the first study period occurring entirely post-*SWANCC*, and the U.S. Fish and Wildlife Service notes that the acceleration of wetland loss is likely at least partially explained by the jurisdictional confusion and the withdrawal of CWA protections by the agencies in the wake of the *SWANCC* and *Rapanos* cases.[15]

On a practical level, the 2008 Guidance has resulted in delays, confusion and uncertainty for applicants seeking permits along with increased workloads for Corps and EPA officials. EPA's costs to enforce CWA 402, 404, and 311 have increased significantly due to the incremental resources required to assert jurisdiction post *SWANCC* and *Rapanos*.[16]

[11] *See*, *e.g.*, Letter from Stephen A. Owens, Director, Arizona Department of Environmental to Benjamin H. Grumbles, Assistant Administrator, Office of Water, U.S. Environmental Protection Agency (December 5, 2007) at 2 (describing the quality and function of surface waters in Arizona) (submitted as comments on the Guidance).

[12] U.S. Envtl. Protection Agency, Geographic Information Systems Analysis of Surface Drinking Water Provided By Intermittent, Ephemeral, and Headwater Streams in the U.S (State-by-State) and (County-by-County), http://water.epa.gov/lawsregs/guidance/wetlands/surface_drinking_water_index.cfm (last visited 7/19/11).

[13] *See* Pianin, Eric, *Administration Establishes New Wetlands Guidelines: 20 Million Acres Could Lose Protected Status, Groups Say*, WASHINGTON POST, pg. A5 (Jan. 11, 2003) (in discussing the 2003 agency guidance concerning *SWANCC* and so-called isolated wetlands, it states, "The new [guidance] would shift responsibility from the federal government to the states for protecting as much as 20 percent of the 100 million acres of wetlands in the Lower 48 states, according to official estimates.").

[14] *See*, *e.g.*, EPA National Water Program Strategy 2012: Response to Climate Change (Goal 6) http://water.epa.gov/scitech/climatechange/upload/epa_2012_climate_water_strategy_full_report_final.pdf.

[15] DAHL, T.E. 2011. Status and trends of wetlands in the conterminous United States 2004 to 2009, at 16 U.S. Department of the Interior; Fish and Wildlife Service, Washington, D.C. 108 pp.

[16] *See* 2014 EPA Economic Analysis at 30-31, at: http://www2.epa.gov/sites/production/files/2014-03/documents/wus_proposed_rule_economic_analysis.pdf.

The uncertainty regarding which waters are "waters of the United States" and what evidence is required to prove jurisdiction has compromised enforcement activities under the Act in the aftermath of the Supreme Court's opinions. The staff of EPA's Office of Enforcement and Compliance Assurance, Wetlands Enforcement Division summarized these effects in the 2009 Office of Inspector General Report:

> Overall, CWA enforcement activities [for violations on the prohibition against oil spills and limits on other pollutants like industrial waste, sewage plant effluent and filling waters] have decreased since *Rapanos* ruling. An estimated 489 enforcement cases (Sections 311, 402, and 404 combined) have been affected such that formal enforcement was not pursued as a result of jurisdictional uncertainty, case priority was lowered because of jurisdictional uncertainty, or lack of jurisdiction was asserted as an affirmative defense to the enforcement action. [17]

EPA's 2014 economic analysis of this proposed rule reports that:

> Because it can be difficult to establish where the CWA applies after the Supreme Court's decisions in *SWANCC* in 2001 and *Rapanos* in 2006, EPA enforcement managers have indicated that enforcement efforts have shifted away from small streams high in the watershed where jurisdiction is a potential issue. In short, EPA is focusing efforts on larger streams and rivers, where there is more certainty of establishing jurisdiction. A rule that more clearly protects small streams may lead to more comprehensive enforcement and therefore greater compliance with CWA program regulations. This, in turn, could ultimately save the costs of additional drinking water filtration, stream restoration, and other costs of repairing damage caused by pollution.[18]

By all accounts, the 2008 *Rapanos* Guidance has created confusion, bureaucratic red tape, and is adding time and expense to the decision making process for CWA permits. This uncertainty and added time and expense is undermining Clean Water Act enforcement and the overall effectiveness of the Clean Water Act in maintaining and restoring the nation's waters.

C. The clean water rule is the product of four years of rigorous and transparent scientific and public policy deliberation and offers the best chance in a generation to clarify the "Waters of the United States."

In the face of congressional inaction, in 2011, EPA and the Corps formally launched an administrative effort to clarify the "waters of the U.S." The agencies proposed guidance for determining CWA jurisdiction to replace guidance issued in 2003 and 2008. The proposal also announced the agencies' plans to proceed with rulemaking. The 2011 Proposed Guidance was the subject of extensive interagency review, economic analysis, and public notice and comment.

[17] 2009 Office of Inspector General Report, Report No. 09-N-0149 (April 30, 2009) at 1, at http://www.epa.gov/oig/reports/2009/20090430-09-N-0149.pdf.
[18] 2014 EPA Economic Analysis, *supra,* at 10.

Approximately 250,000 comments were submitted on the guidance, and these overwhelmingly supported the revised guidance. The proposed guidance would provide more certain and predictable protections for many streams and wetlands by comparison to the existing 2003 and 2008 guidance documents. The 2011 guidance still required a case-specific finding of significant nexus, but it found that based on the combined downstream effects of tributaries and adjacent waters within a watershed, significant nexus and CWA jurisdiction were highly likely to be established for these categories of waters.

In 2011-2012, on a parallel track, the EPA Office of Research and Development compiled a draft science report, *The Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence* (Connectivity Report).[19] This scientific report, based on peer-reviewed literature and an additional review by independent scientists, was prepared to inform the Administration's proposed rule clarifying which waters are protected under the Clean Water Act.

In July 2013, the EPA Science Advisory Board (SAB) launched an SAB Expert Scientific Peer Review of the Connectivity Report.[20] In September 2013, the agencies released the Draft Connectivity of Streams and Wetlands Science Report for public comment. Also in September 2013, after holding up action on the Clean Water guidance in the Office of Management (OMB) for almost two years, the Administration sent its draft proposed Clean Water Rule to OMB for interagency review.

In March 25, 2014, after months of interagency review, the EPA and the Army Corps of Engineers jointly proposed the formal rule clarifying and partially restoring the historic scope of waters protected under the Clean Water Act. The 2-page proposed rule text in the federal register is thoroughly explained and supported by a lengthy preamble, including both scientific and legal appendices, the publicly available Connectivity Science Report, and a thorough Economic Analysis. The 200-day public comment period ends November 14, 2014.[21]

In late September-early October 2014, the SAB issued reports affirming the scientific basis for the proposed rule (SAB Rule Letter) [22] and affirming – with recommendations for enhancing – the scientific accuracy of the Connectivity Report (SAB Connectivity Peer Review Letter).[23] The

[19] *See* Draft Connectivity Report (September 2013) at: http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/7724357376745F48852579E60043E88C/$File/WOUS_ERD2_Sep2013.pdf.

[20] *See* SAB Peer Review process at: http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/Watershed%20Connectivity%20Report!OpenDocument&TableRow=2.1#2.

[21] *See* EPA Waters of the U.S. rulemaking process materials at: http://www2.epa.gov/uswaters.

[22] EPA SAB letter to Administrator McCarthy, *Science Advisory Board (SAB) Consideration of the Adequacy of the Scientific and Technical Basis of the EPA's Proposed Rule titled "Definition of Waters of the United States under the Clean Water Act"* (September 30, 2014) (SAB Rule Letter) at: http://yosemite.epa.gov/sab/sabproduct.nsf/518D4909D94CB6E585257D6300767DD6/$File/EPA-SAB-14-007+unsigned.pdf

[23] EPA SAB letter to Administrator McCarthy, *SAB Review of the Draft EPA Report Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence* (October 17, 2014) (SAB Connectivity Peer Review Letter) at:

Connectivity Report will be edited and strengthened in accordance with the SAB recommendations and both the SAB report and the Final Connectivity Report will inform the agencies' final "waters of the U.S." rule.

This rigorous and transparent proposed rulemaking process offers the best opportunity in a generation to clarify which waters are – and are not – waters of the U.S. subject to the Clean Water Act in a manner that provides more clarity than ever before. This rulemaking is informed by over 30 years of agency field experience, by the most comprehensive synthesis of stream and wetland connectivity science ever compiled, and by well over one million public comments.

We urge the agencies to move expeditiously to finalize a strong final rule, consistent with the rule's foundations in the connectivity science, the goals of the Clean Water Act, and the Kennedy significant nexus jurisdictional standard. Until that final rule is in place, the 2003 and 2008 guidance documents and the lack of a clear jurisdictional standard for judicial review continue to require cumbersome, confusing, and resource intensive case-specific jurisdictional determinations. And millions of stream miles and wetland acres, drinking water supplies for 117 million Americans, healthy waters to support a healthy economy, and the effectiveness of the Clean Water Act itself all remain at risk.

II. The proposed definition of "Waters of the United States" is consistent with the goals of the Clean Water Act and with legal precedent.

The Clean Water Act seeks "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters" and eliminate water pollution by 1985.[24] The chief purpose of the Act is to prohibit point source discharges of pollutants into navigable waters, unless otherwise permitted by the Act.[25] For jurisdictional purposes, the Act defines "navigable waters" as "waters of the United States."[26]

The Act's chief regulatory tools exist in the form of two permitting programs for pollutant discharges into navigable waters: (1) the section 402 National Pollutant Discharge Elimination System ("NPDES") permitting program for most discharges (like sewage and industrial waste), to be administered by the EPA; and (2) the section 404 permitting program for discharges of dredged and fill material, to be administered by the Corps.[27] Among other programs, the Act also regulates oil spills,[28] requires the establishment of water quality standards for protected waters, and cleanup plans for waters that do not meet those standards.[29] The jurisdictional definition "waters of the United States" applies to all of these programs. There is no jurisdictional distinction between different programs of the Act.[30]

http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/AF1A28537854F8AB85257D74005003D2/$File/EPA-SAB-15-001+unsigned.pdf

[24] 33 U.S.C. §1251(a).
[25] *Id*. § 1311(a).
[26] *Id*. § 1362(7).
[27] *Id*. §§ 1342, 1344. Both of these programs can be delegated to states for administration. *Id*.
[28] *Id*. § 1321.
[29] *Id.* § 1313.
[30] *Id.* § 1362(7).

The CWA's structure and legislative history indicate that the scope of the Act's protections is not intended to be limited to the conventional concept of "navigable waters," which encompasses waters "used, or [] susceptible of being used, in their ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water."[31] This is reflected in current Corps and EPA regulations that provide protection for:

(1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(2) All interstate waters including interstate wetlands;

(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:

(i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or

(ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

(iii) Which are used or could be used for industrial purpose by industries in interstate commerce;

(4) All impoundments of waters otherwise defined as waters of the United States under the definition;

(5) Tributaries of waters identified in paragraphs (a)(1)-(4) of this section;

(6) The territorial seas;

(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1)-(6) of this section.[32]

Rapanos is the third major case the Supreme Court has decided concerning the scope of the Act's protections. The first time the Supreme Court considered the question of what constituted "waters of the United States" was in *United States v. Riverside Bayview Homes, Inc.*, where the Court affirmed the broad jurisdiction of the CWA by finding the Corps properly regulated wetlands adjacent to a traditionally navigable water.[33]

[31] *The Daniel Ball*, 77 U.S. (10 Wall.) 557, 563 (1870).
[32] 33 C.F.R. 328.3(a); *see also* 40 C.F.R. 230.3(s).
[33] *United States v. Riverside Bayview Homes, Inc.*, 474 U.S. 121 (1985). Also, in *International Paper Co. v. Ouellette*, the court affirmed the Act protected "virtually all bodies of water." 479 U.S. 481, 492 (1987).

Riverside Bayview supported broad CWA jurisdiction based on important ecological considerations and deferred to agency expertise regarding what scope of protection was needed to achieve the goals of the Act. In *Riverside Bayview*, the Court found "the Corps has concluded that wetlands adjacent to lakes, rivers, streams, and other bodies of water may function as integral parts of the aquatic environment" and held the regulation of such wetlands was therefore appropriate.[34] As reasons for upholding protection of adjacent wetlands under the Act, the Court noted the ability of wetlands to "filter and purify water draining into adjacent bodies of water, … to slow the flow of surface runoff into lakes, rivers, and streams and thus prevent flooding and erosion," and to "serve significant natural biological functions, including food chain production, general habitat, and nesting, spawning, rearing and resting sites for aquatic … species."[35]

Sixteen years later, in *SWANCC*, the Court decided certain ponds in northern Illinois were not covered under the Act when jurisdiction was based solely on their use by migratory birds.[36] The *SWANCC* decision was narrow. It simply precluded the Corps from asserting jurisdiction over certain ponds based solely on their use by migratory birds. It did not overturn any aspect of the waters of the U.S. regulatory definition, including (a)(3) other waters provision, or any other regulatory provision of the Corps. Hence, the broad (a)(3) "other waters" element of the waters of the U.S. definition remains on the books today.[37]

In response to *SWANCC*, the Bush Administration issued an Advance Notice of Proposed Rulemaking to redefine jurisdiction under the Act.38 However, more than forty states, countless conservation organizations, including several hunting and fishing groups, and 220 members of Congress commented in overwhelming favor of keeping the current and broadly protective rules.39 Additionally, courts began construing *SWANCC* narrowly. As such, the rulemaking was abandoned in December 2003.[40]

The *Rapanos* case involved wetlands connected by surface flow to tributaries that eventually flowed into traditionally navigable waters.[41] The case involved three sites eleven to twenty miles away from the nearest traditionally navigable water.[42] Each site involved different tributary types, from a wide perennially flowing natural river, to intermittently flowing man-made or man-altered conveyances.[43] The related *Carabell* case involved a wetland that did not share a documented surface hydrological connection with its neighboring tributary, a ditch that carried

[34] *Riverside Bayview*, 474 U.S. at 135, 139.
[35] *Id.* at 134-35 (citations omitted) (internal quotation marks omitted).
[36] 531 U.S. 159 (2001).
[37] The Migratory Bird Rule was contained in the 1986 preamble to the Corps' regulations, and is not a rule. 51 Fed. Reg. 41206, 41217 (Nov. 13, 1986). It is also important to note that *SWANCC* did not state migratory bird use cannot be considered as a factor in deterring the Act's jurisdiction over waters.
[38] *See* 68 Fed. Reg. 1991 (Jan. 15, 2003).
[39] *Rapanos v. United States*, 126 S. Ct. 2208, 2256 n.4 (2006) (Stevens, J., dissenting); Letter from 220 Members of Congress to The Honorable George W. Bush, President of the United States (Nov. 24, 2003).
[40] Environmental Protection Agency, *Watershed News, No New Rule on Federal Regulatory Jurisdiction over Isolated Wetlands*, (Dec. 16, 2003) (stating, "EPA and the Army Corps of Engineers announced that they would not issue a new rule on federal regulatory jurisdiction over isolated wetlands.").
[41] *Rapanos*, 126 S. Ct. at 2238 (Kennedy, J. concurring).
[42] *Id.* at 2214 (plurality opinion).
[43] *Id*. at 2238 (Kennedy, J. concurring).

an indeterminate amount of water about a mile to the navigable Lake St. Clair.[44]

There was no majority opinion in *Rapanos*. While a majority voted to remand the cases back to the lower court for further review, there were divergent and contradictory rationales for what standard the lower court should apply. Justice Scalia, writing for the plurality, looked mainly to a 1954 dictionary to support his analysis.[45] His opinion stated the Act's coverage included "those relatively permanent, standing or continuously flowing bodies of water" and "*only* those wetlands with a continuous surface connection to [other regulated waters]."[46] Justice Scalia included a footnote stating he does not necessarily mean to "exclude seasonal rivers" or waters "that might dry up in extraordinary circumstances, such as drought."[47] A recent case has indicated that seasonal can be reasonably interpreted based on geographic location.[48] ***Importantly, Justice Scalia's test and rationale for narrowing Clean Water Act jurisdiction was rejected by a majority of the Court.***

Justice Stevens, writing for a four-member dissent, deferred to the Corps' current categorical regulation of all tributaries and their adjacent wetlands.[49] He found:

[T]he Corps has concluded that [wetlands adjacent to other waters, including non-navigable tributaries] play important roles in maintaining the quality of their adjacent waters, and consequently in the waters downstream. . . . Given that wetlands serve these important water quality roles and given the ambiguity inherent in the phrase "waters of the United States," the Corps has reasonably interpreted its jurisdiction to cover non-isolated wetlands [such as those at issue in *Rapanos* and *Carabell*].[50]

Justice Kennedy, in a solo concurring opinion, largely agreed with Justice Stevens that broad protection under the Act is warranted.[51] He also rejected the plurality's jurisdictional test as being "without support in the language and purposes of the Act or in our cases interpreting it."[52] Yet, Justice Kennedy found that to support jurisdiction for wetlands adjacent to certain non-navigable tributaries, a showing needed to be made that such waters have a "significant nexus" to traditionally navigable waters for jurisdiction to attach.[53] According to Justice Kennedy:

[W]etlands possess the requisite nexus, and thus come within the statutory phrase "navigable waters," if the wetlands, either alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, and biological integrity of other covered

[44] *Id*. at 2239.
[45] *Id.* at 2220-21 (plurality opinion).
[46] *Id*. at 2225, 2226 (emphasis in original).
[47] *Id*. at 2221 n.5 (emphasis omitted).
[48] *See United States v. Vierstra*, 2011 WL 1064426, *4 (D. Id. 2011) (stating that "common sense and common usage forged in the Intermountain West and applied to the Government's evidence would support a finding that the Low Line Canal is 'relatively permanent'"), *affirmed* 2012 WL 3269211 (9th Cir. Aug. 13, 2012).
[49] *Rapanos, 126 S. Ct.* at 2252, 2265 (Stevens, J., dissenting).
[50] *Id*. at 2257 (citations omitted). Justice Stevens goes on to say that, "I think it clear that wetlands adjacent to tributaries of navigable waters generally have a 'significant nexus' with the traditionally navigable waters downstream." *Id*. at 2264.
[51] *Id.* at 2241 (Kennedy J., concurring).
[52] *Id.* at 2242.
[53] *Id.* at 2249.

waters more readily understood as "navigable." When, in contrast, wetlands' effects on water quality are speculative or insubstantial, they fall outside the zone fairly encompassed by the statutory term "navigable waters."[54]

The dissent stated Justice Kennedy's test "will probably not do much to diminish the number of wetlands covered by the Act in the long run."[55] An examination of the test helps explain why the dissent reached this conclusion. First, it is important to note how utterly Justice Kennedy rejects the plurality's restrictive test, which is largely unconcerned with the water quality goals of the Act. Justice Kennedy accuses the plurality of being "unduly dismissive" of the interests put forth by the government.[56] Unlike the plurality, who see little value in protecting ephemeral waters, dry arroyos, and wet meadows (waters that the plurality characterizes in part as "puddles"),57 Justice Kennedy understands that many of these waters warrant protection.58 He notes at length that nowhere in the Act is there support for a jurisdictional distinction between waters with continuous flow and waters with intermittent flow.59 Similarly, he notes that the Act, case law precedent, and ecology fail to support the plurality's insistence on a continuous surface connection between wetlands and nearby water bodies.60 Justice Kennedy explains that wetlands perform important ecological functions, such as pollutant filtering and flood retention and "it may be the *absence* of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme."61

Importantly, in recognition of the vital ecological functions wetlands perform, Justice Kennedy wrote that wetlands that either individually or collectively impact "the chemical, physical or biological integrity"[62] of other navigable waters have the requisite "significant nexus" to be regulated under the Clean Water Act.[63] The ecological functions identified by Justice Kennedy include flood retention, pollutant trapping, and filtration.[64] Justice Kennedy recognized wetlands often perform these important ecological functions even though they may be intermittent or ephemeral, or lack a surface connection to other waters.[65] Justice Kennedy's test allows for the aggregation of impacts of similarly situated wetlands, meaning individually less significant wetlands may be protected if they become significant when viewed collectively within a region. Subsequent case law has indicated that this term can be interpreted broadly.[66]

Justice Kennedy also indicated a significant nexus to navigable waters can be assumed for

[54] *Id*. at 2248.
[55] *Id*. at 2264 (Stevens, J., dissenting).
[56] *Id.* at 2246 (Kennedy, J., concurring).
[57]. *Id.* at 2221 (plurality opinion).
[58]. *Id.* at 2244 (Kennedy, J., concurring).
[59]. *Id.* at 2242-43.
[60]. *Id.* at 2244.
[61]. *Id.* at 2245-46 (emphasis added).
[62]. 33 U.S.C. § 1251(a).
[63]. *Rapanos*, 126 S. Ct. at 2248.
[64]. *Id*. at 2248.
[65]. *Id*. at 2242-46.
[66] *See Precon Development Corp. v United States Army Corps of Engineers*, 633 F.3d 278, 292 (4th Cir. 2011) ("[W]e recognize that Justice Kennedy's instruction – that 'similarly situated lands in the region' can be evaluated together – is a broad one, open for considerable interpretation and requiring some ecological expertise to administer").

certain categories of wetlands. For instance, he stated that "[a]s applied to wetlands adjacent to navigable-in-fact waters, the Corps' conclusive standard for jurisdiction rests upon a reasonable inference of ecological interconnection, and the assertion of jurisdiction for those wetlands is sustainable under the Act by showing adjacency alone."[67] Therefore, wetlands adjacent to traditionally navigable waters (TNWs) are categorically covered under Justice Kennedy's analysis, and a case-by-case determination is not needed. [68] Likewise, Justice Kennedy suggested wetlands next to certain major tributaries may also be categorically covered by the CWA.[69] It is only in regards to wetlands adjacent to minor tributaries that Justice Kennedy refuses to allow categorical assertion of jurisdiction under the current regulations.[70] Justice Kennedy also accepts as "reasonable" the Corps current definition of adjacent, which includes wetlands that may be separated from other waters by dikes, berms, and other natural or manmade barriers.[71]

Justice Kennedy does not assert categorical regulation of tributaries is no longer permissible, or a case-by-case determination of a "significant nexus" to traditionally navigable waters is required to regulate any tributary.72 On the contrary, he suggests the current definition of tributary "may well provide a reasonable measure of whether specific minor tributaries bear a sufficient nexus with other regulated waters to constitute 'navigable waters' under the Act."73 As to tributaries, Justice Kennedy only expresses concern about categorically extending jurisdiction to all *wetlands* that are adjacent to any waters that meet the regulatory definition of tributaries. Specifically, he writes:

> [T]he breadth of this standard – which seems to leave wide room for the regulation of drains, ditches, and streams remote from any navigable-in-fact waters and carrying only minor water volumes towards it – precludes its adoption as the determinative measure of whether wetlands are likely to play an important role in the integrity of an aquatic system comprising navigable waters as

[67] *Rapanos*, 126 S. Ct. at 2249. Justice Kennedy reiterates "[w]hen the Corps seeks to regulate wetlands adjacent to navigable-in-fact waters, it may rely on adjacency to establish its jurisdiction."

[68] This has been confirmed by multiple lower court decisions interpreting *Rapanos*. *See United States v. Cundiff*, 555 F.3d 200, 207 (6th Cir. 2009) (finding that under Justice Kennedy's opinion assertion of jurisdiction over wetlands adjacent to navigable-in-fact waters may be met 'by showing adjacency alone); *Northern California River Watch v. Healdsburg*, 496 F.3d 993, 1000 (9th Cir. 2007) (finding same); *United States v. Bailey*, 571 F.3d 791, 799 (8th Cir. 2007) (finding same).

[69] *Id*. at 2248 ("[I]t may well be the case that *Riverside Bayview's* reasoning – supporting jurisdiction without any inquiry beyond adjacency – could apply equally to wetlands adjacent to certain major tributaries.").

[70] *Id*. at 2249 ("Absent more specific regulations, . . . the Corps must establish a significant nexus on a case-by-case basis when it seeks to regulate wetlands based on adjacency to nonnavigable tributaries.").

[71] *Id*. at 2245.

[72] Justice Kennedy's opinion limited his basis for remand to the lower court to the question of "whether the specific wetlands at issue possess a significant nexus with navigable waters." 126 S. Ct. 2252. This contrasts with the plurality's broader basis for remand to determine "whether the ditches and drains near wetlands are 'waters,'" and "whether the wetlands in question" are also jurisdictional. *Id*. at 2235. This contrast is further indication Justice Kennedy may not require a case-by-case significant nexus determination for tributaries. Indeed, as the Federal District Court for the District of Idaho recently noted, "It is an open question as to whether Justice Kennedy's concurrence applies in the tributary context." *United States v. Mike Vierstra*, 2011 WL 1064526, *5 (D. Id. 2011), *affirmed* 2012 WL 3269211 (9th Cir. Aug. 13, 2012).

[73] *Id*. at 2249. Justice Kennedy never calls into question the significance of major tributaries to traditionally navigable waters.

traditionally understood.[74]

The dissent would support jurisdiction in every instance where Justice Kennedy and the plurality would.[75]

Federal appeals courts have grappled with which test or tests to apply. However, no appeals court has found that only the plurality test applies. The First, Third, and Eighth Circuits have ruled that jurisdiction can be established under either Justice Kennedy's or the plurality's test.76 The Seventh and the Ninth Circuits found that Justice Kennedy's opinion applied in the case at hand, but did not preclude the use of the plurality opinion to assert jurisdiction in other instances.77 The Fifth and Sixth Circuits declined to choose a controlling test because the waters at issue satisfied both tests.[78] The Eleventh Circuit has found that *Rapanos* precludes the government from asserting jurisdiction based on the plurality test and can only do so based on Justice Kennedy's test.[79] The Fourth Circuit has applied whichever test the parties have agreed is controlling.[80]

The proposed rule closely tracks the Kennedy significant nexus test and, when finalized, should provide a clear, legally and scientifically sound jurisdictional standard for judicial review that should significantly reduce and streamline litigation with respect to whether water bodies are – or are not – waters of the United States subject to the Clean Water Act.

III. There Is a Strong Scientific Foundation for the Proposed Definition of "Waters of the United States"

A. Kennedy's Significant Nexus Test Calls for More than Speculative or Insubstantial Scientific Evidence of Connectivity to Downstream Waters.

When the Supreme Court considered the policy question of which waters were "waters of the U.S.," Justice Kennedy, author of the pivotal concurring opinion in *Rapanos*, was clearly asking for the scientific evidence of connectivity to inform the Court's line-drawing, consistent with the goals of the Clean Water Act. Several justices recognized the important functions and

[74] *Id*.
[75] *Id*. at 2265 ("Given that all four Justices who have joined this opinion would uphold the Corps' jurisdiction in both of these cases – and in all other cases in which either the plurality's or Justice Kennedy's test is satisfied – on remand each of the judgments should be reinstated if *either* of those tests is met.") (emphasis in original).
[76] *United States v. Johnson*, 467 F.3d 56, 65-66 (1st Cir. 2006), *cert. denied*, 552 U.S. 948 (2007); *U.S. v. Donovan*, 661 F. 3d 174, 176 (3rd Cir. 2011); *United States v. Bailey*, 571 F.3d 791, 798-99 (8th Cir. 2009);
[77] *N. Cal. River Watch v. City of Healdsburg*, 496 F.3d 993, 999 (9th Cir. 2007), *cert denied*, 552 U.S. 1180 (2008); *United States v Gerke Excavating, Inc.*, 464 F.3d 723, 724-25 (7th Cir 2006), *cert. denied*, 552 U. S. 810 (2007); *see also N. Cal. River Watch v. Wilcox*, 633 F.3d 766, 769 (9th Cir. 2010), amended 2011 (finding that "[i]n *City of Healdsburg* … the court found that Justice Kennedy's concurrence in *Rapanos* 'provides the controlling rule of law for our [c]ase.' We did not, however, foreclose the argument that Clean Water Act jurisdiction may also be established under the plurality's standard.").
[78] *United States v. Lucas*, 516 F.3d 316, 326-27 (5th Cir. 2008) *cert denied,* 555 U.S. 822 (2008); *United States v. Cundiff*, 555 F.3d 200, 210-213 (6th Cir. 2009), *cert denied,* 558 U.S. 818 (2009).
[79] *United States v. Robison et al.*, 505 F.3d 1208, 1219-23 (11th Cir. 2007), *cert denied sub nom United States v. McWane*, 555 U.S. 1045 (2008).
[80] *Precon Development Corp. v United States Army Corps of Engineers*, 633 F.3d 278 (4th Cir. 2011) (parties agreed Kennedy test governs).

connections of wetlands in a watershed context, but Justice Kennedy wanted more specific evidence of how these wetlands affect downstream waters.

The agencies' finding that all tributaries have a significant nexus to TNWs, IWs, or territorial seas is fully consistent with and relevant to Justice Kennedy's significant nexus test. Justice Kennedy suggests the current definition of tributary "may well provide a reasonable measure of whether specific minor tributaries bear a sufficient nexus with other regulated waters to constitute 'navigable waters' under the Act." *Rapanos* at 2249. As to tributaries, Justice Kennedy only expresses concern about categorically extending jurisdiction, without more supporting evidence, to all *wetlands* that are adjacent to *any* waters that meet the regulatory definition of tributaries. *Id.*

The scientific evidence of connectivity (or isolation) and wetland and stream functions is essential in applying Justice Kennedy's significant nexus test. Justice Kennedy explains that wetlands perform important ecological functions, such as pollutant filtering and flood retention and "it may be the *absence* of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme." *Rapanos* at 2245-46 (emphasis added).

Understanding the scientific evidence of connectivity and effects in the aggregate and in a watershed context is central to the application of Justice Kennedy's significant nexus test which calls for evaluation of wetlands connectivity and effects downstream "either alone or in combination with similarly situated lands in the region."

B. EPA has compiled a rigorous, accurate, and comprehensive science synthesis that supports categorical findings of significant nexus for the entire tributary system, adjacent waters, and several categories of non-floodplain "other waters."

During 2011-2012, the EPA Office of Research and Development compiled a draft science report, *The Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence.*[81] This scientific report, based on peer-reviewed literature and an additional review by independent scientists, brings together the scientific evidence of connectivity and effect to inform the Administration's rulemaking clarifying which waters are protected under the Clean Water Act.

In July 2013, the EPA Science Advisory Board (SAB) launched an SAB Expert Scientific Peer Review of the Connectivity Report. In September 2013, the Administration released its Draft Connectivity of Streams and Wetlands Science Report for public comment. The Draft Connectivity Report included, among others, the following findings:

- Streams and wetlands "fundamentally affect river structure and function by altering transport of various types of materials to the river." *Connectivity Report* at 1-4.

- These altering effects depend on "two key factors: (1) connectivity (or isolation) between streams, wetlands, and rivers that enables (or prevents) the movement of materials

[81] *See supra* note 19.

between the system components; and (2) functions within streams and wetlands that supply, remove, transform, provide refuge for, or delay transport of materials." *Connectivity Report* at 1-4.

- The conceptual framework correctly adopts two important principles for assessing connectivity and effects to downstream waters: 1) identification of the watershed as the appropriate scale to assess connectivity and effects; and 2) recognition that to understand connectivity and effects downstream, "the effects of small water bodies in a watershed need to be considered in aggregate." *Connectivity Report* at 1-14.

- The Connectivity Report thoroughly documents and supports its conclusion that "[a]ll tributary streams, including perennial, intermittent, and ephemeral streams, are physically, chemically, and biologically connected to downstream rivers via channels and associated alluvial deposits where water and other materials are concentrated, mixed, transformed, and transported." *Connectivity Report* at 1-3. The report includes a thorough examination of the literature with respect to ephemeral stream connectivity, particularly in the arid southwest.

- The scientific evidence supports the report's conclusion with respect to floodplain wetlands and open-waters that: "[w]etlands and open-waters in landscape settings that have bidirectional hydrologic exchanges with streams or rivers (e.g., wetlands and open-waters in riparian areas and floodplains) are physically, chemically, and biologically connected with rivers" through multiple processes, and that they "serve an important role in the integrity of downstream waters because they also act as sinks by retaining floodwaters, sediment, nutrients, and contaminants that could otherwise negatively impact the condition or function of downstream waters." *Connectivity Report* at 1-3.

- The scientific evidence also demonstrates that shallow groundwater connections serve as hydrologic connections between surface waters and should be considered in assessing connectivity and effects on downstream waters. *Connectivity Report* at 1-7 to 1-14.

- The draft report compiles compelling scientific evidence supporting the conclusion that "uni-directional" wetlands and open-waters located outside of floodplains (e.g., many prairie potholes, vernal pools, and playa lakes) "provide numerous functions that can benefit downstream water quality and integrity" and "affect the condition of downstream waters if a surface or shallow subsurface water connection to the river network is present." *Connectivity Report* at 1-3-4.

- However, the draft report concludes that [t]he literature we reviewed does not provide sufficient information to evaluate or generalize about the degree of connectivity (absolute or relative) or the downstream effects of wetlands in unidirectional landscape settings." *Connectivity Report* at 1-10 to 1-11.

The Peer Review Panel met and held public meetings to discuss the draft report in December 2013. The Panel drafted and revised its peer review report through the summer of 2014, wrapping up its peer review in September 2014. Building on the Connectivity Report and the

Peer Review Panel deliberations, the agencies' included in the proposed rule preamble a thorough discussion of the science supporting the rule, including a lengthy Scientific Evidence Appendix A, at 79 Fed. Reg. 22222-22252.

On September 30, 2014, the SAB signed and posted its letter confirming the adequacy of the scientific basis for key components of the proposed rule. The SAB Rule Report[82] finds:

- There is strong scientific evidence to support the EPA's proposal to include all tributaries within the jurisdiction of the Clean Water Act.

- If anything, the use of the ordinary high water mark as part of the definition of tributary might be too restrictive.

- The available science supports the EPA's proposal to include adjacent waters and wetlands as waters of the United States. This is because adjacent waters and wetlands have a strong influence on the physical, chemical, and biological integrity of navigable waters.

- Adjacent waters and wetlands should not be defined solely on the basis of geographical proximity or distance to jurisdictional waters.

- There is adequate scientific evidence to support a determination that certain subcategories and types of 'other waters' in particular regions of the United States (e.g., Carolina and Delmarva Bays, Texas coastal prairie wetlands, prairie potholes, pocosins, western vernal pools) are similarly situated (i.e., they have a similar influence on the physical, biological, and chemical integrity of downstream waters and are similarly situated on the landscape) and thus are waters of the United States.

- As the science continues to develop, other sets of wetlands may be identified as "similarly situated."

- The existing science does not support "*excluding* groups of 'other waters' or subcategories thereof" at this juncture.

- There are concerns with excluding various features from being considered waters of the U.S., including groundwater, certain ditches (it notes there is a lack of scientific knowledge to help discriminate between ditches that should be excluded or included), various artificial features, gullies, rills, and non-wetland swales.

On October 17, 2014, the SAB issued its Final Connectivity Peer Review Report on EPA's Connectivity Report.[83] This SAB Connectivity Peer Review Report is the culmination of many months of public review and revisions by a panel of more than 20 wetland and stream science experts.

[82] *See* note 22, *supra.*
[83] *See* note 23, *supra.*

Key Findings from the Final Connectivity Peer Review Report include the following:

- Relatively low levels of connectivity can be meaningful in terms of impacts on the chemical, physical, and biological integrity of downstream waters." Report at 2.

- Strong scientific support has been provided for the overall conclusion and related findings that ephemeral, intermittent, and perennial streams "exert a strong influence on the character and functioning of downstream waters, and indeed that all tributary streams are physically, chemically, and biologically connected to downstream waters." Report at 3.

- There is strong scientific support for the overall conclusion that "bidirectional" wetlands and waters in floodplain settings are physically, chemically, and biologically connected with rivers through multiple pathways. Additional literature could be included in the Report to bolster this conclusion and related findings. Report at 5.

- The SAB Peer Review Report disagrees with the overall conclusion that "[t]he literature reviewed does not provide sufficient information to evaluate or generalize about the degree of connectivity (absolute or relative) or the downstream effects of wetlands in non-floodplain settings." Report at 6.

- "The scientific literature provides ample information to support a more definitive statement (i.e., numerous functions of non-floodplain waters and wetlands have been shown to benefit the physical, chemical, and biological integrity of downgradient waters). *Id.*

- The SAB recommends that the EPA revise the conclusion to focus on what is supported by the scientific literature and articulate the specific knowledge gaps that must be resolved (e.g., degree of connectivity, analyses of temporal or spatial variability). *Id.*

- "The SAB also recommends that the Report explicitly discuss the pathways by which non-floodplain waters and wetlands can be connected to downstream waters and state that the evaluation of connectivity should be based on the frequency, magnitude, duration, predictability, and consequences of water, material, and biotic fluxes to downstream waters and their impact on the physical, chemical and/or biological integrity of those waters." *Id.*

- The key findings concerning non-floodplain waters and wetlands "should address: the biological functions and biological connectivity of non-floodplain wetlands; differences between natural and manmade wetlands; the importance and temporal dynamics of spatial proximity as a determinant of connectivity; and the importance of cumulative or aggregate impacts of non-floodplain wetlands." *Id.*

The Connectivity Report's compilation and synthesis of over 1,000 peer reviewed scientific articles, the SAB Peer Review Panel deliberations, the Science Evidence Appendix A in the

proposed rule preamble, and all of the scientific evidence submitted to the administrative record for this rulemaking provide a solid scientific foundation that supports categorical findings of significant nexus for the entire tributary system, adjacent waters, and several categories of non-floodplain "other waters."

IV. The Overall Approach to the Proposed Rule Increases Clarity and Consistency with the Clean Water Act, the science, and the legal precedent.

First, we support the agencies' application of the jurisdictional definition of "waters of the United States" to all of the Clean Water Act programs, just as Congress did when it passed the 1972 Clean Water Act. There is no jurisdictional distinction between different programs of the Act.[84] The Act simply does not allow a water body to be jurisdictional if one type of activity is at issue, but not jurisdictional if another type of activity is at issue.[85] Thus, if a water body is not jurisdictional for purposes of the section 404 permit program, it is not jurisdictional for the Section 301 prohibition on the discharges of pollutants, the Section 402 NPDES program, Section 303 water quality standards, Section 311 oil spill regulations, or any other Clean Water Act program that limits its jurisdiction to "navigable waters." The scope of jurisdiction also affects when states are able to certify whether federal permits are in compliance with state water quality standards under Section 401 of the Act. Consequently, we strongly support the agencies decision to apply the Proposed Rule to all of these CWA programs.

[84] *Id.* § 1362(7).
[85] While the 2008 Guidance purported to be limited to CWA § 404, even then the Corps acknowledged this in a Questions & Answers posting related to the *Rapanos* decision and the 2007-08 Guidance, stating, "While the *Rapanos* case involved the CWA § 404 permitting program for discharged of dredged or fill material, the decision has implications for all CWA programs, such as § 402 National Pollutant Discharge Elimination System (NPDES) permits, § 311 oil spill prevention and cleanup, and § 303 water quality standards." Questions & Answers for the *Rapanos* and *Carabell* Decision at 67.

We also support the agencies' decision to retain much of the structure and text of the agencies' longstanding definition of "waters of the United States" where revisions are not warranted. We agree that continuity with the existing regulations, where possible, will minimize confusion and reduce transaction costs for the regulated community and the agencies. 79 Fed. Reg. at 22198. To that end, we support the agencies' decision to retain without change the existing related definitions of "wetlands," "adjacent," and "ordinary high water mark," and the following provisions within the definition of "waters of the United States": Traditionally navigable waters, interstate waters, the territorial seas, and impoundments of "waters of the United States." 79 Fed. Reg. at 22198-99.

In addition, we support the agencies' decision to clarify the current definition's longstanding provisions for tributaries and adjacent wetlands by: 1) defining tributary for the first time; 2) clarifying that adjacent water bodies in addition to adjacent wetlands are – and always have been -- jurisdictional by rule; and 3) retaining the existing definition of "adjacent," but defining for the first time the "neighboring" aspect of adjacency, as well as the related "riparian" and "floodplain" terms.

While we recognize the need to revise the current, very broad "all other waters" provision in light of the *SWANCC* Supreme Court decision, we do not agree with the agencies' proposal to severely limit the "other waters" provision by imposing a case specific significant nexus requirement for all non-floodplain, non-adjacent "other waters." As explained more fully below, we do not believe that this proposal is consistent with the Clean Water Act, judicial precedent, or the scientific evidence of connectivity with respect to these waters.

In addition, we support the overall decision to include a new section (b) excluding specific waters from the definition of "waters of the United States." Importantly, we do have concerns with the breadth and vagueness of both the waste treatment system exclusion and the prior converted cropland exclusion. Both of these exclusions have created significant loopholes leading to inconsistencies in application and the destruction of ecologically important water bodies. However, it is our view that revisions to these two existing exclusions warrant special attention is separate rulemakings.

We recognize the need to clearly exclude certain ditches and other water features that are excavated from dry land and that do not contribute flow to downstream waters. However, we strongly urge the agencies to finalize a "waters of the U.S." rule that protects our existing headwaters, streams, ponds, and wetlands from pollution, drainage and channelization associated with ditches and mechanized ditching activity.

V. The Proposed Rule Definition of Traditional Navigable Waters is Well-Supported by Statute and Case Law.

The proposed rule properly retains the existing regulatory language defining and interpreting traditional navigable waters (TNWs) as: [a]ll waters which are currently used, or were used in the past, or may be susceptible of use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide." *See e.g.,* 33 C.F.R. 328.3 (a)(1). The

Agencies' proposed rule and interpretation regarding TNWs is well-supported by pre-Clean Water Act navigability case law and statutes, is consistent with existing regulations and with the current 2008 Guidance on TNWs, and helps restore protections for wetlands, lakes, and streams nationwide.

A. TNWs include waters currently used, used in the past, or susceptible of use in interstate commerce.

Case law makes clear that TNWs include waters that can be navigated by water craft, waters that are currently used as highways in interstate commerce, waters susceptible to such use, and waters that were historically so used, even if they are not currently so used.[86] These include waters that may have areas difficult to navigate.87 These also include certain intrastate waters.88 Moreover, navigation need not be commercial in nature, but can be recreational or small craft navigation.[89]

There are three lines of cases that comprise the foundation for TNWs—1) Commerce Clause cases, including commerce, [90] Rivers and Harbors Act, [91] Federal Power Act, [92] and navigational servitude cases; [93] 2) Admiralty cases, [94] and 3) Equal Footing Clause cases. [95] All of these lines

[86] *See*, *e.g.*, *United States v. Holt State Bank*, 270 U.S. 49, 56 (1926) (waters "are navigable in fact when they are used, or are susceptible of being used, in their natural and ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water; and further that navigability does not depend on the particular mode in which such use is or may be had-whether by steamboats, sailing vessels or flatboats-nor on an absence of occasional difficulties in navigation, but on the fact, if it be a fact, that the stream in its natural and ordinary condition affords a channel for useful commerce"); *U.S. v. Appalachian Elec. Power Co.*, 311 U.S. 377, 408 (1940) ("When once found to be navigable, a waterway remains so.").
[87] *See Appalachian Elec. Power Co.*, 311 U.S. at 408 (navigability can exist despite "the necessity for reasonable improvements to make an interstate waterway available for traffic").
[88] *Utah v. United States*, 403 U.S. 9 (1971).
[89] *See Appalachian Elec. Power Co.*, 311 U.S. at 416 ("Nor is the lack of commercial traffic a bar to a conclusion of navigability where personal or private use by boats demonstrates the availability of the streams for similar types of commercial navigation."); *FPL Energy Marine Hydro LLC v. FERC*, 287 F.3d 1151, 1157-59 (D.C. Cir. 2002) (upholding navigation based on three canoe trips taken to demonstrate navigability); *Alaska v. Ahtna*, 891 F.2d 1404, 1405 (9th Cir. 1989) (use of river for commercial recreational boating sufficient to show navigability).
[90] *Gibbons v. Ogden*, 22 U.S. (9 Wheat.) 1, 190 (1824); *The Daniel Ball,* 77 U.S. 557 (1870); *United States v. Steamer Montello (The Montello),* 87 U.S. (20 Wall.) 430 (1874).
[91] *Economy Light & Power Co. v. United States*, 256 U.S. 113 (1921). The Corps' RHA regulatory definition is based on such cases as *The Daniel Ball, The Montello*, and *Economy Light & Power*, as well as such cases as *United States v. Utah,* 283 U.S. 64 (1931) and and *United States v. Appalachian Electric Power Co.,* 311 U.S. 377 (1940).
[92] United States v. Appalachian Elec. Power Co., 311 U.S. 377, 407-08 (1940). In *Appalachian Electric Power*, the Court ruled, inter alia, that: "[W]hen once found to be navigable, a waterway remains so." *Id.* at 408.
[93] The navigational servitude extends from the "ordinary high water mark" on one bank of a navigable water of the United States to the ordinary high watermark on the other bank. A water body's ordinary high watermark is the "line of the shore established by the fluctuations of water . . . ." 33 C.F.R. §329.11(a). It is determined by "physical characteristics such as a clear, natural line impressed on the bank, . . . changes in the character of the soil; destruction of terrestrial vegetation; . . . or other appropriate means that consider the characteristics of the surrounding areas." *Id. See e.g.,* Normal Parm Jr. et al. v. Mark Shumate, 513 F.3d 135, 143 (5th Cir. 2007); United States v. Rands, 389 U.S. 121, 123 (1967).
[94] *Price v. Price*, 929 F.2d 131, 134 (1991).

of cases involve TNWs and all of these cases can and should be used to support a determination that a water is a TNW.

The statutes, federal case law, and regulatory policy noted above support the Agencies' rule interpretation that waters will be considered TNWs if:

- They are subject to section 9 or 10 of the Rivers and Harbors Act of 1899; *or*
- A federal court has found the water body to be navigable-in-fact; *or*
- They are waters currently in use for commercial navigation, including commercial waterborne recreation; *or*
- They have historically been used for such commercial navigation; *or*
- They are susceptible to being used in the future for such commercial navigation.

[95] *Idaho et al. v. Coeur D'Alene Tribe of Idaho et al*., 521 U.S. 261 (1996); *United States v. Utah*, 283 U.S. 64, 76 (1931) (*citing United States v. Holt State Bank*, 270 U.S. 49, 56 (1926)).

See 79 Fed. Reg. 22200.

B. Susceptibility for future use may properly be based on capacity for use and future use for waterborne recreation.

Susceptibility for future use may be based on such factors as physical characteristics and capacity for commercial navigation, including commercial waterborne recreation and potential future use for these purposes. The case law cited herein and in the Proposed Rule preamble supports the agencies' interpretation that potential future use for such purposes "can be demonstrated by current boating or canoe trips for recreation or other purposes." Proposed Rule Preamble at 22200 and 22253 *citing FPL Energy Marine Hydro L.L.C. v. FERC,* 287 F. 3d 1151, 1157 (D.C. Cir. 2002) and *Alaska v. Ahtna, Inc*., 891 F. 2d 1401, 1405 (9th Cir. 1989).

Waterborne recreational trips are appropriately considered in determining whether a water body is a TNW. As the proposed rule preamble notes, on many rivers the only commerce that will occur in the future is recreational use by paddlers in canoes, kayaks, and rafts. Based on the case law, the question to be asked in determining TNW status is whether this water body ever could be used for commercial recreational boating. If a boating trip can establish that the water is or could be made navigable for small water craft, then the water should be classified a TNW. 79 Fed. Reg. at 22200, 22253.

The July 2010 EPA Los Angeles River TNW determination demonstrates that the TNW definition in the Proposed Rule is no more expansive than the 2008 TNW definition.[96] Although the determination looked at the current commercial uses of the river, as well as the historic uses of the river, an expedition of kayakers and canoeists down the Los Angeles River played a prominent role in convincing EPA that the river was a TNW. If the EPA were to conduct a similar analysis under the Proposed Rule, it is quite likely that it would reach the same result, albeit with considerably less confusion, delay, and resources having clarified, consistent with the case law, that a trip taken for the purpose of demonstrating a water body can be navigated is sufficient.

C. The final rule regarding TNWs could be improved by further clarifying the TNW case law and improving available TNW mapping data.

The TNW definition and its interpretation are key to determining CWA jurisdiction since Justice Kennedy's *Rapanos* opinion uses TNWs as a primary reference point for determining significant nexus and therefore CWA jurisdiction. Any failure to properly identify the nearest TNW could mean a significant nexus analysis is improperly conducted by using a water body that is further away than the nearest water that could be deemed traditionally navigable – and where the significant nexus between the waters may be less apparent and more difficult to prove.

Consider an example in which EPA or Corps staff is trying to determine whether a non-adjacent wetland has a significant nexus to a TNW. Two miles down gradient from where the wetland

[96] Special Case Evaluation Regarding Status of the Los Angeles River, California, as a Traditionally Navigable Water, EPA Region 9 (July 1, 2010).

sits, there is a creek that can be canoed today, and that records show was used 100 years ago by fur trappers. The next downstream water is a major river, but it is more than 20 miles away.[97] Clearly, it would be easier to show that the wetland (perhaps in combination with similarly situated wetlands in the region) had a physical, biological, or chemical linkage – a "significant nexus" – to the creek, as compared to proving the requisite nexus between the wetland and the river 20 miles away. While the wetland may very well have similar impacts on the more distant river, that nexus "might be more difficult to demonstrate and more subtle."[98]

If, for instance, a water is found to have supported "historic commerce," that is all that is necessary to find that the water is a TNW, even if that commerce only involved a trapper using the creek to get his beaver pelts to market. The "susceptible to being used for future commercial navigation" test need only be applied if there is no evidence of historic commerce. And while a "susceptibility" determination may involve an inquiry into the size, depth, and flow velocity of a creek, that same inquiry has no place in a determination of the presence or absence of evidence of historic commerce.

In many cases the Corps will turn to the navigability studies that it has completed under the Rivers and Harbors Act (RHA). However, these studies are often outdated. For example, one such study in Georgia set the head of navigation 70 miles downstream of where it should be, because the author of the report did not apply the historic commerce test. The section of river at issue had been in commercial use well into the 1900's. Thus, this already small subset of TNWs is, in some regions, smaller than it should be. Western Resource Advocates reports, for example, that historically, the Corps had determined that, of Colorado's approximately 100,000 miles of stream, *only 15 miles* (on the main stem Colorado River from Grand Junction to the state line) were TNW.[99] Excessive reliance on Corps district RHA Section 10 waters for TNW determinations would lead to missing many TNWs and, as a result, likely leaving many wetlands, lakes, and ponds without Clean Water Act protection, or would increase the time, cost and effort involved in establishing a basis for CWA protection.

To address these concerns, we join Southern Environmental Law Center (SELC)[100] in recommending the following:

1. The agencies should include a section in the preamble expanding on the one in the proposed rule at 79 Fed. Reg. 22200 (April 21, 2014) that explains in further detail all of the different sources of the term "traditional navigable water" and that points out that they are all equally applicable in making a significant nexus determination. The section should also explain that the nearest traditional navigable water determination should be based on the most inclusive information available.

2. The agencies should make it clear that only one prong of the traditional navigable water

[97] This hypothetical situation is largely borrowed from William W. Sapp *et al*, *The Historic Navigability Test: How to Use It to Advantage in This Post-Rapanos World,* 37 ELR 10797, 10798 (Nov. 2007).
[98] *Id.* at 10805.
[99] Western Resource Advocates 2014 Rule Comments *citing* Hill, John, "The Right to Float in Colorado: Differing Perspectives," 26 Colorado Water 18 (Colorado Water Institute 2009).
[100] *See* SELC 2014 Rule Comments.

test is needed to qualify a water as a traditional navigable water, i.e., the historic commerce test is enough on its own.

3. The agencies should make it clear in the preamble that the Corps' navigability reports hold no more sway than any other navigability test.

4. The preamble should also explain that the Corps must consider any information in making traditional navigable determinations, such as information on historic commerce, introduced by the third parties during a permit process. And that if the Corps judges that third-party information to be legitimate, it cannot be trumped by, for example, a Corps navigability report.

5. In addition to including this information in the preamble, the Corps should state in the preamble that it will be issuing a regulatory guidance letter further explaining the traditional navigability test.

Finally and importantly, the agencies should establish a publicly available spatial database documenting all TNWs as the information supporting TNW status is identified. Readily accessible maps documenting TNWs will improve the efficiency, consistency, and accuracy of TNW, significant nexus, and CWA jurisdictional determinations.

VI. The Proposed Rule's Treatment of Interstate Waters is Well-Supported by Statute, Regulations, and Case Law.

A. The Clean Water Act and the agencies' existing rules provide for categorical protection of interstate waters.

The agencies' proposal to assert jurisdiction over all interstate waters (IWs), including interstate wetlands, categorically and without a case-by-case significant nexus analysis, is consistent with the CWA and its legislative history. *See* Proposed Rule Preamble at 22200 and 22254-59, *citing, e.g.,* CWA section 303(a)(1). The Senate Committee on Public Works stated, for example:

Through a narrow interpretation of the definition of *interstate waters* the implementation of the1965 Act was severely limited. Water moves in hydrologic cycles and it is essential that discharges of pollutants be controlled at the source.[101]

The agencies' definition falls squarely within their longstanding rules "defining 'waters of the United States' to include "*interstate waters including interstate wetlands*." The categorical protection of these waters pursuant to these rule provisions was not questioned or even at issue in the *Rapanos* or *SWANCC* Supreme Court decisions.

The agencies' definition of "interstate waters" also carefully tracks the *statutory* definition of "interstate waters" dating back to the 1948 water pollution law that includes "*all rivers, lakes, and other waters* that flow across, or form a part of, State boundaries." *See* Proposed Rule Preamble at 22255. Assertion of categorical jurisdiction over these waters is neither new nor an

[101] S. Rep No. 92-414 at 77 (1971) 1972 Legislative History at 1495 (emphasis added).

expansion of CWA jurisdiction. The 2008 guidance document, still in effect, inexplicably fails to mention or clarify the treatment of "interstate waters."[102]

Consider, as Western Resource Advocates comments, the headwaters states of the Rockies, where every major river system is the subject of either an interstate compact that allocates its waters or a Supreme Court of the United States decree for an equitable apportionment thereof. [103] According to WRA, the State of Colorado alone is party to nine interstate compacts (two on the Colorado River), one interstate agreement and two equitable apportionment decrees for rivers. Yet, the Corps had formally designated only one of these waterways as a TNW prior to July 2011. Most of Colorado's nearly 100,000 miles of streams are tributary to one of the rivers that is subject to a compact, agreement or decree.

B. The agencies' treatment of tributaries, adjacent wetlands, and other waters in relation to interstate waters is well-supported.

Also well-supported by law and policy is the agencies' proposal to analyze tributaries to IWs, wetlands adjacent to IWs, and other waters relative to IWs in essentially the same manner as these waters are analyzed vis-à-vis TNWs. Proposed Rule Preamble at 22200, 22258-59. Congress clearly intended to protect interstate waters and their tributaries, and understood that protecting interstate waters required limiting pollution upstream. We agree that it is reasonable to apply Justice Kennedy's significant nexus test to the tributaries, adjacent wetlands, and other waters that have demonstrated hydrological or ecological connections to IWs. As noted in the proposed rule preamble:

> Justice Kennedy's standard seeks to ensure that waters Congress intended to subject to federal jurisdiction are indeed protected, both by recognizing that waters and wetlands with a significant nexus to covered waters have important beneficial effects on those waters, and by recognizing that polluting or destroying waters with a significant nexus can harm downstream covered waters.
> *Id.* at 22200.

VII. The Agencies' Definition and Treatment of Tributaries is Scientifically and Legally Sound.

We support the agencies' proposed rule that "all waters that meet the proposed definition of tributary are "waters of the United States" by rule, unless excluded under section (b), because tributaries and the ecological functions they provide, alone or in combination with other tributaries in the watershed, significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and territorial seas." 79 Fed. Reg. 22201.[104]

[102] Robert Meltz and Claudia Copeland, *The Wetlands Coverage of the Clean Water Act (CWA) Is Revisited by the Supreme Court: Rapanos v. United States, at* 14. Congressional Research Service 7-57– (June 3, 2011).
[103] Western Resource Advocates 2014 Rule Comments.
[104] We remind the agencies that Justice Kennedy does not assert that categorical regulation of tributaries is no longer permissible, or that a case-by-case determination of a "significant nexus" to TNWs or IWs is required to regulate any tributary. Justice Kennedy's opinion limited his basis for remand to the lower court to the question of "whether the specific wetlands at issue possess a significant nexus with navigable waters." 126 S. Ct. 2252. This contrasts with the plurality's broader basis for remand to determine "whether the ditches and drains near wetlands are

The proposed rule is strongly supported by the draft Connectivity Report, which thoroughly documents and supports its conclusion that "[a]ll tributary streams, including perennial, intermittent, and ephemeral streams, are physically, chemically, and biologically connected to downstream rivers via channels and associated alluvial deposits where water and other materials are concentrated, mixed, transformed, and transported." *Connectivity Report* at 1-3. The report includes a thorough examination of the literature with respect to ephemeral stream connectivity, particularly in the arid southwest.

This conclusion with regard to all tributary streams is strongly supported by the SAB Connectivity Peer Review Report as well,[105] and is fully consistent with and relevant to Justice Kennedy's significant nexus test. Justice Kennedy suggests the current definition of tributary "may well provide a reasonable measure of whether specific minor tributaries bear a sufficient nexus with other regulated waters to constitute 'navigable waters' under the Act." *Rapanos* at 2249.

We urge the agencies to swiftly finalize this rule, clearly restoring longstanding protections for all tributary waters. Our research, as well as comments submitted by Corps officials, indicate that many lower order intermittent and ephemeral streams were left unprotected following issuance of the Guidance in 2007 and 2008, likely because of the inability to aggregate streams impacts. A Corps employee has commented that:

> [O]ur district has determined that we cannot defensibly say that most individual first order/ephemeral stream reaches have a significant effect on a TNW. EPA and the Sierra Club argue that those first order/ephemeral headwater streams should be regulated because cumulatively they greatly effect [sic] the integrity of the TNWs. We do not argue that. However, the Supreme Court ruling and the *Rapanos* guidance did not say to look at them cumulatively. Not until several first or second order streams merge into a higher order stream can we defensibly argue that a stream has a significant effect.[106]

We have also found several instances where streams, some quite sizable, are not being protected.[107] Some of these streams are being subjected to channelization and other projects that

'waters,'" and "whether the wetlands in question" are also jurisdictional. *Id*. at 2235. This contrast is further indication Justice Kennedy may not require a case-by-case significant nexus determination for tributaries. It is only in regards to *wetlands* adjacent to minor tributaries that Justice Kennedy refuses to allow categorical assertion of jurisdiction under the current regulations. *Id*. at 2249 ("Absent more specific regulations, . . . the Corps must establish a significant nexus on a case-by-case basis when it seeks to regulate wetlands based on adjacency to nonnavigable tributaries.").

[105] *See* discussion *supra* at 22.

[106] Email from Cody Wheeler, codywheeler68@sbcglobal.net, Corps Employee, to OW-Docket@EPA (Nov. 16, 2007).

[107] *See*, *e.g*., Approved Jurisdictional Determination Form, U.S. Army Corps of Engineers, File NWK-2007-01586-1 (Aug. 17, 2007) (no jurisdiction found for second order stream with 384 acres of drainage, estimated to be 8,000 linear feet in length with 626 acre watershed); Approved Jurisdictional Determination Form, U.S. Army Corps of Engineers, File NWK-2007-01586-2, (Aug. 17, 2007) (no jurisdiction found for a first order stream with 115 acres of drainage and a watershed size that is also 115 acres. It is estimated to be 3,800 linear feet in length); Approved

can have significant and harmful water quality and habitat implications. And failing to protect these streams leaves them vulnerable to other pollution, like the dumping of industrial and other waste that poses clear threats to downstream water quality, not to mention the tributary itself.

We urge the agencies to finalize this rule, confirming that any water that meets the definition of tributary (and is not excluded under section (b) of the proposed rule) has a significant nexus to a traditionally navigable water, interstate water, or territorial sea such that it is a 'waters of the United States' without the need for a separate, case-specific significant nexus analysis. *Id.*

A. The agencies' definition of tributary is consistent with existing law and science, and does not expand Clean Water Act jurisdiction.

The agencies' definition of "tributary" includes several clarifying elements, all of which are consistent with existing law, science, and past practice. *See* 33 CFR 328.3 (c)(5); 79 Fed. Reg. 22201-06, 22263. Fundamentally, the proposed rule defines "tributary" as:

> [A] water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4) [traditionally navigable waters, interstate waters, territorial seas, and impoundments of these waters as well as tributaries]. *Id.*

Importantly, and consistent with the science, law, and past practice, the agencies' tributary definition clarifies specific tributary circumstances where the OHWM is not determinative of tributary status: 1) "wetlands, lakes, and ponds are tributaries (even if they lack a bed and banks or ordinary high water mark) if they contribute flow, either directly or through another waters to a water identified in paragraphs (a)(1) through (3);" and 2) a water "does not lose its status as a tributary if, for any length, there are one or more man-made breaks …, or one or more natural breaks … so long as a bed and banks and an ordinary high water mark can be identified upstream of the break." While the OHWM typically provides a strong indicator of relatively frequent flow for linear stream channels, it is not a reliable indicator of flow for non-linear water bodies such as wetlands, lakes, and ponds which none the less do contribute flow downgradient. *See* 79 Fed. Reg. at 22203; 22235.

Also consistent with the Act, the legal precedent, and the underlying connectivity science is the definition's clarification that a tributary, including a wetland, can be "natural, man-altered, or man-made" and includes "rivers, streams, lakes, ponds, impoundments, canals, and ditches not excluded in paragraph (b)(3) or (4) of this section." *Id.* There is significant case law that supports the regulation of man-made and man-altered waters as tributaries.[108]

Jurisdictional Determination Form, U.S. Army Corps of Engineers, File NWO-2007-2195-DEN (Nov. 1, 2007) (ephemeral stream flowing into a reservoir used for water supply not jurisdictional).

[108] *See*, *e.g*, *United States v. Moses*, 496 F.3d 984 (9th Cir. 2007), *cert denied*, 554 U.S. 918 (2008) (stream impacted by man-made diversion jurisdictional); *Vierstra*, *supra*, at *5 ("The fact that the Low Line Canal is man-made is of no moment. The canal is part of a tributary system connecting navigable waters upstream and downstream for six to eight months of the year. Its man-made nature makes it no less capable of carrying pollution to navigable and interstate waters. Moreover, there are many water-ways in the Intermountain West that have been re-routed, re-countered, and re-channeled in an effort to control, store, and use the limited water we have. Excluding these water-

1. *The agencies' use of the existing OHWM definition helps clarify the definition of tributary and tributary boundaries.*

The tributary definition also provides constructive and consistent clarification by incorporating and explaining the Corps' longstanding Ordinary High Water Mark (OHWM) as an indicator of channel boundaries. We support the agencies' use of the existing Corps definition of OHWM:

> The term "ordinary high water mark" means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.
> 33 CFR 328.3(e).

The proposed rule preamble explains that the bed and banks and OHWM requirement is important because "these features generally are physical indicators of flow" and thus indicative of "a tributary's ability to transport pollutants to downstream traditionally navigable waters, interstate waters, and the territorial seas, and thereby have a significant effect on the chemical, physical, and biological integrity of a water identified in paragraphs (a)(1) through (a)(4)." See 79 Fed. Reg. at 22202. Importantly, the preamble notes that these bed and banks and OHWM indicators of flow "can be created by ephemeral, intermittent, and perennial flows." *Id.*

As the agencies explain, the OHWM "generally defines the lateral limits of a water, and its absence generally determines whether a tributary's channel such that the upper limit of the jurisdictional tributary is identified. However, as noted above, we strongly support the agencies' recognition that channel characteristics are variable and those variations must be taken into account in evaluating the presence and continuity of the channel bed and bank and OHWM.

2. Any further clarifications of the tributary definition must respect connectivity science and the goals of the Clean Water Act, and must not exclude wetlands, lakes, and ponds that function as tributaries and are integral elements of the tributary system.

We recognize that the agencies are being asked to further clarify and define the OHWM and bed and banks terms in order to provide more consistency and certainty in identifying tributaries in the field. At the same time, the SAB is cautioning the agencies to recognize that channel characteristics are variable and those variations must be taken into account in evaluating the presence and continuity of the channel bed and bank and OHWM. Indeed, the SAB is urging

ways from the jurisdiction of the CWA when they might otherwise constitute tributaries of navigable waters makes little practical sense."); *see also*, *United States v. Gerke Excavating, Inc.*, 412 F.3d 804, 805-06 (7th Cir. 2005), *vacated and remanded* 548 U.S. 901 (2006) (ordering further consideration in light of *Rapanos*), *remanded* 464 F.3d 723, 725 (7th Cir. 2006) (remanding to district court for further fact finding to determine whether particular wetlands were jurisdictional "waters of the United States" under Justice Kennedy's significant nexus test). (Finding that, "A stream can be a tributary; why not a ditch? A ditch can carry as much water as a stream, or more; many streams are tiny. It wouldn't make much sense to interpret the [Corps'] regulation[s] as distinguishing between a stream and its man-made counterpart.").

EPA to "reconsider the definition of tributaries because not all tributaries have ordinary high water marks." SAB Rule Letter at 2.

As the preamble explains, the Corps has been working to address this variability, providing additional technical assistance on this front. *See, e.g.,* 79 Fed. Reg. 22259-10 *citing* R.W. Lichvar and S.M. McColley, U.S. Army Corps of Engineers, *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual,* ERDC/CRREL TR-08-12 (2008). In order to provide additional clarity in applying these terms in the field that is also scientifically sound, we recommend that the agencies finalize the definition of tributary and the definition of waters of the United States and then continue to develop, adopt, and implement regionally-specific OHWM and tributary delineation manuals along the lines of the agencies' regionally-tailored wetland delineation manuals that have been in use for decades.

We *do not* support changes in the tributary definition that sacrifice sound science in an effort to draw bright lines. In particular, we oppose the "alternate approach" of disqualifying wetlands, lakes, and ponds that are functioning as tributaries simply because, by their very nature (their waters do not flow through a defined channel), they do not necessarily have a bed and bank and OHWM. *See,* 79 Fed. Reg. 22203. Just as linearly flowing tributaries are defined by bed, bank, and OHWM, wetlands are defined, through an established wetland delineation methodology, by the "3-parameter test:" the presence of hydric soils (which take years to develop), the presence of hydrology during the growing season, and the presence (under normal circumstances) of hydrophytic vegetation. Similarly, lakes and ponds are characterized by the relatively permanent presence of a lake or pond bed and open water. These established, relatively permanent water bodies are critical elements of the tributary system and must continue to be recognized as such and found to be jurisdictional on that basis.

Instead, in the interest of improved clarity, we do support a reorganization of the first part of the tributary definition that more clearly identifies contribution of flow as the key element of every tributary, and specifies two categories of water bodies that function as tributaries and therefore meet the tributary definition. For example:

The term tributary means a water in either of the following two categories:

(a) a water which contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (a)(4) of this section, and which is physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e); or

(b) wetlands, lakes, and ponds (even if they lack a bed and banks or ordinary high water mark), if they contribute flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (a)(4) of this section.

While more clearly defined in regulation for the first time, the proposed tributary definition is essentially the same as the Corps' working definition of tributary at the time of the *Rapanos* decision – a working definition referenced and seemingly supported by Justice Kennedy in his *Rapanos* concurring opinion. Justice Kennedy suggests the current definition of tributary "may

well provide a reasonable measure of whether specific minor tributaries bear a sufficient nexus with other regulated waters to constitute 'navigable waters' under the Act." [109]

B. The Proposed Rule, much like the 2008 Guidance, properly treats many non-tidal ditches as tributaries where they clearly function as tributaries.

Ditches that clearly function as tributaries – contributing flow and pollutants downstream – are regulated as such under both the 2008 Guidance and the Proposed Rule. As the preamble explains, "[d]itches not excluded under paragraphs (b)(3) and (4) of the proposed regulation meet the definition of tributary where they have a bed and banks and ordinary high water mark and they contribute flow directly or indirectly through another water to (a)(1) through (a)(4) waters." 79 Fed. Reg. at 22203.

We are generally supportive of the agencies' proposed rule with respect to the jurisdictional treatment of non-tidal ditches and swales. Non-tidal ditches, including roadside and agricultural ditches, are complicated because they are sometimes carved out of upland, but are often constructed in natural streams and wetlands, are prevalent on the landscape, and where they connect directly or indirectly to the tributary system, they often contribute substantial amounts of pollution and flood water to downstream TNWs or IWs. Such ditch systems have wreaked havoc with water quality in some of the nation's greatest aquatic ecosystems, including the Chesapeake Bay watershed and Mississippi River Basin and Gulf of Mexico.[110]

To maintain and restore the physical, chemical, and biological integrity of the nation's waters, the pollution and flood waters conveyed to downstream tributaries from these tributary ditch systems must be subject to Clean Water Act regulation. The agencies have struck a reasonable balance, consistent with the CWA, the Supreme Court cases, and past practice, by treating non-tidal ditches as tributaries *where they clearly function as tributaries*: where they have a bed, bank, and OHWM, connect directly or indirectly to a TNW or IW, and otherwise function as a tributary and potential source of pollution. *See* 79 Fed. Reg. at 22203.[111]

The preamble concludes, based on the science, that tributary ditches provide the same chemical, physical, and biological functions as other tributaries and have the requisite significant nexus to TNWs and IWs:

> Tributary ditches and other man-made or man-altered waters, if they meet the definition of "tributary," have a significant nexus to (a)(1) through (a)(3) waters due to their effects on the chemical, physical, or biological integrity of those downstream waters. As described above, *tributaries of all flow regimes have a significant nexus to downstream (a)(1) through (a)(3) waters.* Due to the often straightened and channelized nature of ditches, these tributaries quickly move

[109] *Id*. at 2249.
[110] *See, e.g.,* SAB Connectivity Peer Review Report at 23-24, 31-32. *See also,* Section IX.K. *infra;* Dr. Robert Magnien, *Miles of Ditches have Altered Delmarva Peninsula Hydrology,* Chesapeake Bay Journal April 1999 at http://www.bayjournal.com/article.cfm?article=2128 (last checked 11.12.14).
[111] The agencies' proposed criteria of an OHWM, a bed and bank, and additional criteria indicative of tributary function are criteria above and beyond existing regulatory requirements for what is considered a tributary.

> water downstream to (a)(1) through (a)(3) waters. Ditches and canals, like other tributaries, export sediment, nutrients, and other materials downstream."
> 79 Fed. Reg. at 22206.

EPA precedent for protecting man-made or altered waters that function as tributaries began quite early in the Act's implementation. The agency's General Counsel concluded in 1977 that the Arlington Canal, in Buckeye, Arizona, was a "water of the United States," despite describing the Canal as:

> [A]n earthen irrigation ditch which flows roughly parallel to the Gila River [, which has flow that] consists primarily of groundwater pumped from wells, irrigation return flows and treated sewage effluent [and which] takes in water from the main Gila River channel only during periods of heavy flow when upstream users are not diverting all of the flow of the River.[112]

The opinion states that the "facts clearly support the Regional Administrator's finding that the Arlington Canal is a tributary of the Gila River, which is navigable water."[113] And this conclusion was not an aberration; a separate opinion from the General Counsel two years earlier was consistent with this view.[114]

Since the passage of the Act, federal courts have consistently concluded that man-made channels can properly be considered "waters of the United States." For instance, in a case involving the discharge of raw sewage during the 1970s into a Louisiana canal that was adjacent to (and from which water was periodically pumped into) wetlands that were considered to be "waters of the United States," the court found that the canal could be protected either as a water linked to interstate commerce or as a tributary to the wetlands.[115]

In the last decade – both before and after *SWANCC* – numerous federal courts of appeal have found that ditches and canals properly could be protected "waters of the United States." Specifically, the Fourth, Sixth, Seventh, Ninth, and Eleventh Circuits found that such features were properly protected by the Clean Water Act.[116] Similarly, the Second Circuit rejected an

[112] U.S. EPA, Office of General Counsel, In re: Town of Buckeye, Arizona, 1977 WL 28254, at * 1 (Nov. 11, 1977).
[113] *Id.* (citation omitted).
[114] U.S. EPA, Office of General Counsel, In re: Riverside Irrigation Dist., Ltd. & 17 Others, 1975 WL 23864, at *3-4 (June 27, 1975) (discussing objection about irrigation return canals, EPA's regulations defining "waters of the United States" and a judicial interpretation which noted that tributaries to navigable waters were protected, and concluding, "[i]t thus appears that the waters that are the subject of these permits may well be determined by the finder of fact, applying the statutory and regulatory test to the facts of these cases, to be navigable waters within the definition in the Act.").
[115] *U.S. v. St. Bernard Parish*, 589 F.Supp. 617, 620 (E.D. La. 1984).
[116] *See, e.g.*, *U.S. v. Deaton*, 332 F.3d at 712 (considering effect of pollution into non-navigable tributaries, noting Corps' interpretation that whole tributary system is protected under applicable rules, and holding, "[t]he Act thus reaches to the roadside ditch and its adjacent wetlands"); *Carabell v. U.S. Army Corps of Eng'rs*, 391 F.3d 704, 708 (6th Cir. 2004) (finding that both ends of ditch along border of the property are connected to tributaries of "waters of the United States," making it a tributary, and thus a protected water), *vacated sub nom*, *Rapanos v. U.S.*, 126 S.Ct. 2208 (2006); *U.S. v. Gerke Excavating, Inc.*, 412 F.3d 804, 805-06 (7th Cir. 2005) ("A stream can be a tributary; why not a ditch? A ditch can carry as much water as a stream, or more; many streams are tiny. It wouldn't make much sense to interpret the regulation as distinguishing between a stream and its man-made counterpart."), *vacated* 126

attempt to limit jurisdiction over a natural tributary that had been "channeled in some places . . . into underground pipes to make room for development. . . ."[117] Cases since *Rapanos* have similarly found that man-made or man-altered tributaries are jurisdictional.[118]

In keeping with this approach, the Bush Administration staunchly defended the protection of the entire tributary system, ditches included, before the Supreme Court. Solicitor General Clement explained "the definition of a tributary is basically any channelized body of water that takes water in a flow down to the traditional navigable water."[119] Specifically, he noted that "[t]he Corps has not drawn a distinction between man-made channels or ditches and natural channels or ditches. And, of course, it would be very absurd for the Corps to do that since the Erie Canal is a ditch."[120]

Even opponents of the continued broad scope of the Act recognize that ditches have long been covered by the Clean Water Act. One such opponent observed (in a 2006 email about the draft guidance sent to staff at the Council on Environmental Quality ("CEQ")) that ditches had "long been covered under [the] CWA," and wondered whether excluding such "artificial" waters from coverage would create legal vulnerabilities.[121]

C. The Proposed Rule excludes from the definition of tributary many ditches and certain other features that are not considered tributaries.

In an effort to clearly define tributaries, the proposed rule excludes from the definitions of tributaries and "waters of the United States" gullies, rills, and non-wetland swales.[122] As the preamble explains, "Of importance with respect to tributaries is the exclusion of gullies, rills, non-wetland swales, and certain ditches." 79 Fed. Reg. at 22204. The agencies also explain that "ephemeral features located on agricultural lands that do not possess a bed and bank are not tributaries." *Id*.

Importantly, in response to concerns from agriculture and local governments, the proposed rule clearly excludes from the definition of tributaries and the definition of "waters of the United

S.Ct. 2964 (2006), *on remand* 464 F.3d 723 (7th Cir. 2006) (remanding to district court to apply *Rapanos*), *cert. denied* 128 S.Ct. 45 (2007); *Headwaters, Inc. v. Talent Irrigation Dist.*, 243 F.3d 526, 533 (9th Cir. 2001) (holding that irrigation canals were "tributaries" protected as "waters of the United States"); *U.S. v. Eidson*, 108 F.3d 1336, 1342 (11th Cir.) ("There is no reason to suspect that Congress intended to regulate only the natural tributaries of navigable waters. Pollutants are equally harmful to this country's water quality whether they travel along man-made or natural routes."), *cert. denied*, 522 U.S. 899 (1997).

[117] *U.S. v. TGR Corp.*, 171 F.3d 762, 765 (2d Cir. 1999).

[118] *See* note 107, *supra*.

[119] Transcript of Oral Argument, *Rapanos v. United States*, 126 S.Ct. 2208 (2006), at 39 (Feb. 21, 2006), available at http://www.supremecourt.gov/oral_arguments/argument_transcripts/04-1034.pdf.

[120] *Id.*

[121] Email from Jeff Eisenberg, National Cattleman's Beef Ass'n, to Greg Schildwachter, CEQ, Sept. 13, 2006, at 1 (produced in response to Freedom of Information Act by Council on Environmental Quality). The message went on to convey that, despite their legal concerns, "[w]e of course are happy to have ditches excluded." *See also Dialogue: Will the New Waters of the United States (WOTUS) Rule Float?* 44 ELR 10862 (10-2014), *Comments of Deidre Duncan* ("It is true that the Corps has, in case-specific circumstances, regulated ditches in the sec. 404 program, but what is also clear is that ditches have not previously been regulated as waters of the United Sates under non-sec. 404 CWA programs.").

[122] 33 CFR 328.3 (b)(5)(vii); 33 CFR 328.3(c)(5); 79 Fed. Reg. 22204; *see also Id.* at 22218-19.

States" two types of ditches that might otherwise be considered tributaries: 1) "ditches that are excavated wholly in uplands, drain only uplands, and have less than perennial flow;" and 2) ditches that do not contribute flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4) of this section." *See e..g.,* 33 CFR 328.3 (b)(3) and (4); 79 Fed. Reg. at 22203.

In doing so, the agencies not only codify these CWA ditch exemptions for the first time, but they propose to broaden the previously informal upland ditch exemption by excluding from jurisdiction upland ditches with less than perennial flow. Not only do the agencies require year round presence of water (under normal or above normal rainfall conditions), but the agencies require year round *flow of water.* Upland ditches that have year round water, but less than year round flowing water apparently do not qualify as tributaries under the proposed rule language, even if those flows are episodically torrential, sending flood waters, sediment, and pollutants downstream. *Id.*

1. *The perennial flow requirement is not consistent with the connectivity science and should be revisited.*

The agencies request comment on the question of the appropriate flow regime to support upland ditch exclusion from Clean Water Act protections. This proposed expansion of the ditch exemption based on perennial flow regime is not based on science and it will exclude from Clean Water Act protections ditches that function as tributaries, contributing pollutants downstream. As the agencies note with respect to tributary ditches, "tributaries of all flow regimes have a significant nexus to downstream (a)(1) through (a)(3) waters." 79 Fed. Reg. 22206.[123] Instead, the agencies justify their perennial flow jurisdictional requirement on grounds that, "[i]dentifying upland ditches with perennial flow is straightforward and will provide for consistent, predictable, and technically accurate determinations at any time of year."

The final rule should either limit this exemption to upland ditches with less than intermittent flow, or clearly demonstrate how and why upland ditches with less than perennial flow will not contribute water, sediment, nutrients, and other pollutants downstream.

In the interest of increased certainty and predictability, the proposed rule excludes from Clean Water Act jurisdiction many upland ditches that function as tributaries. The agencies have already heeded the calls from the regulated community to clarify and to expand Clean Water Act exemptions for ditches. Excluding even more tributary ditches from Clean Water Act regulation in the final rule will put the nation's waters at increased risk.

[123] *See also* Connectivity Report at 1-3 ("[a]ll tributary streams, including perennial, intermittent, and ephemeral streams, are physically, chemically, and biologically connected to downstream rivers via channels and associated alluvial deposits where water and other materials are concentrated, mixed, transformed, and transported."); SAB Connectivity Peer Review Report at 3 (affirming the Connectivity Report's conclusion).

D. The agencies' treatment of headwater and ephemeral streams is scientifically and legally sound.

The preamble to the proposed rule, including the Appendix A Science Evidence, includes the well-documented conclusion that:

> Tributaries that are small, flow infrequently, or are a substantial distance from the nearest (a)(1) through (a)(3) water (e.g., headwater perennial, intermittent, and ephemeral tributaries) are essential components of the tributary network and have important effects on the chemical, physical, and biological integrity of (a)(1) through (a)(4) waters, contributing many of the same functions downstream as larger streams. When their functional contributions to the chemical, physical and biological conditions of downstream waters are considered at a watershed scale, the scientific evidence supports a legal determination that they meet the 'significant nexus' standard articulated by Justice Kennedy in *Rapanos*. 79 Fed. Reg. 22206, 22231-32.[124]

For example, intermittent headwaters streams throughout the Rocky Mountain West contribute cold, clean water to larger perennial tributaries that flow into traditionally navigable or interstate waters. Fish move through both intermittent and ephemeral streams[125] and fish and other aquatic species use these systems for certain life stages.[126]

The continued inclusion of ephemeral streams as tributaries and "waters of the United States" in accordance with the proposed rule is well supported by the scientific literature, the CWA, the case law, and past agency practice.[127] EPA has estimated that intermittent or ephemeral streams comprise fifty-nine percent of all stream miles in the United States, excluding Alaska.128 As Western Resource Advocates notes in its Proposed Guidance Comments (July 2011), the vast majority of river miles in the Interior West are smaller headwaters and plains streams that do not flow year-round. EPA Region 8 estimates that only 17% of the waters within its five states flow

[124] *See* note 122, *supra.*
[125] Stefferud & Steffrud, "Fish Movement through Intermittent Stream Channels: A Case History Study" (2007), *available at* http://www.usbr.gov/lc/phoenix/biology/azfish/pdf/intermittentStreams.pdf.
[126] Wigington, et al. "Coho Salmon Dependence on Intermittent Streams," (2006), *available at* http://www.roguebasinwatersheds.org/files/intermittent%20streams%20and%20coho.pdf.
[127] *See*, *e.g.*, *United States v. Deaton*, 332 F.3d 698, 712 (4th Cir. 2003), *cert denied*, 124 S. Ct. 1874 (2004) ("jurisdiction over the whole tributary system of any navigable waterway is warranted"); *Quivira v. EPA*, 765 F.2d 126 (10th Cir. 1985) (arroyo with continuous groundwater connection and occasional surface water connection jurisdictional under the Act); *United States v. Ashland Oil and Transportation Co.*, 504 F.2d 1317, 1325 (6th Cir. 1974) (finding "Congress knew exactly what is was doing and that it intended the Federal Water Pollution Control Act to apply, as Congressman Dingell put it, 'to all water bodies, including main streams and their tributaries.' Certainly the Congressional language must be read to apply to our instant case involving pollution of one of the tributaries of a navigable river. Any other reading would violate the specific language of the definition [of navigable waters as waters of the United States] and turn a great legislative enactment into a meaningless jumble of words.") (quoting 118 Cong. Rec. 33756-57).
[128] Letter from Benjamin H. Grumbles, Assistant Administrator, U.S. Environmental Protection Agency to Jeanne Christie, Executive Director, Association of State Wetland Managers (Jan. 9, 2006) [mistakenly date stamped Jan. 9, 2005] at 2.

year-round.[129] In Colorado and Utah, respectively, only 25 and 21 percent of stream miles are perennial.[130]

In Arizona, an estimated 96% of the state's stream miles are intermittent or ephemeral.[131] Moreover, in Arizona, in the early 2000s, the State estimated that 97% of its permitted point source discharges were to headwaters, intermittent and ephemeral streams.[132] In its comments on the 2007 *Rapanos* Guidance, the Arizona Department of Environmental Quality (ADEQ) acknowledged that without Clean Water Act jurisdiction over its intermittent and ephemeral streams, it "will be unable to assure the general public that these discharges of effluent in the desert are not harmful to the environment, and we will be unable to achieve our overall mission to enhance and protect Arizona's environment."[133]

The agencies' rulemaking record also considers that, particularly in the West, some rivers and streams that are ephemeral today used to flow with greater frequency because of water supply infrastructure that has diverted the natural flows of these rivers and streams elsewhere.[134] While the South Platte River in Colorado once flowed year round, today there are reaches of the South Platte where the flow in the river can be composed entirely of effluent from point source permitted discharges.[135]

Because the watersheds in the West have a high concentration of ephemeral streams, the contribution of these streams to the larger tributaries is critical to maintain tributary function, including the function of providing habitat to native species that even ephemeral streams provide. WRA notes, for example, one set of three small warm/cool water fishes – the bluehead sucker, the flannelmouth sucker and the roundtail chub – that is the subject of a conservation

[129] *See* Congressionally Requested Report on Comments Related to Effects of Jurisdictional Uncertainty on Clean Water Act Implementation, Report No. 09-N-0149 at 8 (2009), *available at* http://www.epa.gov/oig/reports/2009/20090430-09-N-0149.pdf.
[130] *See* Streams Lakes and Trout Streams of Colorado, http://www.cotrout.org/Portals/0/pdf/legislative/State%20of%20Colorado%20Ephmeral%20Comparison.pdf; EPA, Percentage of Surface Drinking Water from Intermittent, Ephemeral, or Headwater Streams in Utah, *available at* http://www.epa.gov/owow/wetlands/science/surface_drinking_water/pdfs/surface_drinking_water_ut.pdf (last visited 06/28/11).
[131] *See* Letter from Stephen A. Owens, Director, Arizona Department of Environmental to Benjamin H. Grumbles, Assistant Administrator, Office of Water, U.S. Environmental Protection Agency (December 5, 2007) at 2 (describing the quality and function of surface waters in Arizona) (submitted as comments on the Guidance) (2007 ADEQ Comments); *See* NWF, NMWF, TU, DU, *Imperiled Treasures: How Recent Supreme Court Decisions and Agency Actions Have Endangered Southwest Waters and Wildlife* (January 2008) at 16; Nadeau & Rains, Hydrological Connectivity Between Headwater Streams and Downstream Waters: How Science can Inform Policy, 43 J. Am. Water Resources Ass'n 118, Fig. 3b (2007), *available at* http://www.albergstein.com/cao/Best%20Available%20Science/Headwater%20Streams/JAWRA%20Headwaters%20Issue/Headwaters%20ecological%20connectivity%20-%20science%20and%20policy.pdf.
[132] *Id.* at 127.
[133] 2007 ADEQ Comments, *Imperiled Treasures, supra* note 131.
[134] *See, e.g.,* 79 Fed. Reg. at 22201 *citing U.S.* v. *Moses*, 496 F. 3d 984 (9th Cir. 2007), *cert. denied,* 554 U.S. 918 (2008); SAB Connectivity Peer Review Report at 31-32, 57-58; Western Resource Advocates 2014 Rule Comments at 9, 16.
[135] *Id. citing* USGS, Water Quality in the South Platte River: Colorado, Nebraska & Wyoming 1992-1995, Circular 1167 at 18 (1998).

plan among Arizona, Colorado, Nevada, New Mexico, Utah and Wyoming.[136] These fish occupy primarily headwaters tributaries, many of which are intermittent or ephemeral. In one study, the fish were found in deep pools above ephemeral reaches, indicating that both adult and juvenile fish move throughout their headwaters habitat, including along ephemeral channels.[137]

Natural and artificial ephemeral streams, even if they carry only stormwater (or effluent from point source discharges), eventually flow into intermittent or perennial tributaries or traditionally navigable or interstate waters. The pollutants in the storm water or effluent also find their way downstream. WRA offers the example that, in an effort to keep its drinking water source watershed as clean as possible, the Pagosa Area Water and Sanitation District has published a page on its website cautioning loggers to "avoid poor logging practices" that cause excessive sediment contributions to the larger system.[138]

There is agency precedent for regulating ephemeral streams. In 2007, the Arizona Department of Environmental Quality (ADEQ) commented to EPA that, "Arizona's ephemeral streams have been considered jurisdictional waters at least since the first days of the 1972 [Clean Water Act]."[139] Prior to the 2007 guidance, the Los Angeles District often took jurisdiction on "dry washes," at least where they could readily identify an Ordinary High Water Mark.[140] In 2007, the Kansas City District found jurisdictional a first-order, ephemeral, stream based on the presence of a "significant nexus."[141] Even the 2008 Guidance extended CWA jurisdiction to "[c]ertain ephemeral waters in the arid west" where they are "tributaries and they have a significant nexus to downstream traditional navigable waters. For example, in some cases these ephemeral tributaries may serve as a transitional area between the upland environment and the traditional navigable waters." 142 The 2008 Guidance failed to explain, however, why such waters outside of the arid West do not likewise provide important functions and warrant protection.

E. The 2008 Guidance has undermined protections for ephemeral streams and must be withdrawn.

As noted previously, the 2008 Guidance has undermined protections for numerous ephemeral streams that almost certainly had a significant nexus with downstream TNWs or IWs, at least when considered in combination with other tributaries within the watershed. Summarized here are just a few examples:

- 2008 EPA correspondence describes a Kansas City District presumption that first order ephemeral streams, *as a class*, are not waters of the United States, as well as draft

[136] *Id.* at 10, *citing* White Water Park at Rock Park, http://www.cityofsparks.us/residents/parks-and-facilities/whitewater-park-rock-park (last visited Oct. 3, 2014).
[137] Michael R. Bower, et al., *Habitat Features Affect Bluehead Sucker, Flannelmouth Sucker, and Roundtail Chub Across a Headwater Tributary System in the Colo. River Basin*, 23 J. FRESHWATER ECO. 3, pp. 347-58 (Sept. 2008), *available at* http://www.uwyo.edu/frahel/pdfs/bower-2008-1.pdf.
[138] *Id. citing* Watersheds, http://www.pawsd.org/watershed-protection.html (last visited Oct. 3, 2014).
[139] 2007 ADEQ Comments, *Imperiled Treasures* at 17, *supra* note 131.
[140] *Imperiled Treasures, supra,* at 17.
[141] *See* U.S. Army Corps of Eng'rs, Kansas City District, Approved Jurisdictional Determination: Coffey County RWD 3, NWK-2007-02080-2, at 5 (Dec. 6, 2007) (describing multiple effects of stream).
[142] 2008 Guidance at 11.

jurisdictional determinations that underestimated the length of stream reaches, ignored site visit data, and mischaracterized the ability of streams and associated wetlands to filter pollutants and other affect the integrity of downstream TNWs.[143]

- The Omaha District found an ephemeral stream to be unprotected based on lack of significant nexus, where the flow of the tributary was unlikely to reach a traditionally navigable water as a result of the intervening presence of "a water-supply reservoir with all impounded water piped to municipal water treatment plants or for re-injection into local bedrock aquifers."[144] This seems completely at odds with the Corps' Instructional Guidebook's observation that "[g]enerally, impoundment of a water of the U.S. does not affect the water's jurisdictional status,"[145] but is likely attributable to the focus in the guidance on the degree of flow to downstream waters.

- The Nashville District rejected Clean Water Act protections for three ephemeral streams, despite acknowledging the potential importance of such waters. In each case, the district based its assessment of the likelihood of a downstream effect on nothing more than distance and its unsubstantiated conclusion that such distance would attenuate the impact. As the district said in each case: "It is possible during a heavy precipitation event that the unnamed tributary to Horn Springs Branch could carry pollutants and flood waters to TNW along with transferring nutrients and oranic [sic] carbon. However, due to the fact that the water has to travel through two tributaries and between 5-10 river miles to the TNW, the impacts, if any would be very minor."[146]

- The Jacksonville District declared an ephemeral tributary draining a sub-basin approximately 7 acres in size to be non-jurisdictional, with hardly any analysis; rather, the determination states, in a conclusory fashion, that "[t]he frequency and amount of flow in the ditch is not significant enough to provide notable physical, chemical, or biological benefits to downstream waters or a TNW."[147]

- The Huntington District made what appears to us to be conflicting non-jurisdictional and jurisdictional determinations for ephemeral and intermittent tributaries in Ohio. Two determinations found that there was no "significant nexus."[148] On the other hand, the

[143] *Courting Disaster, supra,* at 24 *citing* EPA Memoranda dated February 27, 2008 and July 10, 2008.
[144] *Courting Disaster, supra,* at 14-15 *describing and citing* U.S. Army Corps of Eng'rs, Omaha District, Approved Jurisdictional Determination: Channel Work in the North Tributary of Newlin Gulch at Lagae Ranch, NWO-2007-2195-DEN, at 3 (Nov. 1, 2007). *See* Mark Jaffe, *Rulings drain protections for state waterways,* Denver Post (May 10, 2009).
[145] Instructional Guidebook at 31.
[146] U.S. Army Corps of Eng'rs, Nashville District, Approved Jurisdictional Determinations: Horn Springs Group, 200701845, 200701844, and 200701843, at 6 (Sept. 5, 2007).
[147] U.S. Army Corps of Eng'rs, Jacksonville District, Approved Jurisdictional Determination: SAJ-2007-4563, at 5 (Aug. 31, 2007).
[148] U.S. Army Corps of Eng'rs, Huntington District, Approved Jurisdictional Determination: Good Samaritan Hospital, LRH-2007-449-GMR, at 7 (Oct. 4, 2007) (finding that significant nexus was absent because, *inter alia*, stream was of low quality, lacked adjacent wetlands, was contained in a culvert over 40% of its length and does not have a developed floodplain); U.S. Army Corps of Eng'rs, Huntington District, Approved Jurisdictional Determination: North Clayton Development, LRH-2006-518-GMR, at 7 (Oct. 5, 2007) (finding lack of significant nexus because it conveys a small amount of stormwater and does not provide habitat or have significant floodplain),.

district concluded in a contemporaneous jurisdictional determination that an ephemeral stream was protected because the stream would carry stormwater to the tributary system and "serve to dissipate energy" to the tributary system, things that the other streams presumably would do as well.[149]

- The Buffalo District found three separate ephemeral tributaries to the Cuyahoga River to be non-jurisdictional based on a lack of "significant nexus," without considering the tributaries collectively (much less similar tributaries in the region).[150]

Similarly, we are aware of at least one example where an ephemeral tributary that seems to have an obvious "significant nexus" was apparently the subject of internal debate among the agencies. In a December memorandum, EPA and the Corps headquarters asserted jurisdiction (indicating to us that there was a dispute in the field) over an ephemeral tributary to Canyon Lake, in California, a TNW that is listed as impaired for nitrogen, phosphorus, and pathogens.[151] There was evidence that, "particularly under wet conditions," sources in the watershed in which the segment is located "contribute significant amounts of nutrients" to the lake.[152] In addition, modeling and analysis showed that "it is reasonable to expect pathogens . . . to be present in runoff from the land uses in the . . . sub-watershed," and that "even if the pathogen loads from [the segment] were diluted by unpolluted flows from the rest of the watershed flowing to Canyon Lake, the resulting concentration of fecal coliform at the point of entry to Canyon Lake would likely exceed applicable state water quality standards for pathogens."[153] Although the agencies ultimately reached the right result in this particular case, such an obvious decision should never have required the time, resources, and uncertainty entailed in headquarters intervention.

VIII. The Proposed Rule Properly Asserts Jurisdiction Over Adjacent Waters.

We support the agencies' proposed rule that "all waters, including wetlands, adjacent to a water identified in paragraphs (a)(1) through (5) of this section are "waters of the United States" by rule, because adjacent waters are "integrally linked to the chemical, physical, or biological functions of the (a)(1) through (a)(5) waterbodies to which they are adjacent." *See* 33 CFR 328.3(a)(6); 79 Fed. Reg. at 22206-7.

The proposed rule is strongly supported by the draft Connectivity Report, which thoroughly documents and supports its conclusion that: "[w]etlands and open-waters in landscape settings that have bidirectional hydrologic exchanges with streams or rivers (e.g., wetlands and open-

[149] Army Corps of Eng'rs, Huntington District, Approved Jurisdictional Determination: North Clayton Development, LRH-2006-518-GMR, at 7 (Oct. 5, 2007).
[150] Army Corps of Eng'rs, Buffalo District, Approved Jurisdictional Determination: City of Independence, 2006-00191, Ephemeral Stream 1, at 5 (Nov. 1, 2007); *see also* Army Corps of Eng'rs, Buffalo District, Approved Jurisdictional Determination: City of Independence, 2006-00191, Ephemeral Stream 2, at 5 (Nov. 1, 2007); Army Corps of Eng'rs, Buffalo District, Approved Jurisdictional Determination: City of Independence, 2006-00191, Ephemeral Stream 3, at 5 (Nov. 1, 2007).
[151] Memorandum from Brian Frazer, Wetlands & Aquatic Resources Regulatory Branch, U.S. EPA & Russell L. Kaiser, Regulatory Community of Practice, U.S. Army Corps of Eng'rs, Assertion of Jurisdiction for Jurisdictional Determination SPL-261-FBV (Dec. 6, 2007).
[152] *Id.* at 3.
[153] *Id.* at 4.

waters in riparian areas and floodplains) are physically, chemically, and biologically connected with rivers" through multiple processes, and that they "serve an important role in the integrity of downstream waters because they also act as sinks by retaining floodwaters, sediment, nutrients, and contaminants that could otherwise negatively impact the condition or function of downstream waters." *Connectivity Report* at 1-3. The SAB Connectivity Peer Review Report supports this conclusion at 5 concluding that there is strong scientific support for the overall conclusion that "bidirectional" wetlands and waters in floodplain settings are physically, chemically, and biologically connected with rivers through multiple pathways. Additional literature could be included in the Report to bolster this conclusion and related findings.

The scientific evidence also demonstrates that shallow groundwater connections serve as hydrologic connections between surface waters and should be considered in assessing connectivity and effects on downstream waters. *See, e.g., Connectivity Report* at 1-7 to 1-14. This principle is scientifically sound and widely accepted as legally sound as well.[154]

The agencies' finding that all adjacent waters have a significant nexus to downstream waters and are jurisdictional by rule is fully consistent with and relevant to Justice Kennedy's significant nexus test. Justice Kennedy sets forth a clear framework for establishing adjacent waters and other categories of waters as jurisdictional by rule. First, he defines "significant nexus" and establishes significant nexus as the "touchstone for CWA jurisdiction." *See Rapanos, supra,* at 780 (defining significant nexus); 79 Fed. Reg. at 22209.

Justice Kennedy then provides that the agencies can, through regulation or adjudication identify categories of waters that "are likely, in the majority of cases, to perform important functions for an aquatic system incorporating navigable waters." *Rapanos* at 780-81. The agencies rightly

[154] *See*, *Healdsburg*, 496 F.3d at 1000 (citing to underground hydrologic connections as a basis for establishing a significance nexus between two bodies under Justice Kennedy's standard); *United States v. Banks*, 115 F.3d 916, 921 (11th Cir. 1997) (finding that wetlands that were at least one half mile from navigable waters were jurisdictional due to a hydrologic connection that "was primarily through groundwater, but also occurred through surface water during storms"); *United States v. Tilton*, 705 F.2d 429 (11th Cir. 1983) (finding that wetlands with rare surface water connections, but demonstrated ecological and subsurface hydrological connections, were jurisdictional); *see also*, *Idaho Rural Council v. Bosma,* 143 F. Supp. 2d 1169, 1180 (D. Id. 2001) ("[T]he interpretive history of the CWA only supports the unremarkable proposition with which all courts agree – that the CWA does not regulate 'isolated/nontributary' groundwater which has no affect on surface water. It does not suggest that Congress intended to exclude from regulation discharges into hydrologically connected groundwater which adversely affect surface water. For these reasons, the Court finds that *the CWA extends federal jurisdiction over groundwater that is hydrologically connected to surface waters that are themselves waters of the United States*.") (emphasis added) (citations omitted); *Quivira v. EPA*, 765 F.2d 126 (10th Cir. 1985) (arroyo with continuous groundwater connection and occasional surface water connection to downstream jurisdictional waters protected under the Act); *Washington Wilderness Coalition v. Hecla*, 870 F. Supp. 983, 990 (E.D. Wash. 1994) ("[S]ince the goal of the CWA is to protect the quality of surface waters, any pollutant which enters such waters, whether directly or through groundwater, is subject to regulation by NPDES permit."); *Sierra Club v. Colorado Refining Company*, 838 F. Supp. 1428, 1434 (D. Colo. 1993) (where the Judge stated that, "I conclude that the Clean Water Act's preclusion of the discharge of any pollutant into 'navigable waters' *includes such discharge which reaches 'navigable waters' through groundwater*.") (emphasis added) (citations omitted); *McClellan Ecological Seepage Situation v. Weinberger*, 707 F. Supp. 1182, 1196 (E.D.Ca. 1988), *vacated and remanded on other grounds*, *M.E.S.S. v. Perry*, 47 F.3d 325 (9th Cir. 1995), *cert. denied*, 516 U.S. 807 (1995) (where the Court found that discharges to groundwater could be regulated under the Act if "discharges from the waste pits have an effect on surface waters of the United States" and it could be established that the groundwater was "naturally connected to surface waters that constitute 'navigable waters' under the Clean Water Act").

conclude, based on the scientific evidence, that "all adjacent waters should be jurisdictional by rule because the discharge of many pollutants (such as nutrients, petroleum wastes, and other toxic pollutants) into adjacent waters often flow into and thereby pollute the traditional navigable waters, interstate waters, and the territorial seas." Therefore, "adjacent waters, as defined in the proposed rule, "are likely, in the majority of cases, to perform important functions for an aquatic system incorporating navigable waters." *Rapanos* at 781-82. 79 Fed. Reg. at 22210.

A. The Agencies' proposal to revise the existing "adjacent wetlands" jurisdictional category to include "adjacent waters" provides additional clarity and is scientifically and legally sound.

The agencies propose to revise the existing "adjacent wetlands" jurisdictional category to be the "adjacent waters" category in order to include not only adjacent wetlands but also "ponds, lakes, and similar water bodies that provide similar functions which have a significant nexus to traditionally navigable waters, interstate waters, and the territorial seas." These non-wetland adjacent waters have typically been considered "waters of the U.S." in the past, certainly as "other waters" prior to the 2001 *SWANCC* decision. *See* 33 CFR 328.3 (a)(3); 79 Fed. Reg.22207. As the agencies note, adjacent wetlands, oxbow lakes and adjacent ponds are "integral parts of stream networks because of their ecological functions and how they interact with each other, and with downstream traditional navigable waters, interstate waters, or the territorial seas." 22209.

Together these waters are "an integrated ecological system, and discharges of pollutants, including discharges of dredged or fill material, into these components of that ecological system, must be regulated under the CWA to restore and maintain the chemical, physical, and biological integrity of these waters." 79 Fed. Reg. at 22210; *see also*, 22260 *citing* 42 FR 37128, July 19, 1977 ("The regulation of activities that cause water pollution cannot rely on …artificial lines … but must focus on all waters that together form the entire aquatic system….").

The agencies' adjacent waters proposal is supported by the Connectivity Report and its Peer Review Report, the scientific literature, as well as by the agencies' "scientific and technical knowledge and practical expertise" regarding the ecological connectivity of these waters to TNWs, IWs, and the territorial seas. 79 Fed. Reg. at 22207. Again, the draft Connectivity Report concluded that: *"[w]etlands and open-waters* in landscape settings that have bidirectional hydrologic exchanges with streams or rivers (e.g., *wetlands and open-waters* in riparian areas and floodplains) are physically, chemically, and biologically connected with rivers" through multiple processes, and that they "serve an important role in the integrity of downstream waters because they also act as sinks by retaining floodwaters, sediment, nutrients, and contaminants that could otherwise negatively impact the condition or function of downstream waters." *Connectivity Report* at 1-3. The SAB Connectivity Peer Review Report supports this conclusion at 5 concluding that there is strong scientific support for the overall conclusion that *"bidirectional" wetlands and waters in floodplain settings* are physically, chemically, and biologically connected with rivers through multiple pathways. It is consistent with the CWA, the Supreme Court decisions, the best available science, and the agencies scientific and technical expertise. 79 Fed. Reg. at 22210.

B. The agencies' definition of "neighboring," "floodplain," and "riparian area" to support and clarify the existing definition of adjacent is scientifically and legally sound.

We support the agencies' continued reliance on the existing definition of "adjacent," meaning "bordering, contiguous or neighboring." Under the Corps' existing rules (and related case law and agency precedent), "[w]etlands separated from other "waters of the United States by man-made dikes or barriers, natural river berms, beach dunes and the like are 'adjacent wetlands.'"33 CFR 328.3(c). We concur with the agencies' emphasis that the presence of man-made barriers as well as natural river berms and beach dunes do not sever the hydrological and ecological interconnections between wetlands and adjacent jurisdictional waters. 79 Fed. Reg. 22207, 22210, 22243-46. [155] While this key factor in determining adjacency is explicit in the agencies' long-standing regulatory definition of "adjacent," it has at times been overlooked in the field, leading to inconsistent jurisdictional determinations and compromised protections for important wetland systems.[156] Clarification and documentation of the legal and scientific basis for this important principle of adjacency provide increased certainty and better protection for important wetland systems. Extending the existing adjacent wetlands term to non-wetland adjacent waters is fully consistent with the science and law as noted above.

We support the agencies' proposal to clarify the term "adjacent" by defining "neighboring" as "waters located within the riparian area or floodplain of a water identified in paragraphs (a)(1) through (a)(5) of this section …." See 33 CFR 328.3(c)(2); 22207. We agree that one *sufficient* condition of adjacency should be location within a riparian area or floodplain. And we generally support the agencies' proposal to define the lateral reach of the term neighboring by proposing science-based definitions of "riparian area" and "floodplain" for purposes of defining neighboring and adjacency. 79 Fed. Reg. at 22207.

We appreciate the agencies' clear statements limiting the definition of "adjacent waters" to the *waters located within* the riparian area or floodplain – not the entire riparian area or floodplain which may include both upland areas as well as wetlands or open waters. *See* 79 Fed. Reg. at 22207 ("Absolutely no uplands located in 'riparian areas' and 'floodplains can ever be 'waters of the United States' subject to jurisdiction of the CWA."). With that important clarification, we support the agencies' definition of riparian area to mean: "an area bordering a water where surface or subsurface hydrology directly influence the ecological processes and plant and animal community structure in that area…." *Id.*

Similarly, we generally support the agencies' science-based definition of "floodplain" to mean "an area bordering inland or coastal waters that was formed by sediment deposition from such water under present climatic conditions and is inundated during periods of moderate to high

[155] Courts have confirmed that severances of surface hydrological connectivity do not defeat jurisdiction or adjacency. In *Healdsburg*, the overtopping of a levee separating the pond and wetland from the nearby river were rare events and most hydrologic connection was subsurface. *See Healdsburg*, 496 F.3d at 1000. Additionally, the Federal Appeals Court for the Eleventh Circuit found that, "[M]an-made dikes and barriers separating wetlands from other waters of the United States *do not defeat adjacency*." *Banks,* 115 F.3d. at 921 (emphasis added) (citations omitted). In *United States v. Tilton*, the Eleventh Circuit also found jurisdictional existed over wetlands that were separated from an adjacent river by an earthen berm at least thirty feet wide. 705 F.2d 429.

[156] *See, e.g.,Courting Disaster* at 13 and 20.

water flows." *Id*. We agree with Ducks Unlimited that the reference to *"formed by sediment deposition from such water under present climatic conditions…."* may warrant clarification to ensure that it does not infer "current land use conditions." Recent landscape alterations, including levee construction and extensive land use change, have in many cases changed the height and frequency of flooding in and around many historic floodplains.

1. *Efforts to further clarify the definition of "floodplain" must be scientifically sound and not place undue emphasis on geographic proximity.*

We recognize – as do the agencies – that while reliance on "best professional judgment" will often lead to sound determinations, the preamble guidance for determining the extent of the floodplain leaves considerable uncertainty. We agree that additional guidance is necessary to provide greater clarity and certainty to the public, and better guidance to the regulatory staff who will be applying the rule in the field. The agencies' proposal acknowledges the variability in the size of the floodplain and seeks comment on whether the rule text itself should provide greater specificity regarding "how the agencies will determine if a water is located in the floodplain of a jurisdictional water." 79 Fed. Reg. 22209.

We urge the agency to consider the Connectivity Report,[157] the SAB Connectivity Peer Review Report and the science-based recommendations offered during the public comment period in considering additional specificity that is scientifically sound. We consider the agencies' reference to a *"10 to 20 year flood interval zone"* to be a relatively high frequency flood zone that is far too narrow to reflect the actual floodplain in many if not most circumstances. This narrow floodplain reference is inconsistent with the scientific literature and analysis in the draft Connectivity Report and the SAB Connectivity Peer Review Report, including the Connectivity Report's definition of floodplain as an area "inundated during moderate to high flows."[158] We support the proposed rule definition's use of the phrase, *"is inundated during periods of moderate to high flows,"* and we expect something more on the order of 100 years to be a more reasonable approximation of "high flows," especially given the increasing frequency of large floods in many areas and the increasing flood damage costs and loss of life that are incurred in conjunction with these floods.

We do not, however, support the use of existing flood insurance or other flood zone maps to define floodplain limits in most cases because it is our understanding that these are unavailable in many areas and are not accurate or up to date in others. Instead, we agree with Ducks Unlimited's 2014 Rule Comments supporting the use of more objective, science-based surrogate criteria such as soil classifications. Given the definition's reference to the central element of *"sediment deposition,"* the agencies should consider elements of soil and/or geologic characterizations that could serve as a surrogate for helping to narrow the understanding and/or definition of floodplains for purposes of this rule.

It is important that the agencies' final definition of floodplain be premised on ecological function rather than geographic proximity. As a 2002 Corps guidebook for the Northern Rockies states, "It cannot be overemphasized … that the wetlands and the ecological functions they provide are

[157] *See, e.g.,* Draft Connectivity Report at Appendix A-5 (Definition of floodplain).
[158] *Id.*

inextricably embedded within the context of the floodplain mosaic."[159] Another Corps report confirms that the Upper Yellowstone River drainage has many wetland mosaic complexes in the floodplain.[160]

The federally endangered razorback sucker of the Colorado River Basin is one example of an aquatic species that moves between wetlands and rivers during different life-stages:

> To complete its life cycle, the razorback sucker moves between adult, spawning, and nursery habitats. Spawning occurs during high spring flows when razorback sucker migrate to cobble bars to lay their eggs. Larvae drift from the spawning areas and enter backwaters or floodplain wetlands that provide a nursery environment with quiet, warm, and shallow water.
>
> Research shows that young razorback sucker can remain in floodplain wetlands where they grow to adult size. As they mature, razorback sucker leave the wetlands in search of deep eddies and backwaters where they remain relatively sedentary, staying mostly in quiet water near the shore.[161]

Courts have also found that ecological factors can serve to establish adjacency. For instance, in *Healdsburg*, the Ninth Circuit Court of Appeals found a significant nexus existed between the wetlands and pond area at issue and the nearby navigable river based on the ecological considerations. The court noted that "[t]he Pond and its wetlands support substantial bird, mammal and fish populations, all as an integral part of and indistinguishable from the rest of the Russian River ecosystem…. As the district court observed, these facts make Basalt Pond indistinguishable from any of the natural wetlands alongside the Russian River that have extensive biological effects on the River itself."[162] Similarly, in *Cundiff*, the District Court,in a decision upheld by the Sixth Circuit Court of Appeals, noted "habitat support for plant and wildlife species" and impacts to "aquatic food webs" as justifying the existence of a significant nexus between wetlands and a downstream navigable water.[163] Additionally, prior to *SWANCC*, in *Tilton*, the Eleventh Circuit Court of Appeals upheld jurisdiction noting that the wetlands provided important functions such as offering habitat for a diverse array of wildlife, producing food for the food chain, filtering upland runoff before such runoff entered other waters, serving as a buffer for storm runoff, and storing storm water and thus preventing flooding damage from occurring.[164]

[159] Hauer et al, A Regional Guidebook for Applying the Hydrogeomorphic Approach to Assessing Wetlands Functions of Riverine Floodplains in the Northern Rocky Mountains, ERDC/EL TR-02-21 at 11 (2002), *available at* http://el.erdc.usace.army.mil/elpubs/pdf/trel02-7.pdf.
[160] U.S. Army Corps of Engineers, Wetlands Regulatory Assistance Program, "Upper Yellowstone River Hydrogeomorphic Functional Assessment for Temporal and Synoptic Cumulative Impact Analyses," ERDC TN-WRAP-01-03 (2001).
[161] WRA 2014 Rule Comments, *citing* Upper Colorado River Endangered Fish Recovery Program, Razorback Sucker, http://www.coloradoriverrecovery.org/general-information/the-fish/razorback-sucker.html (last visited Oct. 8, 2014). "Juvenile razorback suckers have been collected in recent years from Old Charley Wash, a wetland adjacent to the Green River." U.S. FISH & WILDLIFE SERVICE, FINAL PROGRAMMATIC BIOLOGICAL OPINION ON THE *MANAGEMENT PLAN FOR THE ENDANGERED FISHES IN THE YAMPA RIVER BASIN* 30 (2005) (internal citation omitted).
[162] *Healdsburg*, 496 F.3d at 1001.
[163] *U.S. v. Cundiff*, 480 F. Supp. 480, 495 (W.D. Ky. 2007), *aff'd*, 555 F.3d. 200 (6th Cir. 2009).
[164] *Tilton*, 705 F.2d at 431 n.1.

2. *The Agencies' proposal defining "neighboring" to include waters with hydrological connections in determining adjacency is scientifically and legally sound.*

We support the agencies' proposed definition of "neighboring" to include waters located outside of the floodplain or riparian area of a tributary that are connected with such a tributary by a "shallow subsurface hydrologic connection or confined surface hydrologic connection to such a jurisdictional water." *See* 33 CFR 328.3(c)(2); 79 Fed. Reg. at 22207-22208.

Confined surface connections are "permanent, intermittent or ephemeral surface connections through directional flowpaths, such as (but not limited to) swales, gullies, rills, and ditches." 79 Fed. Reg. at 22208. Shallow subsurface hydrologic connections are described as "lateral water flow through a shallow subsurface layer, such as can be found, for example, in steeply sloping forested areas with shallow soils, or in soils with a restrictive layer that impedes the vertical flow of water, or in karst systems, especially karst pans." *Id*.

The agencies explain that both confined surface and shallow subsurface connections are "forms of direct hydrologic connections between adjacent waters and (a)(1) through (a)(5) waters," and propose that [w]aters, including wetlands, determined to have a shallow subsurface hydrologic connection or confined surface hydrologic connection to an (a)(1) through (a)(5) water would also be a "waters of the United States" by rule as adjacent waters falling within the definition of "neighboring.'" *Id.* at 22207.

Recognition of these hydrological connections between wetlands and other waters and "bordering, contiguous, or neighboring" jurisdictional waters is warranted by the scientific literature and resource management experience, as well as "the Act's text, structure, and purpose," and Justice Kennedy's concurring opinion in *Rapanos*.[165]

Also important is the clarification that the shallow subsurface connections are distinct from deeper groundwater connections in that "the former exhibit a direct connection to the water found on the surface in wetlands and open waters …. and "[w]hile they may provide the connection establishing jurisdiction, these shallow subsurface flows are not 'waters of the U.S.'" 79 Fed. Reg. at 22208. Again, this is a scientifically sound principle in relation to the purposes of the CWA. [166]

[165] *See, e.g.,* 79 Fed. Reg. at 22241-43; *Connectivity Report* at 1-7 to 1-14 (The scientific evidence also demonstrates that shallow groundwater connections serve as hydrologic connections between surface waters and should be considered in assessing connectivity and effects on downstream waters.). *See also, Rapanos, supra,* 547 U.S. 759, 776 (J. Kennedy concurring opinion; *Northern Cal. River Watch v. City of Healdsburg*, 496 F.3d 993, 997-1001 (9th Cir. 2007) (constant ground water flow between river and pond makes pond jurisdictional under 33 C.F.R. § 328.3(b)); *Idaho Rural Council v. Bosma,* 143 F. Supp. 2d 1169, 1180 (D. Id. 2001) ("[T]he interpretive history of the CWA only supports the unremarkable proposition with which all courts agree – that the CWA does not regulate 'isolated/nontributary' groundwater which has no effect on surface water. It does not suggest that Congress intended to exclude from regulation discharges into hydrologically connected groundwater which adversely affect surface water. For these reasons, the Court finds that *the CWA extends federal jurisdiction over groundwater that is hydrologically connected to surface waters that are themselves waters of the United States*.") (emphasis added) (citations omitted).

[166] *See*, *Healdsburg*, 496 F.3d at 1000 (citing to underground hydrologic connections as a basis for establishing a significance nexus between two bodies under Justice Kennedy's standard); *United States v. Banks*, 115 F.3d 916,

3. *The Agencies' consideration of options for additional precision in defining "neighboring" should be informed by science and should not place undue emphasis on geographic proximity to the floodplain or tributary.*

While we generally support the proposed adjacency definition, we challenge the agencies' emphasis on physical proximity in determining adjacency. The ecological interconnections that demonstrate adjacency are based on wetland functions that are, at most, indirectly related to physical proximity. Physical adjacency, like isolation, is largely a legal construct and an artificial distinction not grounded in hydrology or aquatic ecology.

We respect the agencies' effort to provide additional precision in order to reduce uncertainty "as to whether a particular water connected through confined surface or shallow subsurface hydrology is an 'adjacent' water." However, the agencies must not place undue emphasis on geographic proximity at the expense of waters that clearly function as part of the aquatic system. *See*, *e.g.,* 79 Fed. Reg. at 22208 *citing* 42 FR 37128, July 19, 1977. We urge the agencies to carefully consider the scientific literature, including the SAB Connectivity Peer Review Report, the draft Connectivity Report, and the agencies' Appendix A Science Summary, as well as the additional scientific literature and analysis submitted during the public comment period, as it considers its options for increased clarity.

More specifically, we believe the scientific literature supports the conclusion that "all waters connected through a shallow subsurface hydrologic connection or confirmed surface hydrologic connection" have at least the potential to have more than an insubstantial influence on the physical, chemical, and biological integrity of tributaries "regardless of distance" and therefore should be found jurisdictional as adjacent waters. *See* 79 Fed. Reg. at 22207-08, 22241-43; *Connectivity Report* at 1-7 to 1-14 (The scientific evidence also demonstrates that shallow groundwater connections serve as hydrologic connections between surface waters and should be considered in assessing connectivity and effects on downstream waters.). **Therefore, we strongly oppose the following proposed options to the proposed rule described at 22208-09 as clearly inconsistent with the scientific literature and the goals of the CWA:**

921 (11th Cir. 1997) (finding that wetlands that were at least one half mile from navigable waters were jurisdictional due to a hydrologic connection that "was primarily through groundwater, but also occurred through surface water during storms"); *United States v. Tilton*, 705 F.2d 429 (11th Cir. 1983) (finding that wetlands with rare surface water connections, but demonstrated ecological and subsurface hydrological connections, were jurisdictional); *see also*, *Idaho Rural Council v. Bosma,supra, note 164Quivira v. EPA*, 765 F.2d 126 (10th Cir. 1985) (arroyo with continuous groundwater connection and occasional surface water connection to downstream jurisdictional waters protected under the Act); *Washington Wilderness Coalition v. Hecla*, 870 F. Supp. 983, 990 (E.D. Wash. 1994) ("[S]ince the goal of the CWA is to protect the quality of surface waters, any pollutant which enters such waters, whether directly or through groundwater, is subject to regulation by NPDES permit."); *Sierra Club v. Colorado Refining Company*, 838 F. Supp. 1428, 1434 (D. Colo. 1993) (where the Judge stated that, "I conclude that the Clean Water Act's preclusion of the discharge of any pollutant into 'navigable waters' *includes such discharge which reaches 'navigable waters' through groundwater*.") (emphasis added) (citations omitted); *McClellan Ecological Seepage Situation v. Weinberger*, 707 F. Supp. 1182, 1196 (E.D.Ca. 1988), *vacated and remanded on other grounds*, *M.E.S.S. v. Perry*, 47 F.3d 325 (9th Cir. 1995), *cert. denied*, 516 U.S. 807 (1995) (where the Court found that discharges to groundwater could be regulated under the Act if "discharges from the waste pits have an effect on surface waters of the United States" and it could be established that the groundwater was "naturally connected to surface waters that constitute 'navigable waters' under the Clean Water Act").

- We oppose "asserting jurisdiction over adjacent waters *only if they are located in the floodplain or riparian zone of a jurisdictional water."*

- We oppose "considering only confined surface connections but not shallow surface connections for purposes of determining adjacency."

- We oppose establishing *by rule* "specific geographic limits for using shallow subsurface or confined surface hydrologic connections as a basis for determining adjacency…."

- We oppose adding specific language to the "neighboring" definition that waters connected by shallow subsurface or confined surface hydrologic connections to an (a)(1) through (a)(5) water must be geographically proximate to the adjacent water.

We note that the proposed rule currently recognizes that the agencies' longstanding definition of adjacency "includes an element of reasonable proximity." *Id.* at 22208. The agencies' proposal currently and appropriately explains this element of reasonable proximity as:

> … informed by the scientific literature, supplemented by agency practice, which leads to a recognition of the role of hydrologic connections in supporting a significant chemical, physical, and biological relationship between waters bodies, but this relationship can be reduced as the distance between water bodies increases. The agencies recognize that in specific circumstances, the distance between water bodies may be sufficiently far that even the presence of a hydrologic connections may not support an adjacency determination.

Any further limitations on adjacency based on geographic proximity should be developed through tailored guidance, consistent with the scientific evidence.

C. The agencies should determine adjacency on the basis of functional relationships, not proximity to (a)(1) through (a)(5) waters.

As noted above, defining and determining adjacency based on geographic proximity alone is not consistent with the scientific literature or the goals of the CWA. Instead, the adjacency definition and preamble should focus on adjacency based on functional relationships. The SAB advised as much in their September 30 letter to the Administrator regarding the scientific basis for the proposed rule:

> [I]mportantly, the available science supports defining adjacency or determination of adjacency on the basis of *functional relationships, not on how close an adjacent water is to a navigable water*. The Board also notes that local shallow subsurface water sources *and regional groundwater sources* can strongly affect connectivity. Thus, the Board advises the EPA that adjacent waters and wetlands should not be defined solely on the basis of geographical proximity or distance to jurisdictional waters. *(emphasis added)*.

We agree with science-focused comments submitted by Ducks Unlimited that "functionally

'adjacent wetlands' can be physically distant from navigable waters (just as a jurisdictional surface tributary may be located many miles upstream of a navigable water), yet its direct functional linkage to (i.e., its significant nexus with) the navigable water for purposes of maintaining the integrity of the navigable water would remain the central element of the jurisdictional decision."

The scientific evidence for this position includes the following:[167]

- Simulation of regional groundwater flow systems in Stutsman and Kidder counties, North Dakota, portrayed lateral movement of groundwater flow over 27 km that discharge into Pipestem Creek (Winter and Carr 1980).

- Novacek (1986) stated that sandhills and associated wetlands in Nebraska (including wet meadows) are important to water table and aquifer recharge, with the region containing five principal drainage basins that all ultimately empty into the Platte and Missouri rivers, thus creating a significant nexus between wetlands and navigable waters, even though the wetlands were not in physical proximity to the jurisdictional waters.[168]

- There exists a significant nexus between physically non-proximate waters and traditional navigable waters is Nebraska's Platte River and its tributaries in Colorado (South Platte River) and Wyoming (North Platte), an area covering 23,000 sq. mi. The Platte River provides important habitat for four federally listed threatened and endangered species. Large amounts of surface water have been diverted from this river system for irrigation and other purposes all along the system, and the effects of this diversion on the river have been significant enough to cause the Platte River in Nebraska to occasionally run dry (e.g., in 2003).

- Tiner et al. (2002) indicated that most sandhill wetlands are interconnected with the local groundwater and the agriculturally important Ogallala, or High Plains, aquifer. Furthermore, Weeks and Gutentag (1984) stated that groundwater from this aquifer discharges naturally into flowing streams and springs, and that the aquifer and valley-fill deposits and associated streams comprise a stream-aquifer system that links the High Plains aquifer to surface tributaries of the Platte, Republican and Arkansas rivers.

We agree with Ducks Unlimited that while physical proximity is an important component of adjacency, distance should not override reasonable evidence of the functional connections that provide for a significant nexus. We strongly support the SAB's recommendation that the definitions associated with adjacent waters be revised to recognize the scientifically demonstrated functional relationships that provide for a significant nexus.[169] We share the concern about the agencies' statement that, *"a determination of adjacency based on shallow subsurface or confined surface hydrologic connection outside the riparian area of*

[167] Excerpted from Ducks Unlimited 2014 Rule Comments.

[168] This example also demonstrates that "adjacent waters" and "geographically isolated" waters represent a continuum as opposed a simple dichotomy.

[169] SAB Rule Report, *supra,* at 2-3.

floodplain requires clear documentation." Depending upon its application, the "clear documentation" requirement may go beyond what is available for field jurisdictional determinations, and may go beyond Justice Kennedy's expectation that the regulation *"rests upon a reasonable inference of ecologic interconnection."* 547 U.S. at 780.

We recognize there is variability across ecoregions and landscapes such that there are some ecoregions or landscapes in which the soils, geology, and other characteristics would lead to the reasonable inference that functional adjacency would not extend very far from the jurisdictional water. We concur with Ducks Unlimited that:

> [t]his variability in the relationship between distance and the reasonable inference of a significant nexus provides another indication of the benefits of doing *a priori* significant nexus assessments of at least some of the Nation's key ecoregions. These *a priori* analyses would allow identification, by rule, of those ecoregions for which a presumption of significant nexus between its wetlands, in the aggregate, and other jurisdictional waters would be reasonable, and thereby also provide a greater degree of clarity, certainty, and predictability regarding CWA jurisdiction within those landscapes.

D. The Agencies' proposed "adjacent waters" provision improves the term's clarity by deleting the confusing phrase "other than waters that are themselves wetlands."

We support the agencies' proposal to delete from the existing "adjacent wetlands" provision the parenthetical phrase "other than waters that are themselves wetlands." 79 Fed. Reg. at 22209. The application of this phrase has always been unclear and confusing in practice and, as the agencies note, has at times been applied to exclude from CWA jurisdiction wetlands that were in fact adjacent to tributaries. *Id.* The proposed definition of adjacent waters provides a much clearer and scientifically sound basis for determining jurisdiction based on adjacency to tributaries.

E. The 2003 *SWANCC* and 2008 *Rapanos* guidances have put millions of adjacent wetland acres at risk and must be replaced with a scientifically and legally sound waters of the U.S. rule.

The 2003 and 2008 Guidances, and their application in the field, have put millions of adjacent wetlands at risk through a combination of flawed guidance and bad calls in the field. Here are just a few examples:

Forested wetlands, Coastal South Carolina – Corps determinations in 2002, 2003, and 2005 each found this 32-acre wetland site "isolated," with no surface water connection to nearby tributaries, and therefore not subject to Clean Water Act jurisdiction due to *SWANCC* and the *SWANCC* Guidance.[170] It was not until a citizen suit challenged the Corps' 2005 non-jurisdictional

[170] Charleston District, Army Corps of Engineers, Memorandum to Assert Jurisdiction for SAC 2005-41222-3JI (f.k.a. 87-2005-0575-3 Spectre LLC) (November 1, 2010) (2010 Spectre LLC Jurisdiction Memorandum) at 1. *See also,* Earthjustice, et al. *Courting Disaster: How the Supreme Court Has Broken the Clean Water Act and Why Congress Must Fix It.* (April 2009), at 5-6; Connolly, Kim D., *The Effects of the SWANCC* and *Rapanos* Supreme

determination that the Corps and EPA conducted a series of field inspections that confirmed that the wetlands site was, in fact, adjacent to a tributary that ultimately flowed to a TNW, Collins Creek. In November 2010, the Corps ultimately found this adjacent wetland jurisdictional, documenting that this wetland, in combination with similarly situated adjacent wetlands identified along the tributary reach, had a significant nexus with a TNW-Collins Creek. This 2010 significant nexus analysis confirmed jurisdiction despite the fact that the aggregation of wetlands was artificially limited to the stream reach due to the constraints of the existing flawed guidance.[171]

Forested wetlands, Coastal Georgia – Following *SWANCC,* the Corps accepted a mining company assertion that it did not a permit to destroy over 300 wetland acres in the Satilla River basin near the Okefenokee Swamp because those wetlands were "isolated" from other wetlands by a dirt road. It was left to environmental groups to demonstrate that many of the wetlands drained into a working culvert that went under a dirt road and linked the 300 acres of wetlands to other waterways downstream. Only after months of communications and the threat of litigation did the Corps finally reverse its non-jurisdictional determination. [172] Careful implementation of the Corps' adjacency definition pursuant to this rule should prevent the wasted time and resources, as well as the potential wetland loss, associated with this flawed non-jurisdictional determination.

Sedge wetlands, Eastern Front Range, Colorado – In 2007, the Corps found "isolated" and non-jurisdictional a series of wetlands because they were geographically cut off from their historic Little Dry Creek drainage by a small low-level dam. This example is not an isolated one, but part of a pattern of similar non-jurisdictional determinations along the eastern front range.[173] "[O]ften the difference between wetlands receiving CWA protection or not depends on whether they abut a RPW or a TNW. If they do not, under current Corps practices, they likely will be designated non-jurisdictional *regardless of whether they may be in the same floodplain or drainage and providing many if not all of the same functions."* (emphasis added).[174] A functional approach to adjacency in the final rule should require a more careful consideration of these wetlands and their likely ground water recharge, flood flow retention, and wildlife connections within the floodplain and the watershed.

Adjacent wetland, West Tennessee – In 2007, the Corps found non-jurisdictional a wetland that existed "only feet" from the confluence of the Reelfoot, North Reelfoot, and Cane Creek streams

Court Rulings on South Carolina Waters, at 4-6 (2010) (prepared for National Wildlife Federation, Trout Unlimited, and Ducks Unlimited).

[171] *Id.* at 2-8.

[172] *Courting Disaster* at 13. *See also*, *Courting Disaster* at 20 *citing* EPA and Corps Memorandum to Assert Jurisdiction for SAS-2007-670 (February 12, 2008) (Agencies ultimately reversed non-jurisdiction determination for barrier island interdunal freshwater wetlands later found to be part of a connected interdunal system and hydrologically connected to the tidal Julienton and Little Mud Rivers.)

[173] Buechler, Dennis, *Five Case Studies on the Effects of the SWANCC and Rapanos Supreme Court Rulings on Colorado Wetlands and Streams*, at 19-22 (prepared for National Wildlife Federation, Trout Unlimited, and Ducks Unlimited) (February 2010).

[174] *Id.* at 22.

that flow through the Reelfoot National Wildlife Refuge.[175] "Given the proximity of the contested wetland to the stream, the destruction of the wetland site and loss of the wetland's water quality functions could significantly impact the stream and the refuge by introducing pollutants into the waterways."[176]

IX. The Final Rule should define categories of non-adjacent waters as "waters of the United States" where the scientific evidence of connectivity satisfies Justice Kennedy's Significant Nexus Test.

A. The proposed rule significantly limits the scope of jurisdictional "other waters," is far more restrictive than the limits set by the Supreme Court, ignores the scientific evidence of connectivity, and runs counter to the goals of the Clean Water Act.

As the agencies recognize, the "other waters," (a)(3) provision of the regulations remains in effect. The SWANCC decision specifically addressed only the presence of migratory birds as a basis for asserting jurisdiction, and not the validity of the (a)(3) provisions generally.[177] It is simply incorrect to assert the *SWANCC* Court held that any *category* of waters, other than the specific ponds at issue in the case, was outside of the government's Clean Water Act jurisdiction. The *SWANCC* Court merely held the Corps could not assert jurisdiction over waters based solely on the migratory bird test. The Court did *not* hold isolated waters could not be regulated under the Clean Water Act when there are other bases for jurisdiction.

We agree with the agencies' basic premises that "current regulations assert jurisdiction more broadly," than the proposed rule, and that the Supreme Court decisions in *SWANCC* and *Rapanos* placed limits on the scope of "other waters" that may be determined to be jurisdictional.79 Fed. Reg. at 22212. As the agencies note, Justice Kennedy explained the Court's *SWANCC* decision, and the limits on the scope of "other waters" it articulated, as follows: "In *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers,* 531 U.S. 159 (2001) *(SWANCC)*, the Court held, under the circumstances presented there, that to constitute 'navigable waters' under the Act, a water or wetland must possess a 'significant nexus' to waters that are or were navigable in fact or that could reasonably be so made." *Id. citing* 547 U.S. at 759.

The agencies properly read *SWANCC* and Justice Kennedy's concurring opinion in *Rapanos* as supporting the application of Kennedy's significant nexus standard to the "other waters" included in the agencies' long-standing definition of "waters of the U.S." and at issue in *SWANCC*.[178] Justice Kennedy, in his concurring opinion in *Rapanos,* stressed that hydrologically separated waters can collectively filter pollutants, prevent or reduce flooding and perform many other functions that may establish a "significant nexus" to other waters covered by the Act.[179] It follows from Justice Kennedy's *Rapanos* concurrence, when read in conjunction with the

[175] Siedschlag, Greg, et al, *Five Case Studies on the Effects of the SWANCC and Rapanos Supreme Court Rulings on Tennessee Waterways*, at 9 (prepared for National Wildlife Federation, Trout Unlimited, and Ducks Unlimited) (January 2010).
[176] *Id.* at 10.
[177] *See* discussion of *SWANCC, supra, at* Section II.
[178] 33 C.F.R. § 328.3(a)(3); 40 C.F.R. § 230.3(s)(3); *see also* 40 C.F.R. § 122.2 ("waters of the U.S." (c)).
[179] *See* discussion of *SWANCC, supra, at* Section II.; *Rapanos, supra,* at 547 U.S. at 786.

Court's *SWANCC* decision, that Justice Kennedy would not dismiss protection of so-called isolated waters out-of-hand, but at the least protect those that have a significant nexus to TNWs and IWs.

We agree that if an "other water" is demonstrated to have a significant nexus to a TNW or IW, then it also (easily) satisfies the current regulatory requirement that the water is one "the use, degradation or destruction of which could affect interstate or foreign commerce." [180]

However, the agencies' proposal to require case-specific significant nexus determinations for all "other waters" goes far beyond the limits set by *SWANCC* and *Rapanos*, and ignores the scientific evidence in the record. 79 Fed. Reg. at 22212. This case-specific requirement for all "other waters" effectively creates a seriously flawed regulatory presumption that all "other waters" lack a significant nexus with TNWs, IWs, and territorial seas, and have no influence on the integrity of these waters. This presumption ignores the scientific evidence of connectivity that is in the rulemaking record.

For example, the SAB's review of the proposed rule finds:

> There is also adequate scientific evidence to support a determination that certain subcategories and types of 'other waters' in particular regions of the United States (e.g., Carolina and Delmarva Bays, Texas coastal prairie wetlands, prairie potholes, pocosins, western vernal pools) are similarly situated (i.e., they have a similar influence on the physical, biological, and chemical integrity of downstream waters and are similarly situated on the landscape) and thus could be considered waters of the United States. Furthermore, as the science continues to develop, other sets of wetlands may be identified as 'similarly situated.'
> SAB Rule Letter at 3.

As explained more fully below, there exist numerous categories of non-adjacent "other waters" that are "similarly situated," satisfy the significant nexus test, and warrant inclusion in the list of waters that are jurisdictional by rule.[181] And there is no basis in law or science for categorically

[180] *See e.g.,* Kennedy concurring opinion at 547 U.S. 782 *quoting Oklahoma ex rel Phillips* v. *Guy F. Atkinson Co*., 313 U.S. 508, 524-525 (1941)("[T]he exercise of the granted power of Congress to regulate interstate commerce may be aided by appropriate and needful control of activities and agencies which, though intrastate, affect that commerce"). Justice Kennedy also indicates that regulation of waters having significant nexus are well within the Congress's authority and waters that meet the significant nexus test avoid any federalism or constitutional concerns: In *SWANCC*, by interpreting the Act to require a significant nexus with navigable waters, the Court avoided applications-those involving waters without a significant nexus-that appeared likely, as a category, to raise constitutional difficulties and federalism concerns. *Rapanos*, 547 U.S. at 776.

[181] Most so-called isolated waters are currently regulated under the provision of Corps and EPA regulations that protect "other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce." *See*, *e.g*., 33 C.F.R. § 328.3(a)(3). Many waters, such as prairie potholes, covered under this provision have enormous impacts on the chemical, physical, and biological integrity of traditionally navigable waters and, when viewed collectively, clearly have a "significant nexus" to traditionally navigable waters. *See*, *e.g.*, United States Geological Survey, Northern Prairie Wildlife Research Center, *Prairie Basin Wetlands in the Dakotas: A Community Profile*, *available a*t

excluding some or all "other waters" from CWA jurisdiction absent proof that such other waters lack any more than a speculative or insubstantial effect on TNWs, IWs, or territorial seas.

1. *The single point of entry watershed is a reasonable basis for interpreting "in the region" for purposes of aggregating "other waters" to determine their collective effect on the nearest TNW, IW, or territorial sea.*

We agree with the agencies' science-based rationale for proposing the single point of entry watershed as a minimum "region" and basic scale at which to aggregate "other waters" to determine their collective effect on the nearest TNW, IW, or territorial sea. Watersheds are the logical starting point for defining a "region."79 Fed. Reg. at 22212. The "single point of entry" watershed is a reasonable, albeit in our view conservative, starting point for delineating the "region" in which similarly situated waters are to be identified and assessed.

Justice Kennedy's choice of the Gulf of Mexico's hypoxic zone as an example of the type of water quality issue that the CWA is intended to address should shed some light on the scale of the "region" that should be used to assess aggregate impacts. His example illustrates that a single point of entry watershed will in many cases be too small to appropriately and efficiently assess aggregate impacts of wetlands similarly situated within a region such that the objectives of clarity, certainty, and predictability are achieved. In many cases, the level of the ecoregion will likely be the best scale at which to examine many aggregated wetlands, such as the prairie potholes.

2. The single point of entry watershed approach should provide for more flexible application where region-specific science warrants.

We support the allowance for some flexibility in the use of watershed-based analyses by field staff. We believe that additional flexibility would in many cases be scientifically justified, would in those cases be consistent with Justice Kennedy's perspective on what constitutes a "region," would lead toward greater clarity and certainty, and would provide the basis for a much more effective and efficient process.

For example, we agree with Ducks Unlimited's suggestion that a combination of watersheds and physiographic or ecoregions be used to delineate groups of watersheds that could be scientifically viewed as sufficiently similar to constitute a "region."[182] In a significant number of situations, the "single point of entry" watershed to a TNW or IW will cause work, i.e., jurisdictional determinations, to be unnecessarily repeated for adjacent watersheds when the wetland, riverine, and other land use conditions for adjacent watersheds would be largely indistinguishable. We adopt here Ducks Unlimited's scientific observation that there are many instances in which a watershed at this single point of entry scale will be, in terms of key characteristics such as topography, soils, land use, and many of the characteristics of the watershed's wetlands and other water bodies, "very similar, and in some cases almost

http://www.npwrc.usgs.gov/resource/wetlands/basinwet/ (last modified Aug. 24, 2006) (describing the various important functions prairie potholes provide).

[182] *See* Ducks Unlimited 2014 Rule Comments.

indistinguishable, from neighboring watersheds." Ducks Unlimited 2014 Rule Comments *citing* Lorenz et al 2010. Ducks Unlimited offers the example of numerous neighboring single point of entry watersheds along the Red River of the North between North Dakota and Minnesota that "exhibit strong similarities in almost every respect." *Id.*

We agree with Ducks Unlimited's recommendation that the agencies review neighboring watersheds to determine if they are similar enough to the one at issue in a case-specific analysis of "other waters" to warrant aggregation of more than one watershed in conducting the analysis. *Id.* at 29. We agree that combining adjoining watersheds where they exhibit such strong similarities should lead to greater administrative efficiencies, improved clarity and certainty, and more scientifically sound significant nexus analyses.

We recognize the added efficiency of agency direction that if a significant nexus has been established for one water *in the watershed*, then other similarly situated waters *in the watershed* would also be found to have a significant nexus. This approach is consistent with Justice Kennedy's conclusion that "[w]here an adequate nexus is established for a particular wetland, it may be permissible, as a matter of administrative convenience or necessity, to presume covered status for other comparable wetlands in the region." [183]

We agree with Ducks Unlimited's analysis that it would be more efficient, more consistent, more certain, and at least as scientifically and legally sound to bundle very similar watersheds within a physiographic region or ecoregion where the science establishes strong similarities and treat them as a "region." This approach would allow for significant nexus determinations to apply across these multi-watershed regions rather than needlessly replicating them watershed-by-watershed despite their similarities. This would significantly increase the efficiency, and ultimately the certainty, of the review and permitting process.

3. *The agencies must reject and withdraw the 2008 Guidance's flawed and harmful stream segment approach to aggregation.*

The agencies' must reject and withdraw the 2008 Guidance's flawed stream segment limitation on the aggregation of wetlands and other waters in the watershed. While the scientific evidence in the record overwhelmingly demonstrates the cumulative significant impacts upper reach streams have on downstream water integrity,[184] the 2008 Guidance allows for aggregation of wetlands associated with a particular tributary,[185] defining tributary so narrowly that the scope of consideration will often be exceedingly small, especially in the upper reaches of the tributary

[183] *Id*. at 2249.
[184] *See*, *e.g.*, Meyer, J. L. et al., *Where Rivers Are Born: The Scientific Imperative for Defending Small Streams and Wetlands,* American Rivers and Sierra Club, publishers (Sept. 2003) *available at* http://www.americanrivers.org/site/DocServer/WhereRiversAreBorn1.pdf?docIDC=182 (describing in detail the important links between headwaters and downstream waters); Downing, Donna, Tracie-Lynn Nadeau, and Rose Kwok, *Technical and Scientific Challenges in Implementing Rapanos' "Water of the United States,"* American Bar Association, NATURAL RESOURCES AND ENVIRONMENT, 42, Vol. 22, No, 1, (Summer 2007) at 43 (stating, "The small size of headwater streams means that, in such waters, more water is in direct contact with the streambed and its associated subsurface flows (hyporheic zone), where most processing [to remove pollutants] takes place. Thus, headwaters as a category can have a disproportionate positive effect on the integrity of downstream waters.").
[185] Guidance, *supra*, at 7.

system. This approach has led to many waters being unprotected that would clearly be protected if a broader, and scientifically supported, view of aggregation of wetlands were used. For example, a report noted a study that found that in eight northeastern watersheds wetlands associated with the first order streams in those watersheds accounted for ninety percent of phosphorous removal in the watersheds.[186] The aggregate impact of those wetlands on downstream waters is clearly significant. However, wetlands associated with only one small first order headwater stream are likely to only account for a scintilla of such benefits, and their impacts on downstream waters would be much more likely to be found insubstantial in isolation.

In addition, the current crabbed approach to aggregation has made it excessively burdensome, expensive, and impractical to gather meaningful information on the impacts of wetlands associated with a small stream segment, or on a stream segment itself, in order to demonstrate the "significant nexus" such waters have to TNWs.

B. In categorizing waters as "similarly situated" the final rule should focus on the similar functions of non-adjacent water bodies in the region and less on proximity to TNWs, IWs, and territorial seas.

The agencies' proposed definition of "significant nexus" states that other waters, including wetlands:

> … are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a "water of the United States" so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section.
> 33 CRF 328.3 (c)(7).

We strongly agree with the agencies rationale for aggregation of similarly situated waters, based on Justice Kennedy's standard:

> Since the focus of the significant nexus standard is on protecting the chemical physical, and biological integrity of the nation's waters, the agencies propose to interpret the phrase 'similarly situated' in terms of whether the functions provided by the particular 'other waters' are similar and, therefore, whether such 'other waters' are collectively influencing the chemical, physical, or biological integrity of downstream waters. There are many functions of waters that might demonstrate a significant nexus, such as sediment trapping, nutrient recycling, pollutant trapping and filtering, retention or attenuation of flood waters, runoff storage, and provision of habitat. *See* 547 US at 775, 779-80. This approach is consistent not only with the significant nexus standard, but with the science of aquatic systems.
> 79 Fed. Reg. at 22261.

We question, however, the agencies' imposition of functional similarity and proximity requirements that seem more complicated, confusing, and more stringent than called for by

[186] Meyer, et al., *Where Rivers Are Born*, *supra*, at 14.

Justice Kennedy's use of the term "similarly situated." We agree with Ducks Unlimited that most wetlands in an appropriately sized and delimited 'region' will generally perform many of the same functions and overall, a scientifically valid and more efficient method of aggregating wetlands falling within the classification of 'other waters' would be to evaluate them all in a simple direct, comprehensive aggregation within the appropriate region. Ducks Unlimited 2014 Rule Comments at 27-28.

We also join Ducks Unlimited in objecting to the agencies' proposal to inject wetland density or proximity to a water of the U.S. as criteria for finding other waters to be "similarly situated" and therefore able to be considered in the aggregate for a case-specific significant nexus evaluation. *Id.* at 28. While function, proximity, and density are important factors for assessing the ultimate significant nexus with waters of the U.S., these factors are not central to the determination of which wetlands in a region qualify as being "similarly situated" and therefore eligible for aggregation. "Similarly situated" wetlands and waters should be categorized based on their ecological function, and not their physical proximity. Indeed, Justice Kennedy acknowledged as much: "Given the role wetlands play in pollutant filtering, flood control, and runoff storage, it may well be the absence of hydrologic connection (in the sense of interchange of waters) that shows the wetlands' significance for the aquatic system." 547 U.S. at 786.[187]

While the science reflects some correlation between aquatic function and distance, the degree and direction of that correlation is highly variable and not a reliable surrogate for a functional analysis. The SAB's Connectivity Peer Review Report recognizes as much in its critique of the draft Connectivity Report's limited analysis of the scientific evidence of connectivity with respect to non-floodplain wetlands and waters. SAB Connectivity Peer Review Report at 6. The SAB concludes that: "[t]he scientific literature provides ample information to support a more definitive statement (*i.e., numerous functions of non-floodplain waters and wetlands have been shown to benefit the physical, chemical, and biological integrity of downgradient waters*)." (*emphasis added*). *Id.* The SAB recommends that the EPA revise the conclusion to focus on what is supported by the scientific literature and articulate the specific knowledge gaps that must be resolved (e.g., degree of connectivity, *analyses of temporal or spatial variability*). *Id.* And the SAB recommends that the Final Connectivity Report's key findings concerning non-floodplain waters and wetlands should address: *the biological functions and biological connectivity of non-floodplain wetlands*; differences between natural and manmade wetlands; *the importance and temporal dynamics of spatial proximity as a determinant of connectivity; and the importance of cumulative or aggregate impacts of non-floodplain wetlands."* (*emphasis* added) *Id.*

As our summary of scientific evidence below and comments elsewhere in the administrative record document, we believe that there is a compelling scientific basis for treating as a group of "similarly situated" wetlands those wetlands and other waters that have similar characteristics and serve similar aquatic ecosystem functions in the same region.

[187] *See also,* 547 U.S. at 775 ("it may be the absence of an interchange of waters prior to the dredge and fill activity that makes protection of the wetlands critical to the statutory scheme.").

C. The agencies' definition of significant nexus is legally and scientifically sound.

We support the agencies' definition of significant nexus, which closely tracks Justice Kennedy's definition in his *Rapanos* opinion:

> The term significant nexus means that a water, including wetlands, either alone or in combination with other similarly situated waters in the region (i.e., the watershed that drains to the nearest water identified in paragraphs (a)(1)through (3) of this section), significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section. For an effect to be significant, it must be more than speculative or insubstantial…."
> 33 CFR 328.3 (c)(7); *See also*, 79 Fed. Reg. at 22213, 22262.

We agree, in particular, that Justice Kennedy used the term "significant" with respect to significant nexus to mean "more than speculative or insubstantial." 79 Fed. Reg. 22213 *citing Rapanos* at 547 U.S., at 780. We agree that Justice Kennedy remanded the *Carabell* and *Rapanos* cases because the agencies had not properly applied the controlling legal standard – whether the wetlands at issue had a significant nexus. We agree that Justice Kennedy concluded that "[m]uch the same evidence should permit the establishment of a significant nexus with navigable-in-fact waters…." And that he "was concerned that the evidence of connectivity in the *Carabell* case before the Court contained "conditional language" such as "potential ability" and "possible flooding" that "could suggest an undue degree of speculation." *Id*. 22262, *citing Rapanos* at 547 U.S., at 786.

As the agencies note, functions of waters that may demonstrate a significant nexus include "sediment trapping, nutrient recycling, pollutant trapping and filtering, retention or attenuation of flood waters, runoff storage, export of organic matter, export of food resources, and provision of aquatic habitat." 79 Fed. Reg. at 22213-22214. We agree that water functions demonstrating a significant nexus *in the absence of hydrologic connection* include retention of flood waters or pollutants that would otherwise flow downstream to the TNW, IW, or territorial sea. *Id. citing* 547 U.S. at 775. For scientific support for this point, the agencies cite to the Draft Connectivity Report at 5-26 *citing* A. Bullock and M. Acreman, "The Role of Wetlands in the Hydrological Cycle," *Hydrology and Earth System Sciences* 7:358-389 (2003)).

In considering the significance of a nexus between other waters and downstream waters, we urge the agencies to consider the nature of the pollutants (e.g., water soluble toxic chemicals) that could be discharged to a non-adjacent waterbody and could adversely impact downstream waters and water supplies. While it might take years for the pollutant to be carried through groundwater to a river, ultimately those toxic chemicals could threaten water supplies or otherwise degrade the chemical and biological health of a TNW or IW. *See* Ducks Unlimited's 2014 Rule Comments at 26-27 (illustrating the point with the example of a 2013 Exxon crude oil pipeline spill to wetlands and inlets adjoining a popular fishing and recreation lake where Exxon used the failure to prove "waters of the U.S." in an effort to avoid clean up liability).

We strongly agree with the agencies that a clear distinction must be drawn between the conditional language suggesting undue speculation that concerned Justice Kennedy and the very

different conditional language often used by scientists to avoid speculation; the "rigorous and precise language of science necessary when applying specific findings in another individual situation or more broadly across a variety of situations." Indeed, words like "potential" may have a meaning that is not speculative at all, but may mean definitively that an ability or capability (e,g., a wetland function) is expected to occur under designated circumstances. 79 Fed. Reg. at 22262.

In light of these crucial differences between the language of law and science, the final rule should explain more clearly how Justice Kennedy's legal language should be used in the science-based connectivity analysis that will be conducted for "other waters." We agree with the SAB recommendation that "the EPA clarify in its general communications and in the preamble to the final rule that 'significant nexus' is a legal term, not a scientific term." SAB Rule Letter at 4.

Along these lines, we encourage the agencies to include in the final rule preamble additional clear guidance regarding the extent to which the science related to wetland/water functions, (e.g., water storage, nutrient recycling, maintenance of base flows) can be generalized and applied to significant nexus analyses of "other waters" in ecoregions and/or watersheds beyond the one in which a particular set of research was conducted. We agree with and support the agencies preamble language on this subject at 79 Fed. Reg. 22214, including, in particular, the agencies statement that, "[s]uch information need not always be specific to the water whose jurisdictional status is being evaluated. Regional and national studies of the same type of waters or similarly situated waters can help to inform a significant nexus analysis as long as they are applicable to the water being evaluated."

D. The final rule should define categories of "other waters" as "waters of the United States" based on the current scientific evidence of connectivity.

Recognizing that the case-specific analysis of significant nexus is "resource intensive for the regulating agencies and the regulated community alike," the agencies solicit information about whether "current scientific research and data regarding particular types of waters are sufficient to support the inclusion of subcategories of types of 'other waters,' either alone or in combination with similarly situated waters, that can appropriately be identified as *always lacking or always having a significant nexus*."

In this regard, we strongly agree with the SAB that:

1. "There is [] adequate scientific evidence to support a determination that certain subcategories and types of 'other waters' in particular regions of the United States … are similarly situated … and thus could be considered waters of the United States."
2. "Furthermore, as the science continues to develop, other sets of wetlands may be identified as 'similarly situated'….; and
3. "[T]he science *does not support excluding groups of 'other waters' or subcategories thereof.*

SAB Rule Letter at 3.

Where the science *currently available* is not considered in particular instances (based on case-specific review) to be sufficient to establish significant nexus, those waters would remain non-jurisdictional unless and until a significant nexus finding is warranted by a future analysis with additional scientific support. However, that lack of information currently should not be the basis for *permanently excluding* such waters from jurisdiction.

We join Ducks Unlimited in recommending that during the finalization of the rule, the agencies evaluate categories of "other waters" likely to have a significant nexus on an ecoregional basis and, "based on the available science and judgments of wetland and hydrologic experts, determine for which regions of the country the wetlands that exist therein should be designated as jurisdictional by rule." Ducks Unlimited 2014 Rule Comments at 22. These *a priori* case-specific analyses should be conducted by the agencies for major subcategories of "other waters" in the course of finalizing the rule.

We agree with the Ducks Unlimited analysis that this approach has numerous advantages, including:

- Increased clarity and certainty for landowners and regulators with respect to "other waters" located within those regions found to be jurisdictional by rule.

- Significant reduction of future administrative burdens associated with resource intensive case-specific analyses for "other waters" located within those regions found to be jurisdictional by rule.

- Scientifically sound recognition that the *current* scientific literature clearly supports findings of significant nexus in some regions, but may not *currently* support such findings in other regions.

- Providing for the documentation and accumulation of science-based significant nexus determinations over time.

These *a priori* analyses, supported by the breadth and depth of the scientific literature and expertise currently available to the agencies, would allow identification, by rule, of those ecoregions for which a presumption of significant nexus between its wetlands, in the aggregate, and other jurisdictional waters would be reasonable, and thereby also provide a greater degree of clarity, certainty, and predictability regarding CWA jurisdiction within those landscapes. As the agencies recognize, "[t]here is substantial value to the regulated public and all other stakeholders involved in providing increased certainty regarding which "other waters" are jurisdictional and which are not."[188] Categorical significant nexus determinations fulfill the purpose of the proposed rule because it allows the agencies to "better address the clarity, certainty, and predictability goals of this rule."[189] Therefore, the agencies should make categorical significant nexus determinations where possible in order to ease the administrative burden of the proposed rule on all stakeholders involved.

[188] 79 Fed. Reg. at 22216.
[189] *Id.*

The importance of providing for science-based, categorical – versus case-by-case -- findings of connectivity for categories of non-floodplain, non-adjacent waters cannot be overstated. The scientific evidence for such categorical findings exists and should be accurately reflected in the final Connectivity Report and the final rule. Case-specific significant nexus analyses are extremely time and resource intensive and simply impractical in many cases. Realistically, if left to case-by-case analysis, many non-adjacent other waters -- and their demonstrated ecological influence on downstream waters -- will continue to be discounted, degraded, and destroyed. The integrity of downstream waters will suffer as a result.

We acknowledge that even with these eco-region-based significant nexus findings and inclusion of categories of "other waters" as jurisdictional by rule, the final rule cannot and will not assert jurisdiction as broadly as the current (a)(3) regulations do.

E. The agencies have the legal authority to make a categorical determination for subcategories of "other waters" when a majority of those waters meet the significant nexus standard.[190]

Agencies have the authority to determine that a subcategory of "other waters" is "waters of the United States" when a majority of the waters in that subcategory meet the significant nexus standard. In *Rapanos*, Justice Kennedy stated "through regulation or adjudication, the Corps may choose to identify categories of [waters] that are likely, in the majority of cases, to perform important functions for an aquatic ecosystem incorporating navigable waters."[191] In the proposed rule, the agencies stated "Justice Kennedy's significant nexus standard provides a framework for establishing categories of waters which are *per se* 'waters of the United States."[192]

In *Rapanos*, Justice Kennedy stated that the Court's reasoning in *Riverside Bayview* "could apply equally to wetlands adjacent to certain major tributaries."[193] Justice Kennedy therefore provided a direct example of how the agencies could make a categorical significant nexus determination, based on the Court's holding in *Riverside Bayview*. His statement in the next sentence—that agencies could make categorical significant nexus determinations—repeats and clarifies his original argument.

In addition, the agencies have a longstanding practice of creating categories of waters defined as "waters of the United States." After initially construing "waters of the United States" to cover only waters navigable in fact, in 1975 the Corps issued interim final regulations redefining "the waters of the United States" to include not only actually navigable waters but also tributaries of such waters, interstate waters and their tributaries, non-navigable interstate waters whose use or misuse could affect interstate commerce, and all "freshwater wetlands" that were adjacent to

[190] This subsection is excerpted from, and incorporated here by reference to, the Southern Environmental Law Center's 2014 Rule Comments.
[191] 547 U.S. at 780.
[192] *See* 79 Fed. Reg. at 22209
[193] *Id.* at 780 *citing Riverside Bayview Homes*, 474 U.S. 121, 126, 134 (1985) (Supreme Court upheld the Corps' determination that wetlands adjacent to navigable waters were categorically "waters of the United States" based on the Corps' "reasonable inference of ecological interconnection" between the waters and the adjacent wetlands. The Court deferred to the Corps' judgment, stating that the Corps "provide[d] an adequate basis for a legal judgment [contained in 33 C.F.R. § 323.2(a)] that adjacent wetlands may be defined as waters under the Act."

other covered waters.[194] In 1977, the Corps formally adopted this regulation in 33 C.F.R. § 323.2(a). The Corp's and the EPA's current definition of "waters of the United States"— located in 33 C.F.R. § 328.3(a)—includes the categories listed in the 1977 regulation, as well as an assortment of "other waters" including wetlands and intermittent streams, the use or destruction of which could affect interstate commerce. In *United States v. Riverside Bayview Homes, Inc.* the Court upheld the Corps' categorical determination that wetlands adjacent to navigable waters were "waters of the United States" because, *inter alia*, Congress had acquiesced to the Corps' categorical determination.[195]

Finally, the agencies have made such categorical determinations of significant nexus in sections (5) and (6) of the proposed rule. In section (5) of the proposed rule, the agencies created a category of "tributaries" that are jurisdictional *per se*. As stated by the agencies in the proposed rule, "[w]hile Justice Kennedy's opinion focused on adjacent wetlands in light of the facts of the cases before him, the agencies determined it was reasonable . . . to undertake a detailed examination of the scientific literature to determine whether tributaries, as a category . . . significantly affect . . . navigable waters, interstate waters, or territorial seas."[196] The agencies studied the physical, chemical and biological impact of tributaries and concluded tributaries "significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas."[197] Thus, the agencies concluded that "[t]ributaries . . . perform the requisite functions identified by Justice Kennedy for them to be considered, as a category, to be 'waters of the United States.'"[198]

The proposed rule clarifies that "small, intermittent, and ephemeral tributaries" meet Justice Kennedy's significant nexus standard because they are "essential components of the tributary network . . . when their functional contributions to the chemical, physical, and biological conditions of downstream waters are considered at a watershed scale."[199] Therefore, the agencies concluded that all "tributaries," including intermittent and ephemeral tributaries, are categorically "waters of the United States."[200]

Similarly, in section (6), the agencies concluded that "waters adjacent" to waters in sections (1) through (5) also have a "significant nexus" to traditional navigable waters and are categorically "waters of the United States." In *Rapanos*, Justice Kennedy approved the Corp's previous determination that "wetlands adjacent to traditional navigable waters are presumed to be jurisdictional waters" because the Corps previously made a "reasonable inference of ecological connection."[201] In the proposed rule, the agencies further concluded that adjacent waters have a significant nexus with territorial seas, impoundments, and tributaries because they are "likely, in

[194] 40 Fed. Reg. 31320 (July 25, 1975).
[195]474 U.S. 121, 136 (citing 123 Cong. Rec. 39209 (1977) (Congressional efforts to narrow the definition of "waters" were abandoned and, in the words of Senator Baker, the Corps "retain[ed] the comprehensive jurisdiction over the Nation's waters exercised in the 1972 Federal Water Pollution control Act")).
[196] 79 Fed. Reg. at 22259.
[197] *Id.* at 22201.
[198] *Id.* at 22204.
[199] 79 Fed. Reg. at 22206.
[200] *Id.* at 22201.
[201] 547 U.S. at 780.

the majority of cases, to perform important functions for an aquatic system incorporating navigable waters."[202]

For all of the reasons stated above, the agencies have the legal authority to make a determination that certain subcategories of "other waters" have a significant nexus to traditional navigable waters, interstate waters, and territorial seas.

F. The agencies should determine by rule that "other waters" are similarly situated in certain areas of the country.

We support the agencies' proposed alternative #1 approach of determining by rule that "other waters" are similarly situated in certain areas of the country. 79 Fed. Reg. at 22215. We support the agencies' proposal to use Level III ecoregions as the appropriate scale for assessing the degree to which "other waters" are similarly situated. *Id*. As the agencies note, "[t]he 'other waters in these ecoregions are within a contiguous area of land with relatively homogenous soils, vegetation, and landform (e.g., plain, mountain, valley, etc), and generally provide similar functions to the downstream traditional navigable waters, interstate waters, or the territorial seas." *Id.* Using this approach, the agencies would aggregate as similarly situated the "other waters" in a single point of entry watershed in these identified ecoregions for purposes of assessing significant nexus.

This approach is scientifically sound and consistent with Justice Kennedy's significant nexus test. This approach would reduce administrative burdens and increase clarity and certainty since, as the agencies note, they "expect that determining all 'other waters' within an ecoregion to be similarly situated would result in these 'other waters' being determined to have a significant nexus and being found jurisdictional."

We also support the agencies' list of 25 Level III regions as a good starting point for a list of ecoregions "where waters are similarly situated and aggregation could be used." These 25 ecoregions contain well-known, important wetland systems that should be prioritized for a priori examination in the course of finalizing the rule. As The SAB Rule Letter to EPA states:

> *...there is also adequate scientific evidence to support a determination that certain subcategories and types of 'other waters' in particular regions of the United States (e.g., Carolina and Delmarva Bays, Texas coastal prairie wetlands, prairie potholes, pocosins, western vernal pools) are similarly situated (i.e., they have a similar influence on the physical, biological, and chemical integrity of downstream waters and are similarly situated on the landscape) and thus are waters of the United States.*

The SAB's non-exclusive list of wetland systems above includes the following Level III ecoregions – all from the agencies' list of 25 -- that should be considered priorities for significant nexus analysis in the aggregate:

[202] 79 Fed. Reg. at 22210.

- 6 – Central California Foothills and Coastal Mountains
- 7 – Central California Valley
- 9 – Eastern Cascades Slopes and Foothills
- 34 – Western Gulf Coastal Plain
- 42 – Northwestern Glaciated Plains
- 46 – Northern Glaciated Plains
- 47 – Western Corn Belt Plains
- 48 – Lake Agassiz Plain
- 63 – Middle Atlantic Coastal Plain
- 65 – Southeastern Plains

The SAB's priority list of ecoregions includes several wetland systems of particular interest to our members and supporters as well as to Ducks Unlimited. These include the prairie pothole region, which is contained within ecoregions 42, 46, 47, and 48. The agencies' list of 25 high priority ecoregions includes additional ecoregions with important wetland systems, including the Nebraska Sandhills (ecoregion 44). We join Ducks Unlimited in urging the agencies to add ecoregion 44 to the above list of the highest priority ecoregions.

We also join Ducks Unlimited in suggesting that the agencies consider adding the following additional ecoregions to the larger list of 25 at 79 Fed. Reg. 22215:

- 25 – High Plains: This ecoregion contains the South Platte and portions of the Platte River system containing wetlands and other waters that are known to have shallow, subsurface connectivity with the rivers, and that are being managed to benefit maintenance of base flows in the rivers to benefit four federally listed threatened and endangered species as well as maintaining water supplies for irrigation and other interests.

- 53 – Southeastern Wisconsin Till Plains: This ecoregion, and the three that follow, adjoin the Great Lakes. In light of the high priority of these interstate/international waters, and the level of concern generated by an increasing number of high profile algal blooms and their relation to public health and welfare, as well as economic impacts, we suggest that these four Great Lakes ecoregions be added to the list.
- 56 – Southern Michigan / Northern Indiana Drift Plains
- 57 – Huron / Erie Lake Plains
- 61 – Erie Drift Plain

- 73 – Mississippi Alluvial Plain: This region was historically highly significant in terms of its wetlands and their importance to the Mississippi River and major tributaries. While many of the remaining wetlands should be found jurisdictional as adjacent waters, the remaining "other waters" in this ecoregion would most likely be considered similarly situated, and therefore suitable for aggregation for purposes of determining significant nexus.

We support the agencies' list of science-based factors used to develop the list of 25 ecoregions where waters are similarly situated and aggregation can be used. 79 Fed. Reg. at 22216. We agree that these factors appropriately relate to the primary question of whether waters in these ecoregions are similarly situated and subject to aggregation in determining significant nexus. However, we note that the list of factors, the draft Connectivity Report, and this proposed rule, seem to minimize biological factors and the biological component of the integrity of the Nation's waters. The SAB Connectivity Peer Review Report at 6 shared this concern and recommends more of an emphasis on biological factors in the Final Connectivity Report. Factor "f" at 79 Fed. Reg. 22216 relates to habitat function, but seems limited and not fully reflective of the scientific evidence of biological connectivity.

G. The agencies should determine by rule that certain "other waters" have a significant nexus and are jurisdictional by rule.

We also strongly support the alternative #2 proposal that the agencies determine by rule, based on the available science, that certain additional subcategories of "other waters" are similarly situated and have a significant nexus and are jurisdictional by rule rather than via the resource-intensive case-specific significant nexus analysis under paragraph (a)(7). 79 Fed. Reg. at 22216.

The SAB has already stated its position that the agencies have sufficient scientific evidence to support making certain subcategories of "other waters" jurisdictional by rule, including, but not limited to Carolina and Delmarva Bays, Texas coastal prairie wetlands, prairie potholes, pocosins, and western vernal pools:

> [T]here is also adequate scientific evidence to support a determination that certain subcategories and types of 'other waters' in particular regions of the United States (e.g., Carolina and Delmarva Bays, Texas coastal prairie wetlands, prairie potholes, pocosins, western vernal pools) are similarly situated (i.e., they have a similar influence on the physical, biological, and chemical integrity of downstream waters and are similarly situated on the landscape) and thus are waters of the United States.
> SAB Rule Letter.[203]

As noted previously, we strongly believe that finding subcategories of others waters to be jurisdictional by rule, where supported by the available science, will significantly decrease the administrative burdens, uncertainty, inconsistency, and wasteful litigation by significantly reducing the circumstances requiring a case-specific significant nexus analysis.

H. The agencies should not categorically exclude from aggregation or jurisdiction "other waters" that are not located in these identified ecoregions.

We disagree with the suggestion that wetlands not located in these identified ecoregions or areas would necessarily "be determined to not be similarly situated." Such a determination is not necessarily supported by the current science and it would unnecessarily constrain future case-

[203] *See also,* 79 Fed. Reg. at 22216, *citing* Appendix A, Part II, iii. C (1).

specific analyses in a way that could potentially eliminate any role for emerging science. Some ecoregions could contain a wide diversity of relevant geologic and climatic attributes and include a range of wetland types that could not reasonably be considered to be "similarly situated." In such cases, the science may still support aggregation at the scale of a single point of entry watershed. Other ecoregions might simply contain a lower density of wetlands, but these wetlands may still be relatively similar in terms of their type, functions, and distribution across the landscape. The wetlands, in the aggregate, in some of these kinds of ecoregions might fail to rise to the level of being found jurisdictional by rule based on currently available scientific evidence. However, given that the relevant science continues to emerge, these wetlands could in the future be found to be jurisdictional as a result of a case-specific significant nexus analysis. **Therefore, those wetlands should by no means *"be determined to be not similarly situated"* on the basis that they are not located in identified ecoregions or other specified areas.**

We also disagree with the suggestion in alternative #2 that certain subcategories of waters would be determined to lack a significant nexus and therefore be permanently excluded from jurisdiction. As the SAB notes, "*the science does not support excluding groups of 'other waters' or subcategories thereof."* SAB Rule Letter at 3. The final rule and preamble must clearly distinguish between not finding a significant nexus on the one hand, and definitively determining that these waters "lack a significant nexus to an (a)(1) through (a)(3) water," on the other.

We agree with Ducks Unlimited that in most cases, not finding a significant nexus now simply means that the science currently available is insufficient to make such a designation. So, as science continues to emerge, areas in which a significant nexus could not now be found might indeed be later found to have a significant nexus based on the new science. For the final rule to be truly science-based, it must allow for this distinct and likely possibility. Clearly, for regulatory purposes, those waters for which a significant nexus could not be demonstrated at this time would need to be treated as being non-jurisdictional unless and until shown otherwise.

I. Retaining the case-specific approach where the science is inconclusive is scientifically sound and helps to accommodate evolving science that could establish significant nexus in the future.

While the currently available science is sufficient to establish significant nexus and jurisdiction by rule for some subcategories of "other waters," we acknowledge that it is not yet sufficient to establish significant nexus and jurisdiction by rule for all such "other waters." The agencies seek comment on how this inconclusiveness of the science relates to the use of case-specific determinations. 79 Fed. Reg. at 22216-17. As noted previously, we agree with the SAB that the current science does *not* support findings that categories of "other waters" as a class lack a significant nexus and are excluded from jurisdiction by rule. We believe the science supports retaining the case-specific approach for those "other waters" that are not specifically found to be jurisdictional by rule. *See Id.* at 22217. As the agencies state, doing so "would retain the ability for a jurisdictional determination consistent with the objective of the CWA to restore and maintain the chemical, physical, and biological integrity of the nation's waters." It would also help to accommodate the emerging science. As science continues to emerge, areas in which a significant nexus could not now be found might indeed be later found to have a significant nexus based on the new science. Once again, it would *not* be appropriate to categorize remaining

"other waters" as not jurisdictional.

J. The final rule should establish a process by which emerging scientific evidence of connectivity can be incorporated into a cumulative body of scientific information and used to inform both case-specific and categorical significant nexus determinations over time.

The preamble also requests comments "on how to best accommodate evolving science in the future that could indicate a significant nexus for these 'other waters.'" 79 Fed. Reg. at 22217. To be science based and to achieve the goals of the CWA, the final rule must accommodate this evolving science. We strongly recommend that the agencies establish in the final rule or preamble a process by which emerging scientific evidence of connectivity can be incorporated into a cumulative body of scientific information and used to inform both case-specific and categorical significant nexus determinations over time.

This process and the scientific information gathered through it should be science-based, transparent, and accessible to the public. We do not believe a subsequent (and repeated) rulemaking process is appropriate for accommodating the evolving science. We join Ducks Unlimited in recommending a nationally standardized and consistently applied geographic database (with accompanying mapping features) developed and maintained to facilitate the objectives of clarity, certainty, predictability, and administrative efficiency that could include data layers related to the findings of significant nexus analyses of "other waters" that would clearly depict:

- ecoregions and/or watersheds for which significant nexus analyses were conducted, and those for which an analysis has not yet been conducted;

- areas within which "other waters" in the aggregate were found to have a significant nexus and would therefore be jurisdictional;

- areas whose "other waters" in the aggregate that could not at this time be demonstrated to have a significant nexus, and would therefore be non-jurisdictional; these areas could be subject to re-assessment as new science emerges;

- if applicable, areas in which it was determined that the "other waters" do not and could not possibly be shown to ever have a significant nexus, and therefore would be non-jurisdictional, or perhaps even excluded if the determination could be made with sufficient scientific finality; and, other relevant information.

K. Summary of Science-based Comments Supporting Findings of Significant Nexus and Jurisdiction by Rule for Other Water Subcategories in Specific Regions

We summarize in this section, and incorporate by reference, several reports detailing peer-reviewed scientific literature and conclusions that support finding certain subcategories of non-adjacent waters jurisdictional by rule. These reports have been submitted to the record during the

comment period at Docket ID No. EPA-OW-2001-0880, and are submitted again with our comments:

- The 2014 Ducks Unlimited Comments on the Proposed Rule, Sections III and IV (November 5, 2014
- *Physical, Chemical, and Biological Impacts of Geographically Isolated Wetlands on Waters of the United States*, Woolford, Bonney, Pringle, River Basin Center, University of Georgia (October 2014)
- *Evidence of Significant Impacts of Coastal Plain Depressional Wetlands on Navigable Waters*, Woolford and Carroll, River Basin Center, University of Georgia (July 2014)

EPA's Connectivity Report and the SAB's Connectivity Peer Review Report also provide substantial support in the administrative record for such categorical jurisdictional determinations. We highlight the wetland types and regions outlined below because, among other reasons: 1) wetland loss has been significant in these regions and the remaining wetlands are highly threatened in the absence of CWA protections; (2) there is literature that clearly demonstrates the abundance and strength of the significant nexuses that exist among these waters and with downstream navigable waters; (3) these wetland types largely fall into the "other waters" category; and, (4) despite individual wetlands often being situated not in proximity to (a)(1) through (a)(3) waters, there is a compelling scientific basis for the vast majority of these waters to be considered jurisdictional on the basis of a comprehensive, science-based significant nexus evaluation.

In issuing the final rule, we urge the agencies to review the reports attached to these comments. It is our position that when this research is combined with the Final Connectivity Report and the many peer-reviewed scientific papers cited therein, the agencies will have the scientific foundation necessary to establish that prairie pothole wetlands, coastal depressional wetlands (such as Carolina and Delmarva Bays), vernal pools, pocosins, and other subcategories of "other waters" should be defined as waters of the United States by rule. This, of course, would obviate the need to perform case-by-case analyses of these waters.

As the agencies conduct these evaluations, they should keep in mind the overall context within which important decisions about significant nexus and jurisdiction will be made. Approximately 53% of the estimated 221 million acres of wetlands originally present in the United States have been lost (Dahl 2000). The CWA undoubtedly contributed to the decrease in the rate of wetland loss since 1972, when the act was passed, through 2004 (Dahl 2006). However, not counting the additions of ponds that have little wildlife value (e.g., farm ponds, golf course ponds, storm water retention lagoons, etc.), the Nation has nevertheless experienced a net loss of over 16 million acres of wetlands since the mid-1950s. Since 1986, the Nation has lost over 2 million acres of vegetated wetlands and 1.4 million acres of freshwater marshes that are among the most important wetlands for waterfowl and other wildlife (data from Dahl 2000, 2006, 2011). These kinds and magnitudes of losses have had a cumulative negative impact not only on critical waterfowl habitats, but also on the Nation's water quality and other federal interests.

Unfortunately, the most recent national wetlands status and trends report (Dahl 2011) reported that since 2004 the rate of wetland loss had increased by 140% over the previous report period.

This is the first acceleration of wetland loss over a 50-year period, and given that this is the first survey period occurring entirely post-*SWANCC*, the acceleration of wetland loss is likely at least partially attributable to the jurisdictional confusion and withdrawal of CWA protections by the agencies in the wake of the *SWANCC* and *Rapanos* cases.

Therefore, the trajectory of the future status and trends of the Nation's wetlands -- and therefore of the future direction of the condition of the Nation's waters -- will be significantly influenced by the content of the final rule on the "definition of the 'waters of the U.S.'"

1. ***Prairie Pothole Region Wetlands***[204]

Prairie pothole wetlands are stereotypical examples of wetlands that would generally be characterized as being "geographically isolated" and classed as "other waters" in the proposed rule. The region is characterized by high wetland densities, and typically contains between 15 and up to 150 wetlands per square mile (National Wetlands Working Group 1988; Baldasarre and Bolen 2006). Thus, prairie pothole wetlands provide one of the best opportunities to show that a large subcategory of wetlands falling primarily within the "other waters" category do indeed have a demonstrable significant nexus with downstream navigable waters. The Prairie Pothole Region (PPR) of the northern Great Plains encompasses over 300,000 square miles, and is encompassed within four Level III ecoregions (#42, 46, 47, and 48). Despite considerable federal investments in wetland conservation, there continues to be a net loss of wetlands in this important region (Dahl 2006).

As documented most recently by Dahl (2014), wetlands in the PPR tend to be remarkably similar in general structure and function. Of the total 6.4 million acres of wetlands, 88% are emergent wetlands (i.e., marshes), making up 93% of all wetland basins in the region (Dahl 2014). Dahl (2014) documented that in 2009 almost 50% of the emergent wetland basins were temporarily flooded (temporary ponds, low prairie wetland), about 42% were seasonally flooded (seasonal ponds, shallow marsh), 6% were semi-permanently (semi-permanent ponds, dugouts, deep marsh), and about 2% were farmed wetlands. In large part, the marked similarity among prairie potholes is due to the fact that they were generally formed when large chunks of ice were dropped by the receding glaciers along with other materials that had carried southward by the glaciers.

<u>Prairie Potholes: Surface Water Storage and Flood Attenuation</u>

The abundance and density of potholes on the PPR landscape in conjunction with their general lack of direct surface water connection to streams and rivers is most important in creating the basis for an especially significant nexus between these wetlands and large navigable waters like the Red, Missouri, and Mississippi rivers.

Just as water during storm events moves through the multitude of small tributaries and eventually affects the integrity of downstream "waters of the U.S.," the same thing occurs with prairie potholes although in the case of the potholes, it is more common for them to serve the function of storing water that would otherwise flow to downstream waters, thereby affect the downstream

[204] This section is excerpted from Ducks Unlimited 2014 Rule Comments, Section III.

navigable waters by decreasing flood flow. However, in many cases, a "fill and spill" type of connectivity is exhibited when the wetland fills to capacity and then spills over into other wetlands and/or to downstream waters (Kahara et al 2009; Shaw et al 2012; Shaw et al 2013; Winter and LaBaugh 2003). During wet periods, there might actually be a smaller number of wetlands on the landscape as a result of nearby wetlands becoming "aggregated" (Kahara et al 2009), as a result of the magnitude of stored water in areas of high pothole density.

Their nature and position on the landscape is the primary reason that potholes serve so well the function of capturing runoff and storing it in intact "non-contributing" basins, i.e., wetlands and lakes (Winter et al. 1984). In general, the presence of many isolated wetlands decreases runoff velocity and volume by capturing high magnitude short duration flows, e.g., runoff of spring thaws, and releasing water (such as through groundwater and evaporation) over an extended period (Carter 1996; Carroll et al 2005). The net effect of this important wetland function is to abate flooding by lowering and moderating the peaks of flood stages, thereby reducing flood damages (Mitsch and Gosselink 1986). *See also* Hubbard and Linder 1986; Gleason and Tangen 2008; Minke et al. 2009; Ripley 1990;Winter 1989. Other work (Hayashi et al 2003; Huang et al 2011; Kantrud et al 1989) concluded that small pothole wetlands retained most of the runoff from spring snow melt within their respective watersheds, thereby moderating snow melt input to regional drainage systems. Miller and Nudds (1996) compared U.S. and Canadian rivers and landscape changes on each side of the international border to provide further evidence that wetland drainage in the upper reaches of the Mississippi River watershed has increased flooding in the Cannonball and Sheyenne rivers in North Dakota, and the Moreau and Big Sioux rivers in South Dakota.

Vining (2002) used a modeling study to demonstrate the importance of storage by wetlands and impacts on stream flow of Starkweather Coulee in North Dakota, stating that his findings were likely similar to the situation found in other drainage basins. *See also* Vining 2004; Pomeroy et al (2014). For a Minnesota watershed, Wang et al (2010) estimated that the loss of the first 10-20% of its wetlands resulted in up to a 40% increase in the peak discharge to downstream waters. Canadian studies are directly relevant to significant nexus evaluation on the U.S. side of the border. Hayashi et al (1998) found that approximately 30-60% of the water in the potholes studied entered them as runoff from spring snowmelt. Thus, when considered in the context of wetland densities and the total storage capacity of the wetlands in the region, this represents a huge volume of water that would otherwise move through artificial ditches until ultimately reaching a navigable waterway and increasing flood flows in the river. *See also* Fang et al (2014) and Pomeroy et al (2014).

In the Red River basin which delivers the majority of the nutrients to Lake Winnipeg, over 50% of the wetlands have been eliminated in the U.S. portion of the watershed (Schindler et al. 2012), with as much as 90% loss or more in portion of the Red River watershed in Canada (Hanuta 2001). Increases in flooding and water yield have been directly linked to increased phosphorus export in the Lake Winnipeg watershed (Environment Canada and Manitoba Water Stewardship, State of the Lake Report 2011) and demonstrate the ability for isolated wetlands, in the aggregate and at the level of the watershed, to affect the integrity of one of the world's largest lakes.
Wetland drainage has significantly decreased the cumulative storage capacity of wetlands (Dahl 1990; Dahl and Johnson 1991), and this decrease has been linked to increases in the frequency of

flooding in and around the PPR (Miller and Frink 1984; Miller and Nudds 1996; Manale 2000). *See also* Yang et al. 2008, 2010.

Similarly, Johnson et al. (1997) reported that about 33% of the drained wetlands in the flood-prone Vermillion River watershed (southeast South Dakota) flowed into artificial drainage ditches, and that a quantity of water equivalent to about half of the river's annual flow could be stored by restoring those wetlands. Pomeroy et al (2014) pointed out that artificial drainage of prairie potholes has the effect of adding permanent surface connections and thereby reduces the ability of the watershed to store water, even under wet conditions, with the consequences being increased stream flood frequencies and magnitudes (Gleason et al 2007; Yang et al 2010). Jahn (1981), also in the context of the Red River system, stated that wetlands there significantly reduced flood levels in major metropolitan areas downstream.

Hey (1992) estimated that as a result of approximately two-thirds of the original potholes having been lost through drainage, the region has lost 20-30 million acre-feet (0.87 – 2.2 trillion cubic feet) of water storage capacity. A number of studies have concluded that loss of pothole wetlands has contributed significantly to flooding and increases in associated damages along the Red River of North Dakota and in portions of Minnesota and Iowa (e.g., Campbell and Johnson 1975; Moore and Larson 1979; Brun et al. 1981). Ludden et al. (1983) found that small basins in the Devil's Lake watershed in North Dakota could store 72% of the total runoff from a 2-year frequency flood and approximately 41% of the total runoff from a 100-year frequency flood, with Malcolm (1979) and Gleason et al. (2007) and others reporting impacts of similar magnitude for north central North Dakota and western Minnesota, respectively. Hann and Johnson (1968) found that depressional areas in north central Iowa had the ability to store more than one-half inch of precipitation runoff within their individual watersheds.

Gleason et al. (2008), based on a study covering almost 500 wetlands across Iowa, North Dakota, South Dakota, Minnesota, and Montana, conservatively estimated that wetland catchments covering ~1.1 million acres on USDA Conservation Reserve Program and Wetland Reserve Program lands can capture and store an average of 1.1 acre-feet of water per acre of wetland (a total of more than 1.2 million acre-feet [52.2 billion cubic feet] of water). The clear inference that can be drawn is that if this quantity of natural wetlands were lost because of a lack of CWA protection, there would be significant impacts from the more than 1.2 million acre-feet of water that would otherwise be flowing more directly and quickly to the downslope navigable waters. *See also* Gleason et al. 2007; Kurz et al. 2007 (modeled peak flow reductions associated with artificial storage of precipitation on flooded agricultural lands in the Red River valley of the north central PPR, and estimated that with both conservative (259,000 acre-feet) and moderate (2,188,400 acre-feet) storage volumes placed on the landscape, flood stages like those of the flood of 1997 on the Red River could have been reduced by 2-5 feet at Grand Forks). Thus, it is reasonable to predict that similar impacts of flood attenuation would be associated with similar storage volumes in natural wetlands, again demonstrating the significant nexus that exists between the aggregate of the pothole wetlands with navigable waters.

Although potholes typically are not directly hydrologically connected to other waters via surface connections, during wet periods water tables rise and surface water levels reach outlet elevations of most potholes (Sloan 1972; LaBaugh et al. 1998; Winter et al. 1998; USGS 1999). This "fill

and spill" phenomenon results in temporary but direct hydrologic connections among and between potholes, and between complexes of potholes and the streams and rivers in the region, with associated impacts on regional water regimes in navigable waters and their tributaries (Stichling and Blackwell 1957; Sloan 1972; Leitch 1981; Winter 1989; USGS 1999; Leibowitz and Vining 2003).

Lenhart et al (2011) noted that over the last 30 years stream flows at less than bank full elevation had increased, and that while large floods had not significantly increased, the larger, longer duration flow volumes had a significant impact on the movement of sediment and nutrients, with obvious implications for total daily maximum loads and nutrient management issues. Odgaard (1987) found that average daily flows only one-third bank full were associated with increased bank erosion, streambank collapse and downstream sedimentation. Looking broadly at agricultural watersheds in two time periods (1940-70 versus 1980-2009), Lenhart et al (2011) found that streamflow had increased in the agricultural landscapes due to increased stormwater runoff and base flows, both of which are associated with wetland drainage. They stated that mean annual flows had increased in most of the Minnesota River basin and Red River basin, as well as in the Des Moines, Sugar and Root Rivers.

In an important recent study of 21 southern Minnesota watersheds, all contributing flow via tributaries to the Mississippi River, Schottler et al (2013) showed that surface drainage of wetlands was a significantly greater driver of increased downstream river flow and the consequences of the increased flows extended to increased erosion and widening of stream channels which in turn causes increased turbidity and sediment loading and transport (Doyle et al 2005; Simon and Rinaldi 2006; Wolman and Miller 1960).

Prairie Potholes: Surface-Groundwater Interrelationships

Prairie potholes, as well as other types of "other waters," can, and very often do, contribute to groundwater recharge, and this groundwater often continues to move downslope toward intermittent or flowing streams ultimately discharging into navigable waters or their tributaries (Winter et al. 1998). For prairie potholes, where the water table tends to be a subdued image of the topography and is generally very near the land surface (Sloan 1972), pothole wetlands can serve as groundwater recharge sites (Euliss et al. 1999). Winter and LaBaugh (2003) stated that prairie potholes are commonly connected via groundwater flow systems, and that water that seeps from the wetland into shallow gravel aquifers can annually travel many kilometers, while movement through clay or silt layers can be much slower. Van der Kamp and Hayashi (1998) stated that there is little groundwater recharge from dry uplands outside depressions, and that groundwater recharge from small depressions constitutes a large proportion of the total recharge in many areas.

Winter and Rosenberry (1998) stated that some water seeping from potholes into groundwater passes beneath local flow systems and discharges to wetlands at lower elevations, commenting on the complexity of the connections between potholes and groundwater while recognizing that the fundamental connections are common. Short-term, scientifically verified determinations are not only costly and largely impractical to apply, they can also lead to conclusions that are incorrect in the long-term due to their short-term nature and inability to account for variation

over time.

Because seepage contributions to groundwater are greatest where wetland shoreline is largest relative to the water volume (Millar 1971), the smallest pothole wetlands are proportionately more important to groundwater connectivity. Sloan (1972) stated that surface water seepage to groundwater was greater for ephemeral and temporary wetlands than for other wetland types. And, these are the very types of wetlands that are being drained at the greatest rates (Dahl 2014), and are most at risk of degradation or loss in the absence of CWA jurisdiction.

Some potholes have a net seepage outflow (groundwater recharge basins), others have a net seepage inflow (groundwater discharge basins), and many basins function alternately - at times having a net outflow into the groundwater and at other times having a net inflow (Sloan 1972; LaBaugh et al. 1998; Johnson et al 2004; Swanson et al 1988). Hubbard and Linder (1986) concluded that approximately 12% of the total storage capacity of wetlands in an area in northeast South Dakota infiltrated to groundwater as recharge, and that drainage of potholes therefore significantly reduces ground water recharge rates. Net seepage outflow into the groundwater can more typically amount to 20-30 percent of the total water loss for prairie wetlands (Eisenlohr and Sloan 1968; Shjeflo 1968; Eisenlohr and Sloan 1972; Winter and Rosenberry 1995).

Pothole wetlands are generally connected to and continuous with the groundwater in the surrounding area in relatively local groundwater flows (van der Kamp and Hayashi 2008), but these surficial aquifers can extend up to several miles. Regional aquifers are located deeper than the surface aquifers, and water flow into and through these deeper aquifers can be significant in locations in which they underlay an extensive area, and often flow to distant discharge areas (van der Kamp and Hayashi 2008). While a relatively small portion of recharge water flows to these deeper, geographically more expansive regional aquifers, this portion of the groundwater recharge from wetlands is important for sustaining groundwater resources (van der Kamp and Hayashi 2008).

To support CWA jurisdiction, it is important to note that the groundwater to which the pothole wetlands are linked subsequently provides input to lower-lying wetlands and stream valleys (van der Kamp and Hayashi 1998). Numerical simulation of regional groundwater flow systems in Stutsman and Kidder counties, North Dakota, portrayed lateral movement of groundwater flow over 16 miles to discharge into Pipestem Creek, a prominent stream in the region (Winter and Carr 1980). In another area of the PPR in northwest Minnesota, Cowdery et al. (2008) demonstrated that horizontal hydraulic conductivity in shallow aquifers was high and that these aquifers can extend tens of miles in the region and interact with deep aquifers in some areas. Surface aquifers were recharged in significant part from surface waters, particularly from at-risk seasonal and ephemeral wetlands. Notably, discharge areas for the water from these shallow aquifers included surface waters, as well as withdrawal from wells. In fact, 17-41% of the water from the surface aquifers was discharged to surface waters that left the study area, and groundwater discharge comprised 30-71% of all surface drainage flow, helping to maintain base flow. Van Voast and Novitzki (1968) concluded that groundwater and surface water interconnections (including flowing waters) were typical in the Yellow Medicine River watershed in the PPR region of southwest Minnesota.

Prairie Potholes: Water Quality Relationships

Potholes act as a sink for nutrients and other chemicals, including those widely used for agricultural purposes, and thereby affect and improve the quality of runoff water (Davis et al. 1981; Crumpton and Goldsborough 1998; van der Valk 1989; Whigham and Jordan 2003). Ditches draining potholes create new surface connections between previously geographically isolated wetlands and tributaries and rivers (Brunet and Westbrook 2011). With pothole wetlands being the landscape's primary storage area for nutrients and salts, these solutes (along with increased sediment loads) are carried downstream when the pothole is drained (Brunet and Westbrook 2011; Lenhart et al 2011). *See also* Yang et al. 2008, 2010. When as a result of the ditching or filling of wetlands the retention time is shortened or eliminated and the associated biochemical processes are thereby altered, the cleansing or filtration function of the former wetland is lost or degraded, with direct negative impacts on the quality of the downstream navigable waters. Similarly, water retained in a pothole is cleansed of much of its load of pollutants via biochemical processes before it enters groundwater and flows laterally to other areas and other waters, or downward into deeper aquifers, as described earlier.

Ginting et al (2000), working in the Minnesota River watershed, also showed that draining wetlands there led to increased runoff, thereby carrying elevated levels of solids and nutrients into downstream waterways. The findings of Lenhart et al (2011) and Odgaard (1987) described earlier clearly demonstrated that the physical impacts of increased downstream flows resulting from drainage of potholes were also accompanied by degradation of the chemical integrity (increased sediment movement and nutrient transport and concentration) of downstream waters in the PPR. The increased stream flows that result from draining potholes and reducing the retention time of water on the landscape causes increased stream flow which in turn increases river erosion, bank sloughing and widening, and reduces water quality by increasing turbidity and sediment loads (Schottler et al 2013). All of these significant impacts to the integrity of downstream waters are the direct consequence of the drainage or filling of pothole wetlands across broad landscapes.

Water captured and retained within pothole wetlands has been shown to have elevated levels of pesticides. In a portion of the Canadian PPR containing almost 1.8 million potholes, up to 60% of the wetlands examined exceeded Canadian guidelines for the protection of aquatic life for at least one pesticide (Donald et al 1999). Squillace et al (1996) found that in the Cedar River basin of Iowa a number of agricultural chemicals moved from surface water bodies into the groundwater, and that subsequent movement and discharge of that groundwater served as the primary source of these chemicals entering the Cedar River and thereby impacting its chemical integrity.

Prairie Potholes: Biological Nexus

Lannoo (1996) demonstrated that where PPR wetlands have been connected to navigable waters (e.g., in the Iowa Great Plains region), amphibian populations in the formerly isolated wetlands have decreased significantly. Thus, in an instance such as this, the creation (by draining and ditching) of a surface hydrological nexus where none previously existed between the wetland

and navigable water had a significant negative effect on the biological integrity of the waters involved. In addition, several waterfowl species require or use both saline lakes and freshwater wetlands and rivers in North Dakota (Windingstad et al. 1987; Swanson et al. 1984), with the freshwater wetlands being necessary for purposes of osmoregulation.

In addition, the cumulative impacts of pothole drainage to downstream waters, including increased pesticide levels (Donald et al 1999) and increased turbidity and sedimentation (Gleason et al 2003; Schottler et al 2013), would clearly impact the biological integrity of downstream waters. Gleason et al (2003) found that sediment deposition of only 0.5 cm resulted in a 99.7% reduction in total invertebrate emergence and 91.7% reduction in seedling emergence in an experiment conducted in the context of the PPR. The increased flows in downstream waters resulting from drainage or filling of potholes (see previous section and citations) would also affect the capability of those waters to sustain populations of organisms more suited to the lower flows, decreased concentrations of nutrients and other solutes, and lower sedimentation rates of waters less impacted by drainage. Thus, the biological impacts to aquatic life in navigable waters that result from the increased hydrological connectivity and corresponding increases in stream flow and erosiveness, sediment loads, and nutrient and pesticide concentrations, cannot be ignored as an important component of the significant nexus evaluation for the ecoregion.

Prairie Potholes: Economics

Some of the greatest economic impacts associated with the alteration of the significant nexus between pothole wetlands and navigable waters in the PPR are those associated with increased flood damages resulting from lost flood attenuation functions. For example, the estimated net benefit of artificially storing water in the Red River valley as described by Kurz et al. (2007) exceeded $800 million over 50 years in some scenarios as a result of reduced flood stages in the Red River and avoided damages and other benefits. Hey and Phillipi (1995) documented that mean annual flood damage in the Upper Mississippi River basin had increased 140% over the previous 90 years (in adjusted dollars). Given the extent of increasingly frequent damaging floods along rivers in and flowing out of the Prairie Pothole region (as well as in other areas around the country), the economics associated with avoided damages through wetland protection and maintenance of flood water storage functions should also be an important component of significant nexus analyses.

One recent study (Yang et al. 2008) also estimated the value of the nutrient removal and carbon sequestration services lost due to draining or altering potholes in the Broughton Creek watershed since 1968 to be $430 million.

In summary, we believe that the weight of the existing scientific evidence clearly demonstrates that when prairie potholes are drained or filled such that they can no longer fulfill functions such as water storage and water quality maintenance, the physical, chemical and biological integrity of the receiving downstream navigable waters is negatively affected. The significant nexus they have as a result of "geographic isolation" is fundamentally altered when the basins are filled or drained via ditches and more directly linked to the downstream waters. The extent to which navigable waters are impaired depends

upon the scale of the altered inputs, thereby reinforcing the appropriateness and importance of using an appropriate watershed scale, or groupings of watersheds, to assess aggregate impacts.

2. *Texas and Southwest Louisiana Coastal Prairie Wetlands*[205]

The inland, freshwater wetlands of the coastal prairies of Texas and southwest Louisiana are contained within Level III ecoregion number 34, "Western Gulf Coastal Plain." The region is a mosaic of low relief mounds, flats, and depressional wetlands (Moulton and Jacob 2000). This ecoregion provides another good example of a situation in which it would make no sense to do significant nexus analyses for each single point of entry watershed. They are by-and-large aligned along the Gulf coast, and are all very similar in their fundamental hydrogeomorphic and ecologic characteristics, strongly reinforcing the case for ecoregional analyses.

The wetlands across the region can be locally diverse, but their basic hydrology typically ranges from temporarily flooded to only rarely exposed, much like the prairie potholes. And, they typically occur in relatively high densities. Studying only a relatively small but typical portion of the ecoregion in a 200 mi^2 area near Galveston Bay, researchers counted over 10,000 non-riverine palustrine wetlands, with the median size being only 0.37 ha, and 72% being less than 1 ha (Enwright et al 2011). In the aggregate, the wetland basins and their catchments represented over 40% of the study area (Enwright et al 2011). Like prairie potholes, most are geographically isolated, and are being lost relatively rapidly. In Harris County and the Houston area, 13% were drained or filled over a recent 10-year period (Jacob and Lopez 2005). This is a region and category of wetlands which the SAB Rule Letter to the EPA identifies as being similarly situated "other waters" that in the aggregate have a significant nexus that affects the integrity of downstream navigable waters, and therefore should be considered jurisdictional waters of the United States.

Gulf Coastal Prairie Wetlands: Hydrologic and Chemical Connectivity

In south Texas near Galveston Bay, coastal prairie wetlands are a prominent and important component of the landscape. Two recent studies (Forbes et al. 2010; Wilcox et al. 2011) showed that in the case of these coastal depressional wetlands that have been considered "geographically isolated wetlands," intermittent surface water connections with the surrounding coastal jurisdictional waterways involved 17-18% of the precipitation falling on the watershed during the study period. Wilcox et al (2011) demonstrated that the complexes of the wetlands that they studied here in fact exhibited a strong surface water connection with the waterways in the region, serving in effect as headwaters with intermittent but regular discharges to flowing waters and estuaries in the region. Both studies concluded that much of the surface runoff entering the navigable Galveston Bay and other nearby waters likely passes through coastal prairie wetlands, and support the contention that their results can be generalized across the Texas Gulf Coastal Plain.

Forbes et al. (2012) also found that these wetlands significantly affect the water quality of navigable waters by reducing incoming inorganic nitrogen by approximately 98%, and inorganic phosphorus by 92%. Thus, these wetlands are positioned within the hydrologic flow paths to

[205] This section is excerpted from Ducks Unlimited 2014 Rule Comments, Section III.

serve as strong sinks for nitrogen and phosphorus and thereby provide substantial reduction of the pollution of runoff waters that ultimately enter the Galveston Bay estuary. The fixed carbon and nitrogen then exported from these wetlands to the navigable waters provides valuable food web support, thereby creating a biological nexus, as well.

In the case of these Gulf coastal prairie wetlands, we have a relatively few focused studies that have provided strong evidence of connectivity bearing upon their potential designation as "waters of the U.S." by rule. Based on the recent increased rate of research related to connectivity of the type necessary for evaluation of "significant nexus" determinations in the aggregate, we would anticipate a continued and important need to have a process through which new science will be able to be continually incorporated into the decision making process for what are now being called "other waters."

Gulf Coastal Prairie Wetlands: Biological Connectivity

With the distinction between migrating and migratory birds in mind, we understand that, for example, the fact that a redhead duck migrating from its breeding habitat in North Dakota stops for a short time at a wetland in central Iowa on its way to its wintering ground on the Texas Gulf coast, cannot in and of itself be used to assert CWA jurisdiction over the Iowa wetland. However, when a migratory bird (a legal designation of a large category or birds, as opposed to resident or non-migratory species) like the redhead can be shown to be dependent upon *both* navigable waters and "other waters" *within* a season and within a relatively local or regional context, then the migratory birds should indeed contribute to the establishment of a significant biological nexus between the "other waters" and the navigable water.

Redheads and lesser scaup during their wintering period provide excellent examples. Approximately 80% of the entire North American population of redheads winters in estuaries of the Gulf of Mexico, mostly in the Laguna Madre of Texas and Tamaulipas, Mexico (Adair et al. 1996; Ballard et al. 2010). They forage almost exclusively on shoalgrass (*Halodule wrightii*) in the hypersaline lagoon, which is a traditionally navigable waterway (Ballard et al. 2010). Large numbers of lesser scaup also winter in the Gulf Coast region, and generally forage on invertebrates in the saline and brackish marshes and offshore habitats of Texas and Louisiana (McMahan 1970). Large concentrations of diving ducks in the region, including these two species, must also make daily use of inland, coastal freshwater ponds in order to dilute and excrete the salt loads that are ingested while feeding in the saline habitats (Adair et al. 1996; Ballard et al. 2010; Mitchell et al 1992). Activity budgets documented that redheads and scaup spent approximately 37% and 25% of their time, respectively, on the freshwater wetlands actively drinking (Adair et al. 1996). While both studies found that redheads and scaup tended to make greater use of wetlands that were in closer proximity to the coast when they were available, they flew farther inland when necessary during dry conditions to acquire freshwater because they require the freshwater to survive. Adair et al. (1996) found that redheads used wetlands up to 13 miles inland, and scaup used wetlands up to 33 miles from the coastal navigable waters. Thus, these researchers and others (e.g., Woodin 1994) concluded that these migratory bird species are dependent upon *both* the navigable saline waters of the Laguna Madre and Gulf of Mexico, *and* the inland, physically non-proximate freshwater wetlands, throughout the approximately 5-month wintering period. **Therefore, if the inland freshwater wetland habitats, i.e., the "other**

waters," are adversely impacted because of a lack of CWA jurisdiction, the region's ability to support redhead, scaup and other diving duck populations is degraded, and the biological integrity of the traditionally navigable water of the Gulf of Mexico's Laguna Madre is therefore impacted. The dependency upon both the "other waters" and the navigable waters involved here therefore clearly constitutes a significant nexus that is fully consistent with the legal framework laid out by Justice Kennedy.

Gulf Coastal Prairie Wetlands: Economic Consequences Related to Hydrologic Connectivity

A series of studies around the Gulf Coast documented the direct, significant impacts of wetland drainage on real flood damages based on actual insurance costs. This is particularly relevant to examine here because the state of Texas consistently has more flood damage than any other state. Brody et al (2014) looked at an individual watershed in this ecoregion near Houston, and found that the presence of wetlands was the second-most important land-use-land-cover factor related to flood damages totaling $356 million over 11 years. Of all variables, being surrounded by wetlands had the strongest influence on reducing flood damages. Looking more broadly at a 37-county area along the entire Gulf coast of Texas between 1997 and 2001, Brody et al (2008) found that alteration of wetlands was strongly correlated with flood damages. They noted that in areas with greater degrees of wetland loss, flood damages increased with a given amount of precipitation.

Brody et al (2007a) conducted a similar examination of flood damage and wetland alteration between 1991 and 2002 over an even more expansive area that included all fourth-order HUCs within 100 miles of the coasts of Texas and Florida. Once again, they clearly demonstrated a strong relationship between wetland loss and alteration and increased flood damage. Importantly, they found that the cumulative effects of many small scale impacts to wetlands had a significantly greater effect on the level of flood damages than did larger, individual impacts. Brody et al (2011) looked at more than $13 billion in insured property losses across 144 coastal counties in all five Gulf coast states (plus several counties in extreme southwest Georgia) over the 2001-2005 period. They again found that wetland alteration was a significant factor in explaining flood damages.

Similar studies in Florida (Brody et al 2007b; Highfield and Brody 2006) also demonstrated that flood-caused property damages significantly increased as a consequence of the degree to which naturally occurring wetlands were altered. Thus, this series of powerful studies convincingly demonstrated the direct economic consequences of failure to recognize the connectivity of many "other waters," including geographically isolated wetlands, to downstream waters, and that the cumulative effect of many small, scattered wetland impacts to these wetlands are significant, oftentimes more so than individual larger impacts.

In summary, and in accordance with the conclusion expressed by the SAB in their Rule Letter to the EPA, the available science strongly supports the designation of the "other waters" classed as Gulf coastal prairie wetlands throughout this ecoregion, and in the aggregate, as jurisdictional by rule.

3. *Carolina Bays, Delmarva Bays, Pocosins and Similar Coastal Depressional Wetlands*[206]

Some of the wetlands most in danger of losing protection under the CWA are wetlands found in the southeastern United States like pocosins and Carolina bay wetlands. Pocosins, from the Algonquin word meaning "swamp on a hill," occur in the southeastern Coastal Plain from Virginia to North Florida.[207] Seventy percent of the nation's 3.14 million acres[208] of pocosins are found in North Carolina, where they comprise approximately 50 percent of the state's freshwater wetlands.[209] Broadly defined, pocosins encompass all shrub and forested bogs, Atlantic white cedar stands, and some loblolly pine stands on flooded soils. They are rainfall-driven and are usually not connected by streams to major rivers. However, they are often found adjacent to estuaries and have surface hydraulic connections have been linked to water quality and salinity gradients in these estuaries. Scientists suggest that because of this connection and because pocosins cover vast areas on the coast that "these wetlands are connected to regulated waters of the United States."[210]

Carolina or Delmarva bays are depressional wetlands found throughout the southeastern United States from Delaware to Florida, with most bays located in southeastern North Carolina, South Carolina, and northeastern Georgia. They occur in topographic depressions and are shallow and oval shaped, and their shape allows for surface water accumulation. Water sources may be precipitation, surface water flow, streams, or groundwater, and water may exit bays through evapotranspiration, outlets, or to groundwater recharge.[211] Many bays hold water only during part of the year. These bays are home to a wide variety of plants and wildlife, including frogs, salamanders, turtles, snakes and alligators. Migratory waterfowl and mammals like deer, raccoons, and opossums also use the bays. Salamanders and frogs are prolific in the bays and are dependent on these wetlands for use as breeding sites.[212]

Chemical Connection

From a water quality perspective, so-called isolated wetlands are rarely completely isolated from other wetlands or traditionally navigable waters. Indeed, wetlands biologist Dennis Whigham suggests that "isolation is a term that is not very useful from an ecological perspective."[213] Geographically isolated wetlands are at times connected to other waters by groundwater flows,

[206] This section is largely excerpted from SELC 2014 Rule Comments.
[207] Richardson, Curtis J. 2003. *Pocosins: Hydrologically Isolated or Integrated Wetlands on the Landscape?* WETLANDS, 23 (3): 563-576.
[208] "Friends of Pocosin Lakes National Wildlife Refuge: A Helping Hand to Wildlife." 4 Apr. 2008. http://www.noolf.com/index.cfm/sid.356/nid.2218/do.s/p.2?action=&PageNum_get=2. Last accessed 12 Jul., 2011.
[209] U.S. Department of the Interior. The Impact of Federal Programs on Wetlands Vol. II. *North Carolina: The Pocosins and Other Freshwater Wetlands.* http://www.doi.gov/oepc/wetlands2/v2ch16.html. Last accessed 12 Jul., 2011.
[210] Richardson, *supra note* 208.
[211] North Carolina Division of Coastal Management. Carolina Bay Wetlands. http://dcm2.enr.state.nc.us/wetlands/Coastal_Explorers/cpfmodule/cpf_mapping1.htm. Last accessed 12 Jul., 2011.
[212] Savannah River Ecology Laboratory, University of Georgia. Carolina Bays Fact Sheet. 2007. http://www.srel.edu/outreach/factsheet/carolinabays.html. Last accessed 12 Jul., 2011.
[213] Whigham, Dennis F., Jordan, Thomas E. 2003. *Isolated Wetlands and Water Quality*. WETLANDS , 23(3): 541-549.

intermittent streams, or overland flows.[214] This connection has been found in bays,[215] pocosins,[216] and limesink wetlands.[217] Because of this hydrological connection, wetlands can have significant effects on the chemical quality of downstream waters. Wetlands can capture and store large amounts of water, acting as sponges. As they absorb flood water, run-off and rain, they filter pesticides, excess nutrients, sediment and other pollutants, protecting the health of downstream tributaries, rivers and wetlands.[218] For example, a 2010 assessment prepared for the U.S. EPA of geographically isolated wetlands in 88 counties of the Carolinas showed that these isolated wetlands stored significant amounts of water and in doing so captured heavy metals, nutrients, and carbon.[219] Accordingly, the loss of geographically isolated wetlands would potentially have negative effects on the quality of downstream waters and the ecological and human communities that rely on them.[220]

Another important example of chemical connectivity between upland wetlands and downstream estuaries and other traditionally navigable waters is the flow of primary production between them.[221] Because of this flow, many species that utilize estuaries benefit from the production of tidal marshes and wetlands even though they never occupy these areas. One study demonstrated that there was rarely a time when the estuarine taxa surveyed did not contain isotopic signatures of all primary producers in the region, including primary producers from distant marshes. The results indicate significant material flow from areas of primary production in marshes to estuarine and open water environments and that wetlands do not function in isolation when supporting estuarine secondary production, but rather are integrated components of larger systems.[222]

Physical Connection

As with chemical connectivity, some wetland biologists regard the term "isolated" to be inappropriate to describe wetlands, because many are hydrologically connected to other wetlands or TNWs through groundwater flows or intermittent overflows.[223] Hydrologic models of Carolina bay wetlands indicate that the bays are a flow-through wetland system, receiving ground water from the adjacent upland, but recharging the groundwater to lower topographic

[214] Whigham, *supra note* 214.
[215] Sun, Ge, et al. 2006. *Modeling the Climatic and Subsurface Stratigraphy Controls on the Hydrology of a Carolina Bay Wetland in South Carolina, USA*. WETLANDS, 26(2): 567-580.
[216] Richardson, *supra note* 208.
[217] Opsahl, Stephen P. 2004. *Organic Carbon Composition and Oxygen Metabolism Across a Gradient of Seasonally Inundated Limesink and Riparian Wetlands in the Southeast Coastal Plain, USA*. BIOGEOCHEMISTRY, 76: 47-68.
[218] Society of Wetland Scientist letter to Donna Downing, U.S. Environmental Protection Agency, Office of Wetlands, Oceans and Watersheds on Advance Notice of Proposed Rulemaking EPA Docket # OW-2002-0050; (April 16, 2003) http://www.sws.org/regional/northcentral/documents/swscommentsisolatedwetlands.pdf (Last viewed on June 2011).
[219] Assessing Geographically Isolated Wetlands in North and South Carolina: The Southeast Isolated Wetlands Assessment (SEIWA), Final Report, Prepared for U.S. Environmental Protection Agency ORD NHEERL (Feb. 17, 2010).
[220] Whigham, *supra note* 214.
[221] Weinstein, Michael P., Litvin Steven Y., Guida, Vincent G. 2005. *Considerations of Habitat Linkages, Estuarine Landscapes, and the Tropic Spectrum in Wetland Restoration Design*. Journal of Coastal Research, 40: 51-63.
[222] Weinstein, *supra note* 222.
[223] Tiner, Ralph W. 2003. *Geographically Isolated Wetlands of the United States*. WETLANDS, 23(3): 494- 516.

areas, especially during wet periods in winter months.[224] A later study of a similar area concluded that "the dynamic nature of the hydrology in this Carolina bay clearly indicates it is not an isolated system as previously believed."[225]

Pocosins demonstrate similar physical connections to downstream waters. Pocosins are both important water storage systems and a source of water for the Coastal plains, connecting them to downstream and coastal waters.[226] Because of surface overflow and because pocosins cover vast areas on the coast, wetland biologists consider these wetlands to be connected to regulated waters of the United States.[227] In fact, a survey of U.S. Army Corps of Engineers personnel in North Carolina indicates that most pocosins are considered hydrologically connected to regional waters because they are the primary source of surface water flow on landscapes where they dominate.[228] In accordance with this understanding of physical connectivity, wetlands scientists urge the entire hydrologic system needs to be considered in establishing a definition of hydrologic isolation.[229]

Biological Connection

Geographically isolated wetlands, including pocosins and Carolina bays, are biologically diverse ecosystems. The loss of such wetland habitats could have a serious impact on the survival of the species that depend on them. By protecting these wetlands, the Clean Water Act provided one of the few federal safeguards for the protection of these biodiversity resources. Out of the total of 274 at-risk plant and animal species supported by geographically isolated wetlands, 35 percent of species are not known to be supported by any other type of habitat.[230] Additionally, 86 plant and animal species listed as "threatened," "endangered," or "candidate" under the Endangered Species Act are found in geographically isolated wetland habitats.[231]

Numerous species are dependent on geographically isolated wetlands in the southeast. Importantly, because all of these species travel between wetlands, they serve to link wetlands to one another and to other waters. The following are examples of studies that document the presence and movements of species of ducks, frogs, turtles, salamanders, fish, newts, and snakes in southeastern wetlands.

- Wood ducks living in the riverine wetlands of the Tennessee-Tombigbee Rivers and Waterway in Alabama and at Noxubee National Wildlife Refuge (NNWR) in Mississippi

[224] Sun, *supra note* 215.
[225] Pyzoha, Jennifer E., et al. 2008. *A Conceptual Hydrologic Model for a Forested Carolina Bay Depressional Wetland on the Coastal Plain of South Carolina*. USA HYDROL. PROCESS, (22) 2689.
[226] Richardson, *supra note* 208.
[227] *Id*.
[228] *Id.*.
[229] Winter, Thomas, LaBaugh, James W. 2003. *Hydrologic Considerations in Defining Isolated Wetlands*. WETLANDS, 23(3): 532-540.
[230] Comer, P., K. Goodin, A. Tomaino, G. Hammerson, G. Kittel, S. Menard, C. Nordman, M. Pyne, M. Reid, L. Sneddon, and K. Snow. 2005. *Biodiversity Values of Geographically Isolated Wetlands in the United States.* Nature Serve, Arlington, VA. http://www.natureserve.org/library/isolated_wetlands_05/isolated_wetlands.pdf (Last viewed June 2011).
[231] *Id.*

traveled to geographically isolated wetlands from these TNWs to geographically isolated scrub-shrub wetlands to breed.[232]

- Green treefrogs, which typically occur in permanent lakes, ponds, swamps and occasionally temporary ponds, were shown to interbreed with barking frogs, which dwell entirely in geographically isolated wetlands. Their hybrids will return to these geographically isolated wetlands to breed.[233]

- The semi-aquatic Eastern Mud Turtle is a bottom-dweller of shallow, slow-moving water bodies and geographically isolated wetlands, but during the late summer and fall, individuals leave their aquatic habitat for extended periods to overwinter on land. Movement between aquatic water bodies is common.[234]

- Chicken turtles, which are found primarily in shallow and seasonally fluctuating wetlands in the southeastern United States but are rare in permanent wetlands, have been documented to move distances of several hundred meters between geographically isolated wetlands.[235]

- Sirens and Amphiumas (salamanders) in the Savannah River Site in South Carolina colonize geographically isolated wetlands through temporary aquatic connections to other bodies of water.[236]

- Fish found in geographically isolated Carolina bay wetlands in the Savannah River Site confirm surface water connections between the wetlands and the Savannah River during times of wetland overflow flooding.[237]

- Red-spotted newts in a series of mountain ponds in the Shenandoah Mountains of Virginia were documented to migrate "en masse" every August and September, moving to and from ponds to breed.[238]

[232] Davis, Brian, Cox, Robert R.Jr., Kaminski, Richard M, Leopold, Bruce D. 2007. *Survival of Wood Duck Ducklings and Broods in Mississippi and Alabam*a. JOURNAL OF WILDLIFE MANAGEMENT, 71(2): 507-517.
[233] Gunzburger, Margaret S. 2005. *Differential Predation on Tadpoles Influences the Potential Effects of Hybridization between Hyla cinerea and Hyla gratiosa*. JOURNAL OF HERPETOLOGY, 39(4): 682-87.
[234] Harden, Leigh Anne, Price, Steven J., Dorcas, Michael E. 2009. *Terrestrial Activity and Habitat Selection of Eastern Mud Turtles (Kinosternon subrubrum) in a Fragmented Landscape: Implications for Habitat Management of Golf Courses and Other Suburban Environments.* COPEIA, (1) 78-84.
[235] Buhlmann, Kurt A., Congdon, Justin D., Gibbons, J. Whitfield, Greene, Judith L. 2009. *Ecology of Chicken Turtles (Deirochelys Reticularia) in a Seasonal Wetland Ecosystem: Exploiting Resource and Refuge Environments*. Herpetologica, 65(1): 39-53.
[236] Snodgrass, Joel W, Ackerman, Jerry W., Bryan Jr., A. Lawrence, Burger, Joanna.1999. *Influence of Hydroperiod, Isolation, and Heterospecifics on the Distribution of Aquatic Salamanders (Siren and Amphiuma) among Depression Wetlands.* COPEIA, (1): 107-113.
[237] Snodgrass, Joel W., et al. 1996. *Factors Affecting the Occurrence and Structure of Fish Assemblages in Isolated Wetlands of the Upper Coastal Plain, U.S.A.*. CAN. J. FISH. AQUATIC. SCIENCE, 53(2): 443-454.
[238] Gill, Douglas E. 1978. *The Metapopulation Ecology of the Red-spotted Newt, Notophtalmus viridescens (Rafinesque).* ECOLOGICAL MONOGRAPHS, 48(2): 145-166.

- Several species of aquatic and semi-aquatic worm snakes, found primarily in geographically isolated wetlands formed metapopulations in the Lower Atlantic Coastal Plain of South Carolina during periods of inundation when wetland boundaries expanded and the wetland system became more interconnected.[239]

- Alligators in southern Georgia were shown to form a functional connectivity among the seasonal wetland, terrestrial, and creek–river systems, and that this connectivity is a consequence of the ontogenetic niche shift in habitat use and results in significant movement of energy and biomass. As alligators progress from juvenile life stages to adulthood, they shift from using wetland habitat to using riverine habitat. Females also return to wetlands to breed.[240]

Decreasing the amount of geographically isolated wetlands has been shown to reduce the population of species in larger wetlands.[241] This phenomenon has been documented extensively in populations of pond-breeding amphibians like newts.[242] The loss or alteration of any wetland, large or small, reduces the total number of sites at which pond-breeding individuals can reproduce and successfully recruit juveniles into the breeding population.[243] Decreasing the amounts of geographically isolated wetlands reduces the number of individuals dispersing and increases the distance individuals must travel between wetlands, decreasing the species' ability to maintain larger and more viable meta-populations.[244]

For all the reasons stated immediately above, the scientific evidence exists to establish the requisite significant nexus between Carolina and Delmarva Bays,[245] Pocosins[246]and other similar coastal depressional wetlands[247] and downstream traditional navigable waters allowing these waters to be defined as waters of the United States by rule.

4. *Northern Vernal Pools[248]*

Northern vernal pools have many physical, chemical, and biological impacts on navigable waters:

- During high precipitation events or in specific landscape positions, northern vernal pools can have surface water connections to adjacent or nearby navigable waters and may provide groundwater input to adjacent waters, shallow aquifers, ephemeral streams, and

[239] Russell, Kevin R. 1999. *Aspects of the Ecology of Worm Snakes (Carphophis amoenus) Associated with Small Isolated Wetlands in South Carolina*. JOURNAL OF HERPETOLOGY. 33(2): 339-344.
[240] Subalusky, Amanda L., Fitzgerald, Lee A., Smith, Lora L. 2008. *Ontogenetic Niche Shifts in the American Alligator Establish Functional Connectivity Between Aquatic Systems.* BIOLOGICAL CONSERVATION, 142: 1507-1514.
[241] Semlitsch, Raymond D., Bodie, J. Russell.1998. *Are Small, Isolated Wetlands Expendable?* CONSERVATION BIOLOGY, 12(5): 1129-33.
[242] Gill, *supra note* 239.
[243] Semlitsch, *supra note* 242.
[244] *Id*.
[245] *See also* Woolford and Carroll (July 2014).
[246] *Id.*
[247] *Id*.
[248] This section is excerpted and summarized from Woolford et al (October 2014) at 11-12.

river networks.

- Northern vernal pools that do not share surface or groundwater connections to navigable waters impact hydrology in river networks by intercepting and storing water before either discharging it slowly or exporting it via evapotranspiration.

- Vernal pool hydrology allows for nutrient retention and nitrogen transformation, and vernal pools likely retain pollutants and toxins and prevent these compounds from entering downstream waters. Soluble compounds, alternative, may be delivered to nearby nabigavle waters through groundwater connections.

- Many types of cyclic colonizing invertebrates adapted to migrate between ephemeral wetlands and permanent water are found in northern vernal pools, and represent an important flow of energy and nutrients into navigable waterways flowing vernal pool dry down.

5. *Western Vernal Pools*[249]

Western vernal pools are unique wetland ecosystems have a variety of significant physical, chemical, and biological impacts on downstream waters due to their hydrology, isolation, and landscape context. These include:

- Western vernal pools typically have predictable hydrologic cycles that regulated run-off flow and volume, nutrient, carbon, and salt export, and facilitate nutrient cycling among uplands, wetlands, and navigable waterways.

- Storage of stormwater and sediment in vernal pools limits erosion and run-off that would otherwise reduce water quality of navigable waters.

- Many western vernal pools are connected to other wetlands as a complex during the wettest season, and may be connected to navigable waters through ephemeral streams, swales, or overland sheet flow, facilitating nutrient, sediment, and organic matter transfer.

- Animals migrating between western vernal pools and navigable waters carry passively dispersing propagules and invertebrates to navigable waters, where they help maintain species and genetic diversity.

6. *Sinkhole Wetlands in Karst Regions*[250]

Sinkhole wetlands occur in topographic depressions, which are formed when limestone bedrock is dissolved and the overlying soil collapses. Sinkhole wetlands in karst regions fit into several categories that have differing hydrologic connections to groundwater, various hydroperiods, and

[249] This section is excerpted and summarized from Woolford et al (October 2014) at 15.
[250] This section is excerpted and summarized from Woolford et al (October 2014) at 25-30; *See also* Woolford and Carroll (July 2014) re southeastern coastal depressional wetlands.

contrasting topography and geography. Compound sinks are typically connected to groundwater systems, while karstic pans are usually isolated. **Sinkhole wetlands of each category generally have significant physical, chemical, and/or biological impacts on downstream waters:**

- Karst wetlands can mediate flooding and stormwater run-off, and reduce peak flows by retaining water on the landscape before it reaches navigable waterways.

- Compound sinks can slow water infiltration aquifers in karstic landscapes and allow for sedimentation and pollutant removal, while karstic pans eliminate water quality deterioration by retaining water and restricting surface water-aquifer connectivity.

- Karstic wetlands transform nutrients and organic compounds, and cycle organic carbon that can be exported to navigable waters via ephemeral streams or aquifer connections to river networks.

- Karst wetlands in the Mammoth Caves region are home to a diversity of invertebrates, including cyclic colonizers that migrate between these wetlands and permanent waters, as well as passively dispersing invertebrates that move among lentic and lotic systems on the feet, fur, and feathers of other animals.

- Some sinkhole wetlands in Virginia are connected to navigable waters by the movement of C. serpentina [Eastern Snapping Turtle], which can be a frequent colonizer of newly inundated waters and is commonly present in permanent sinkhole wetlands (such as some compound sinks); this is likely the case in all karstic regions in the United States.

7. *Nebraska Sand Hill Wetlands*[251]

Ecoregion 44 is named the "Nebraska Sand Hills," and is the largest sand-dune area in the Western Hemisphere. This approximately 12 million-acre region of central and eastern Nebraska contains over 1,000,000 acres of sandhill wetlands (LaGrange 2005). The "other waters" in this region include approximately 177,000 acres of open water and marsh, i.e., permanently and semi-permanently inundated wetland, and 1.13 million acres of wet meadow, i.e., ephemeral and seasonal wetlands (Rundquist 1983). Sandhill wetlands range in size from less than an acre to 2,300 acres, but 80% are less than 10 acres (Wolfe 1984).

Ginsberg (1985) noted that although many of these wetlands and lakes appear to be geographically isolated wetlands, they are predominantly hydrologically connected to and represent an extension of the groundwater, particularly in the eastern and central sandhills and thereby supply base flows to the streams and other waters in the region. These sandhill wetlands developed as groundwater seepage areas in the valleys of wind-deposited sand dunes (Sidle and Faanes 1997). Rundquist et al. (1985) provided evidence of groundwater flow-through in a shallow lake, with the groundwater flowing toward Blue Creek, about 3 miles away. LaBaugh (1986) also documented interconnections and flow between sandhill wetlands and lakes and

[251] This subsection excerpted from Ducks Unlimited 2014 Rule Comments at Section III. *See also* Woolford et al (October 2014) at 35-39.

groundwater as water in this interconnected system flowed toward lower elevations. Novacek (1986) stated that the sandhill wetlands in Nebraska (including wet meadows) are important to water table and aquifer recharge, with the region containing five principal drainage basins that all ultimately empty into the Platte and Missouri rivers. It has also been stated that most sandhill wetlands are also interconnected with the important Ogallala aquifer as well as the local groundwater (Tiner 2002).

Winter (1998) stated that, "groundwater and surface-water interactions have a major role in affecting chemical and biological processes in lakes, wetlands and streams, which in turn affect water quality throughout the hydrologic system." The extent of connectivity between the wetlands, groundwater and downstream flowing waters was provided by Chen and Chen (2004) when they documented that a very high percentage of the flows of the Dismal and Middle Loup rivers was supplied by groundwater. Further evidence of the connectivity with the groundwater is the presence of fens in the region (Steinauer 1995).

Tiner et al. (2002) indicated that most sandhill wetlands are interconnected with the local groundwater and the agriculturally important Ogallala, or High Plains, aquifer. Importantly, in terms of the issue of connectivity of the wetlands with downstream waters via groundwater, Weeks and Gutentag (1984) stated that groundwater from this aquifer discharges naturally into flowing streams and springs, and that the aquifer and valley-fill deposits and associated streams comprise a stream-aquifer system that links the High Plains aquifer to surface tributaries of the Platte, Republican and Arkansas rivers.

In summary, the scientific evidence seems clear that the Sandhill wetlands are, in the aggregate and generally, connected via groundwater linkages to navigable waters and their tributaries in this region of the country. Thus, they should be strongly considered for designation as jurisdictional by rule.

8. *Playa Wetlands, Rainwater Basins, and Platte River Region Wetlands*[252]

Playa Wetlands: Playas are relatively shallow, ephemeral, closed-basin wetlands usually not proximate or adjacent to navigable waters (Figure 12). They occur in high densities in several areas within ecoregion 27, the Central Great Plains, including the Rainwater basin region of Nebraska (see below) where its wetlands are very similar in structure and function to the playas that occur farther south. These shallow, typically circular basins often lie at the lowest points in relatively flat watersheds, and each collects runoff from the surrounding area. About 66,000 playas remain in the relatively flat topographic landscape of the Great Plains of Kansas, Colorado, Oklahoma, Texas, and New Mexico (Playa Lakes Joint Venture http://www.pljv.org; Smith et al 2012; Figure 13). In Kansas, a recent study using improved techniques documented about double the number that had previously been estimated (new estimates of about 22,000 playas), and noted that more than 80% were smaller than 5 acres in size (Bowen et al 2010). They occur in clusters of high density in several distinct areas across the landscape of ecoregion 27, and are dominant components of the landscape in these areas (Bowen et al 2010). For example, the total playa area in west Texas was estimated (Fish et al 2000) to be almost 400,000 acres. Thus, given their numbers, distribution, and structural and functional similarities, the

[252] This section, including figure and citations references, is excerpted from Ducks Unlimited 2014 Rule Comments.

value of playas is most reasonably assessed in the aggregate across the landscapes in which they occur (Johnson et al 2012; Smith et al 2012).

The Ogallala (or High Plains) aquifer underlies about 170,000 square miles and is shared by eight states, including much of the playa region, as well as the Rainwater Basin area of Nebraska. This aquifer is the primary source of water in the region with about 97% being used to support irrigated agriculture (Maupin and Barber 2005), and the water has an economic value of approximately $20 billion (Moody 1990). The aquifer also provides drinking water for about 82% of the region's residents (Maupin and Barber 2005).

Conceptual models have proposed for years that the playas are critical recharge zones for the Ogallala (e.g., Wood 2000). Gurdak and Roe (2009; 2010) recently provided a comprehensive synthesis of the related literature (approximately 175 studies) and concluded that playas are pathways of relatively rapid recharge and provide an important percentage of recharge to the Ogallala aquifer. Thus, playas are, in the aggregate, critical to supplying water to an important, interstate water body, and they therefore impact the water quantity of the underlying aquifer (Gurdak et al. 2009; 2010). Furthermore, Rainwater and Thompson (1994) stated that landscape changes increased water collection in playas and that infiltration had also increased. They further stated that these factors increased the contribution of playas to Ogallala aquifer recharge and that, in some areas, infiltration from playas that receive runoff are the principal source of aquifer recharge.

Understanding that the CWA has no jurisdiction over groundwater, the importance of the aquifer to human health, welfare and economic benefit is therefore not a direct, independent concern of the Act except as it is affected by condition of surface water and wetlands. **However, Weeks and Gutentag (1984) stated that groundwater from this aquifer discharges naturally into flowing streams and springs, and that the aquifer and valley-fill deposits and associated streams comprise a stream-aquifer system that links the High Plains aquifer to surface tributaries of the Platte, Republican and Arkansas rivers, as well as the Pecos and Canadian rivers (Kreitler and Dutton 1984).** Further strengthening documentation of the linkage of wetlands, groundwater, and flowing navigable waters, Slade et al. (2002) showed that channel gain or loss in Beals Creek (draining into the Colorado River basin of Texas) corresponded to discharges from or recharges to the Ogallala aquifer. **Thus, the significant nexus between the playa wetlands and navigable waters is created by their direct linkage through the Ogallala aquifer.**

In addition to the impact that playa wetlands have on the quantity of water moving from the wetlands, through the aquifer, and to navigable waters, they also have an impact on the quality of that water. **Ramsey et al. (1994) showed that playa wetlands improve the water quality of storm runoff, demonstrating that water quality in the playa is better than that found in storm runoff before entering the wetland.** They stated that this wetland function thereby contributes to improving/maintaining groundwater quality in the aquifer, as would be predicted in light of playas being the principal source of aquifer recharge in some areas (Rainwater and Thompson 1994). Thus, as a result of the relationships with navigable rivers in the region (Weeks and Gutentag 1994), playas must also improve water quality in those streams and rivers as well.

Hence, impaired water quality functions of playas would have adverse impacts on the quality of water in the aquifer and linked navigable waters. Increased agricultural application of nitrate fertilizers makes the groundwater more vulnerable to nitrate contamination (Gurdak and Roe 2009) via playa recharge. Belden et al (2012) found that the water in many playas sampled in Nebraska, Colorado, Texas and New Mexico contained elevated levels of pesticides, particularly herbicides. Given the linkage of playas to the Ogallala, the potential impacts of what might be deposited in the playas to the groundwater are clear. In addition, as a result of slow recharge rates, the limited ability of the aquifer to attenuate contaminants such as nitrates, and the prolonged travel times of aquifer water, any potential contamination would have very long duration (Gurdak and Roe 2009) even if corrective action were taken. **Thus, the natural denitrification function of intact playas takes on added significance in relation to the quality of water in the aquifer, and ultimately, to its interconnected flowing waters.**

Rainwater Basin and Platte River Region Wetlands: The Platte River and its major tributaries transect ecoregions 25 (High Plains) and 27 (Central Great Plains), and the Rainwater basin region is in ecoregion 27, along with most of the playas (see above). **In addition to the previously discussed documentation and acceptance of the fact of the hydrologic connectivity between the Platte River, its tributaries, and "other waters" in the region, Chen (2007) noted that the river, alluvial aquifer, and the riparian zone all form a well-connected hydrologic system.** He additionally indicated that water in streams there may come from shallow or deep aquifers depending on evapotranspiration rates, further indicating the connectivity of the components of the aquatic system there.

Millions of waterfowl migrate through the region every year and concentrate on the small percentage of the region's remaining wetlands (approximately 5%) that provide habitat, particularly in the spring. In addition, nearly the entire population of mid-continent sandhill cranes (~500,000 birds) stages there (Krapu et al. 1982; Vrtiska and Sullivan 2009), and it is an important concentration site for the federally endangered whooping crane (Austin and Richert 2005). Although this region is a migration and staging area for the crane species, the situation requires further examination because huge numbers of the sandhill cranes, and non-negligible percentages of the whooping crane, roost at night by standing in the very shallow waters of the Platte River (along about 65 miles of its length in central Nebraska), but they leave the river to use other habitats for feeding and loafing during the day. While the sandhill cranes feed predominantly on waste grain in crop fields (Krapu et al. 1984; Davis 2003; Anteau et al. 2011), the whooping crane spends more time in palustrine wetland habitats (Austin and Richert 2005). Austin and Richert (2005) analyzed habitat use from 1977-99, but did not appear to directly review their data relative to the question of the degree of dependence of whooping cranes on both the riverine habitat and the freshwater wetlands in the sense required to firmly establish a significant nexus as currently proposed.

Folk and Tacha (1990) documented patterns of use of the North Platte River and the region's temporary and semi-permanent palustrine wetlands by sandhill cranes. The North and central Platte River valley provides the primary spring staging habitat for about 80% of the entire midcontinent population of the species (Pearse et al 2010), and the cranes typically roost in the river channel or nearby wetlands for safety during the night. They found that the cranes were

collectively interdependent upon the shallow navigable river and the region's wetlands, providing a biological nexus between the two types of waters. Taken together, these and other studies (Bishop et al 2010; Gersib et al 1989; Pearse et al 2011; Tacha et al 1994) indicate that the Platte River and the wetland of the rainwater basin and surrounding landscape function as a complex of aquatic habitats for a diversity of species, and as the "other waters" of the region are negatively impacted, so too is the integrity of the navigable Platte River.

Thus, playa wetlands, as well as the Rainwater basin wetlands, provide strong evidence of the kinds of linkages (often via important groundwater bodies) and relationships between "other waters" and downstream or navigable waters that can inform significant nexus analyses of aggregated wetlands in these and other regions of the country.

9. *Interdunal Wetlands*[253]

Interdunal wetlands exist along the coastlines of America's oceans and Great Lakes among sand dunes formed by nearshore processes and historically higher water levels. These landscapes have several significant physical, chemical, and biological impacts on navigable waters, including streams, the Great Lakes, and the coastal oceans, including the following:

- Seasonal shifts in the groundwater hydrologic gradient cause exchange between interdunal wetlands and navigable waters, including streams, the Great Lakes, and coastal oceans.

- Fluctuating dunes commonly create temporary connections between interdunal wetlands and navigable waters, stimulating exchange of water, sediments, nutrients, and organic matter.

- Open water interdunal wetlands can sequester incoming suspended solids, as well as attached phosphorus and pollutants such as heavy metals and pesticides, and may prevent them from entering nearby navigable waters.

- Interdunal wetlands support some 1,400 species of living organisms and are extremely important staging and breeding areas for waterfowl, shorebirds, and wading birds that migrate along the Atlantic, Mississippi, and Pacific flyways.

- Many resident birds, mammals, reptiles, and (during times of temporary connection to navigable waters) fish in interdunal wetlands move between these habitat and navigable waters such as streams and rivers, Great Lakes, and coastal oceans, and represent transfers of energy, nutrients, genetic material, and organic matter,

[253] This section is excerpted and summarized from Woolford et al (October 2014) at 49-50.

L. Significant Nexus; Additional Science-based Comments Regarding Connectivity[254]

As is evident from the Connectivity Report and the SAB Connectivity Peer Review Report, the scientific literature clearly documents that many other wetlands and wetland subcategories falling within the proposed rule's "other waters" classification have similar types of significant nexuses with downstream navigable waters. This section highlights some of the science regarding the existence, geographic extent, and general pervasiveness of those avenues of significant nexus. One objective of this summary is to help convey a sense of the cumulative effect of many small, scattered, seemingly isolated impacts to "other waters" ultimately has an impact on downstream navigable waters that can only be considered significant, as evidenced by the current state of the Nation's waters being a reflection of the past cumulative degradation and loss of "other waters."

1. Surface Water Storage and Flood Abatement

Wetlands in any watershed, including physically non-proximate wetlands, serve a critical function in storing and holding water and associated pollutants (including sediment) that otherwise would flow more rapidly and directly toward navigable waters. Thus, wetlands play a significant role in local and regional water flow regimes by intercepting storm runoff and storing and releasing those waters over an extended period, either through surface or groundwater discharges (Mitsch and Gosselink 1986). Floods continue to be the most economically significant natural hazard in the U.S., and have a significant negative impact on national, regional, and local economies, as well as taking a toll on human life, health, and general welfare. *See* Blann et al's (2009) thorough review of the effects of surface and subsurface drainage on aquatic ecosystems. They make an important contribution by collecting and effectively synthesizing information that relates to the effects of drainage, often involving either existing or past "other waters," on the chemical, hydrologic and physical, and biological integrity of downstream waters. Their synthesis underscores the significance of the cumulative impacts of the upstream alterations of water bodies.

Another recent paper (McLaughlin et al 2014) specifically examined geographically isolated wetlands from the standpoint of the current "significant nexus" context. They added to the many others who have found that these kinds of "other waters" moderated the frequency of both very high and very low water tables, and they also buffered stream base flows, thereby demonstrating the significant nexus with flowing waters. This functional connection between geographically isolated wetlands and navigable waters reduces the risk of downstream interests to flood hazards, and also reduces the erosion of stream banks and sediment movement and the physical, chemical, and biological consequences of those alterations to downstream hydrology. Additionally, groundwater exchange is controlled more by wetland perimeter than surface area, indicating the importance of many small wetlands. Importantly, their modeling work verified that given the same surface area of wetlands, landscapes with many small wetlands had more "capacitance" than landscapes with fewer large wetlands. **They conclude that a significant nexus exists as a consequence of the influences of these "other waters," in the aggregate, on regional water tables and regulation of base flows.**

[254] Excerpted from Ducks Unlimited 2014 Rule Comments at Section IV.

The presence of wetlands in watersheds was found to be a significant factor in the reduction of 50- to 100-year floods (Novitski 1978a). In Wisconsin, Illinois, and the northeast U.S., wetland area within watersheds has been shown to be positively correlated with reduction in peak flows (Novitzki 1978a, 1982, 1985; Demissie et al. 1988; Demissie and Khan 1993). Johnston et al. (1990) modeled the relationship between wetland flood storage and flood peak reduction and found that in watersheds with a wetland area of less than 10%, major effects on flood flows were associated with small additional losses in wetland area.

The decrease of 80% of the storage capacity of the Mississippi River floodplain as a result of levees and loss of forested and other wetlands (Gosselink et al. 1981) is widely considered an important contributing factor to the increasing frequency of flooding along the Mississippi River (Belt 1975). Hey et al. (2004) calculated that restoring 4 million acres of former wetlands in the Mississippi River floodplain could create approximately 16.5 million acre-feet of flood storage. Conversely, the loss of existing wetland acreage in the floodplain and watershed would increase flood flows on this navigable river. An increase in discharges from agricultural landscapes, at least in part due to wetland drainage, was shown to be a primary contributing factor in carbon, nutrient, and pesticide exports to the Gulf of Mexico (Raymond et al 2008).

Studies in landscapes with other types of non-proximate wetlands have similarly demonstrated that drainage of wetlands and other areas results in increased peak flows in navigable waters and their tributaries (Allan 2004; Skaggs et al. 1980). Ogawa and Male (1983) employed a hydrologic simulation model to demonstrate that for relatively low frequency floods (those occurring with 100-year interval or greater which are also those with the greatest potential for catastrophic losses) the increase in peak stream flow was very significant for all sizes of streams when wetlands were removed from the watershed. Brody et al. (2007) analyzed 383 non-hurricane flood events in Florida, and their results suggested that property damage caused by floods was significantly increased by alteration of naturally occurring wetlands. Many of these floods were presumably in association with jurisdictional waters.

As with USDA programs in the prairie pothole region, Duffy and Kahara (2011) showed that wetlands restored by the Wetland Reserve Program in the Central Valley of California provided flood storage of 113 billion cubic feet in 2008. They also documented that, in the aggregate, that the palustrine, riparian, and vernal pool wetlands in the region provided flood storage of 4159, 2182, and 2140 cubic meters, respectively. Clearly, loss of wetlands in this region would ultimately increase flood flows in navigable rivers like the Sacramento and San Joaquin.

Viewed on the whole, studies like these provide examples of the general importance of wetlands in flood attenuation. The aggregate contributions of individual wetlands distributed across a regional landscape, and often located within topographically higher portions of the watershed and non-proximate to other jurisdictional waters, can nevertheless exert a very significant effect on flood volumes. Thus, many physically non-proximate wetlands are in fact adjacent in functional sense, and exhibit a significant nexus with, navigable waters that are clearly jurisdictional from the perspective of the Clean Water Act and federal interests such as flood and pollution control.

2. Groundwater Recharge and Base Flow Maintenance

Attention is being increasingly focused on the growing problems associated with rapidly increasing use and diminishing supply of groundwater resources in many areas across the U.S. (Russo et al 2014). That being the case, the proposed rule should keep in mind the role that surface wetlands, particularly "other waters," play in groundwater recharge.

There is a much greater degree of linkage between wetlands, including aggregations of physically non-proximate wetlands, and navigable waters via groundwater connections than is generally appreciated. Wetlands very often contribute to groundwater recharge, and this groundwater then continues to move downslope toward flowing streams and rivers and thus ultimately contributing water to jurisdictional waters (Ackroyd et al. 1967; Winter et al. 1998).

Winter (1998) provided a good overview of the interconnections between streams, lakes, and groundwater systems. He concluded, "Groundwater interacts with surface water in nearly all landscapes," and provided examples from glacial, dune, coastal, karst, and riverine systems regarding these interactions. *See also* Hayashi and Rosenberry (2002). Woessner (2000) provided an overview of the interactions between groundwater and flowing waters in a fluvial plain setting, and highlighted the significant potential that exists for pollution of surface waters, such as jurisdictional waters, if groundwater becomes contaminated. **Other review papers and individual studies typically demonstrate that not only do connections almost always exist between wetlands, groundwater, and streams and rivers, but also that these interconnections are usually complex.**

Gonthier (1996) documented the linkage and flow of water between an extensive bottomland hardwood wetland in Arkansas (a Ramsar-designated Wetland of International Importance), local flow of groundwater, and the Cache River, up to ~2 miles away. **However, the farther the wetland from the river, the more likely the water from the wetland was to enter groundwater flowing to the deeper Mississippi Alluvial Valley aquifer which discharges flows to major navigable rivers, including the Cache, White and Mississippi.**

Flow of water and its chemical constituents from wetlands, via groundwater, to the water of the Great Lakes (i.e., TNWs) is extensive and important and has been frequently documented. Doss (1993) examined a coastal wetland complex in Indiana on the south shore of Lake Michigan and found strong hydrologic connectivity between the many interdunal wetlands and the lake, noting that groundwater discharge to Lake Michigan was the only significant loss of water from the wetlands besides evapotranspiration. Holtschlag (1997) evaluated Michigan's entire Lower Peninsula, and estimated that groundwater discharge constituted 29.6 to 97.0 percent of the annual percentage of stream flow in the region. Holtschlag and Nicholas (1998) estimated that 67.3% of stream flow in the Great Lakes basin is groundwater discharge, and represents 22-42% of the Great Lakes water supply, its largest component. A significant portion of this groundwater is likely the result of recharge from wetland basins. In Wisconsin, groundwater flow into Lake Michigan is between 7 and 11% of the river flow, a significant part of the lake's total water budget (Chekauer and Hensel 1986).

In the case of vernal pools in California, Hanes and Stromberg (1996) reported that wetlands

with discontinuous or a weakly developed hardpan had high rates of seepage and therefore contributed to subsurface flow. Tiner et al. (2002) stated that during the wet seasons these geographically isolated wetlands formed hydrologically linked complexes that could drain into perennial streams.

Non-proximate wetlands that exist in karst topography are often directly linked to subsurface water flows of relatively high velocity, moving easily through underground channels, caves, streams, and cracks in the rock. There tend to be many springs and seeps, many with surface connections, which are the source of some large streams (Winter et al. 1998), and Winter (1998) stated that groundwater recharge in karst terrain is efficient. Entire streams can go subsurface and reappear in other areas, connect directly with wetland basins, and contaminants are easily mobilized in these regions.

In addition to the direct hydrologic connections that exist between groundwater and streams, the nature of the groundwater discharge to streams can have impacts such as influencing benthic productivity (Hunt et al. 2006). The nature of recharge from wetlands to this pool of groundwater can therefore create an even more complex significant nexus between the wetlands (frequently non-proximate) and the navigable water as a result of the interacting hydrologic and biologic relationships.

Clearly, demonstrated linkages between wetlands, groundwater and navigable waters within a broad variety of wetland categories and across a diversity of landscapes and regions, indicate that adjacency and significant nexus should be interpreted from a functional perspective if water quality is to be protected as intended by the CWA.

3. Water Quality Relationships

It is well established that wetlands of all types have the capability to improve water quality by trapping, precipitating, transforming, recycling, and/or exporting many of its chemical and waterborne constituents (van der Valk et al. 1978; Mitsch and Gosselink 1986). They serve as a natural buffer zone between upland drainage areas and open or flowing water. They can improve water quality by removing heavy metals and pesticides from the water column, and by facilitating the settling of sediment to which many pollutants are attached. Wetlands remove excess nutrients, e.g., phosphorus and nitrogen compounds, by incorporating them into plant tissue or the soil structure and by fostering an environment in which microbial and other biological activity pulls these compounds out of the water, thereby enhancing water quality.

Importantly, water quality contributions by wetlands can occur no matter where the wetland occurs on the landscape, and non-proximate waters also serve as chemical and nutrient sinks, trapping and holding these compounds (Mitsch and Gosselink 1986; Mitsch et al 1999). Retention time, obviously prolonged when waters flow into a wetland before leaving via surface runoff or through infiltration into subsurface groundwater that flows to a river, has been shown to be the most important factor in promoting nitrogen processing (Jansson et al 1994). For example, it has been shown that when water naturally filters through Delmarva bays (a category of geographically isolated wetlands) instead of being circumvented through drainage canals to a navigable water, it flows through groundwater pathways to the Chesapeake Bay with much of its

nitrogen having been removed (Laney 1988; Shedlock et al. 1991; Bachman et al. 1992; Fretwell et al. 1996). Nitrogen is one of the principal pollutants of concern in the waters of the Chesapeake Bay, and in many other waters that supply domestic, municipal, irrigation and commercial needs. In Michigan, Whitmire and Hamilton (2005) concluded that a remarkably small area of wetland can strongly influence water quality relative to nitrate and sulfates. Some of their study wetlands were connected to the groundwater system. In Lake Michigan and Lake Huron, the biota associated wetlands near outlets from agricultural drainage systems were different than that of coastal wetlands not close to such outlets (Schock et al 2014). These differences were associated with increased levels of nitrates, turbidity, and other chemical characteristics of the drainage water, thereby providing another example of the impacts related to upstream drainage of "other waters" that could have intercepted and improved water quality.

Lin and Norman (2003) demonstrated that wetlands in California were able to remove an average of 69% of the selenium contained within agricultural runoff they received, thereby providing a natural mechanism for reducing the availability of this trace element which becomes toxic if bioaccumulated in the food chain. Weller et al. (1996) demonstrated that riparian wetlands of all types in eight watersheds of Lake Champlain were important in reducing phosphorus loading of surface waters.

With increased flows being a direct result of wetland drainage and artificially increased connectivity with downstream waters, those increased flows in turn increase stream incision, the rate and nature of channel evolution, and the rate of erosion and sediment transport (e.g., Simon and Rinaldi 2006). Bellrose et al. (1983) and Mills et al. (1966) also described how sedimentation, including stream bank erosion, has created navigation and ecological problems on the Illinois River. One group of researchers stated that "discharge is a master variable that controls many processes in stream ecosystems" (Doyle et al 2005).

Fennessy and Craft (2011) examined the relationships of Farm Bill wetland conservation programs to nutrient and sediment loads contributed by the entire Glaciated Interior Plains, (encompassing much of a seven-state area from Minnesota to Ohio) to the Mississippi River and Gulf of Mexico. Wetlands involved included about 260,000 acres of a variety of wetland types scattered throughout the region. They estimated that these wetlands reduced the region's contribution of nitrogen, phosphorus, and sediment to the Mississippi River by 6.8%, 4.9%, and 11.5%, respectively. Given that excess nitrogen is widely accepted as the primary cause of the hypoxic zone (Moreau et al. 2008), these wetlands clearly exhibit a significant nexus and provided significant benefit to the Mississippi River and Gulf of Mexico. However, it is important to recognize that if analyzed on the basis of only single point of entry watersheds, they would likely not have been determined to be jurisdictional wetlands, and this benefit to the Mississippi River and Gulf would be lost if those waters were significantly impacted by the draining or filling of the wetlands. A disproportionately high percentage of the nitrate load that the Mississippi River exports to the Gulf of Mexico comes from this region (Hey 2002), with the role of wetlands (i.e., "other waters"), and loss of that function along with loss of wetlands from across the landscape, being a significant factor (Hey et al 2012). *See also* Diaz and Rosenberg 2008; Duffy and Kahara 2011.

Human-induced eutrophication of lakes and rivers is a growing issue across the U.S., with total nitrogen and total phosphorus for all EPA nutrient ecoregions exceeding reference median values (Dodds et al 2009). In light of the scientific evidence, it is evident that loss of wetlands in the "other waters" class, in the aggregate, has played a significant role in this long-term trend.
There is a vast body of scientific literature dealing with the relationship of wetlands (including those that are physically non-proximate) and water quality, and the literature cited above is only a small sample of what is available on the topic. As Whigham and Jordan (2003) concluded in a review paper, from a water quality perspective, "so-called isolated wetlands are rarely isolated" from other waters of the United States.

Human Health Issues: A few examples of pollution of waters are informative regarding the risks associated with failing to recognize that a significant nexus exists between wetlands and other physically non-proximate waters, groundwater, and navigable waters, and failing to view them as a single system in determining CWA jurisdiction. Additionally, from the standpoint of interpreting these risks, some examples of "artificial" waters nevertheless serve as instructive surrogates for the potential water-borne pollution pathways for natural wetlands. For example, Ryan and Kipp (1997) assessed the impact of liquid wastes discharged from an enriched uranium recovery plant to evaporation ponds in Rhode Island. They identified chemical and radioactive constituents that infiltrated from the ponds to the groundwater aquifer, creating a plume that ultimately discharged into the Pawcatuck River.

Superfund sites offer many examples of the hazards associated with the pollution of non-proximate waters, whether natural or artificial, to navigable waters. In Macomb County, Michigan, at a 100-acre site at which effluent from a waste oil reclamation facility was held in ponds (EPA Superfund ID No. MID980410823), groundwater was found to be contaminated with volatile organic compounds which flowed toward business and residences, causing residents to use bottled water for potable purposes. Fish collected in the nearby Clinton River had elevated PCB levels.

The Vertac site in Arkansas (EPA RCRA ID No. ARD000023440) involved the contamination of an aquifer with dioxins, furans and other chemicals that eventually contaminated Bayou Meto, a traditionally navigable waterway. White and Seginak (1994) documented that as a result of the dioxins and furans in Bayou Meto, wood ducks breeding there experienced suppressed nest success, hatching success, and duckling production. Teratogenic effects, such as crossed-bills, were documented at the sites with the highest levels of contamination. Similar situations of contamination of navigable waters as a result of linkages to non-proximate waters and groundwater are unfortunately not uncommon.

More recently, concerns have arisen over coal ash settling ponds and their nexuses to navigable and other waters. At a site adjoining Lake Michigan and the Indiana Dunes National Seashore in northwest Indiana, Cohen and Shedlock (1986) noted elevated levels of boron, arsenic, and molybdenum in groundwater associated with a coal ash pond. Subsequent to the 1.1 billion-gallon ash release from holding ponds in Tennessee, the Gibson plant in Indiana has come under scrutiny as a result of boron concentrations (reported to cause nausea and diarrhea, among other potential adverse health effects) increasing in drinking water wells of East Mount Carmel (www.courier-journal.com February 23, 2009). Significantly elevated concentrations of selenium

(teratogenic and toxic at high concentrations) in an associated cooling lake caused a closure to public fishing and raised concerns about nesting endangered least terns. Our understanding is that the EPA has been assessing the risks associated with coal ash more closely. While the question of the level of hazard associated with coal ash is not directly at issue with respect to the CWA, we encourage the EPA to look to those situations as examples of "artificial" physically non-proximate surface waters that can provide information and perspectives on the relevant question of the many avenues of significant nexus between non-proximate and other waters that exists in regions across the country.

Finally, harmful algal blooms are an increasing water quality problem that clearly has significant human health and economic implications (Dodds et al 2009; Falconer I.R. 1999). This problem has been exacerbated by the loss of the many, often small, isolated wetlands from across the landscape which, when protected, sequester the nutrients (phosphorus and nitrogen) that lead to the unnatural blooms. High phosphorus loading are primarily responsible for the resurgence of algal blooms in Lake Erie (International Joint Commission [IJC] 2014). Much of the phosphorus input comes with runoff during spring snowmelt and heavy precipitation events (IJC 2014), much of it coming from agricultural operations south of the west end of the lake in Ohio. Ohio has lost more of its wetlands (90%) than any other state except California (91%; Dahl 1990), and it is a reasonable presumption that many of those wetlands would have been classed as "other waters" and if they were still on the landscape they would intercepted some of that runoff and processed the nutrients it contained, thereby benefitting the integrity of Lake Erie.

4. Biological Nexus

Some avian species that spend significant time daily on saltwater (navigable) habitats are similarly dependent upon the presence of regional freshwater wetlands for purposes of osmoregulation (Woodin 1994). Some examples of such species include: black ducks in the northeast and mid-Atlantic coast and Chesapeake Bay that also depend upon inland freshwater wetlands (see Morton et al. 1989); California gulls using hypersaline Mono Lake and freshwater wetlands in southern California (Mahoney and Jehl 1985); and white ibises using estuarine rookeries and requiring freshwater wetland-derived prey for osmoregulation (Bildstein et al. 1990). Tens of thousands of waterfowl winter on and near the Great Salt Lake (Vest and Conover 2011), and some, such as northern shovelers and green-winged teal, feed on invertebrates (brine shrimp and brine flies) in the lake. However, both species are dependent upon the availability of freshwater wetlands for osmoregulatory purposes in order to use the food resources and habitats of the Great Salt Lake (Aldrich and Paul 2002). Thus, a diminishment or degradation of freshwater wetlands in the vicinity of the lake would translate to a diminishment of the biological integrity of that navigable water. Unfortunately, the research has not yet been conducted that would clearly show how distant those two species would fly to make use of freshwater wetlands.

We believe that, as shown clearly by the examples of the redheads and lesser scaup on the Gulf Coast, the dependence upon *both* navigable waters and non-proximate wetlands can constitute a significant nexus. In these cases, without the wetlands, the species would not occupy the region as a whole and the biological integrity of the navigable waters would therefore be impacted.

Within-season use of both categories of waters by examples of other migratory (not migrating) birds demonstrates similar dependency and a similar nexus.

Changes to flow regimes of navigable waters that result at least in part from degradation and loss of "other waters" also have a direct impact upon the biota of the navigable waters. Some species, for example, can be eliminated as a result of flows that are increased in magnitude and/or frequency (Allan 2004). Conversely, lower base flows that result from wetland drainage and reduced infiltration to the subsurface water that discharges to navigable waters also have a direct effect on the habitability of the latter for many taxa.

Numerous studies of amphibians have documented that the loss and degradation of "other waters" can affect population size, distribution, and movement as a result of the cumulative impact of the loss of "other waters" (e.g., McIntyre et al 2014; Rittenhouse and Semlitsch 2007; Schalk and Luhring 2010; Scott et al 2013). Where these populations and effects occur near navigable waters, the biological integrity of the navigable waters would therefore be impacted by the impacts to the "other waters."

M. The 2003 and 2008 Guidances leave millions of acres of lakes, potholes, and wetlands at risk of pollution and destruction.

The current 2003 and 2008 guidance documents, as well as the proposed rule's case-specific significant nexus test for "other waters," leave millions of wetland acres at risk nationwide. EPA acknowledged in its economic analysis of the 2011 draft guidance that "[s]ince *SWANCC*, no isolated waters have been declared jurisdictional by a federal agency." [255] Our review of several districts shows no indication so-called isolated waters such prairie potholes and playa lakes are receiving protection. [256]

EPA Region 8 staff reported in 2009 that they are losing protections for prairie potholes, playa lakes, and vernal pools. They report that Army Corps Sacramento, Omaha, and Albuquerque Districts –covering Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming, and 27 Tribal Nations – failed to assert jurisdiction in nearly 72% of their jurisdictional calls between June 2007 and August 2008, and that *SWANCC, not Rapanos,* was cited as the basis for lack of federal jurisdiction on 88% of these non-jurisdictional determinations. In numerous instances, these findings of no jurisdiction ignored important shallow sub-surface connections. [257]

At risk waters in the West include those that connect to TNWs and IWs through a ground water rather than a surface water connection. The "Lost" river drainages in eastern Idaho include 73 streams within a 5500 square mile area.[258] The rivers empty into the Eastern Snake Plain

[255] U.S. Environmental Protection Agency, *Potential Indirect Economic Impacts and Benefits Associated with Guidance Clarifying the Scope of the Clean Water Act Jurisdiction*, at 3 (April 27, 2011).
[256] *See, e.g.,* Earthjustice, et al. *Courting Disaster: How the Supreme Court Has Broken the Clean Water Act and Why Congress Must Fix It.* (April 2009), at 6-7 ("isolated" but navigable-in-fact skiing lake); 8-9 (North Dakota prairie potholes).
[257] 2009 EPA Inspector General Report at 9-10.
[258]EarthJustice, NWF, NRDC and Sierra Club, "Reckless Abandon" 12 (2004).

Aquifer, an underground water body twice the size of Lake Erie.[259] Eventually, the Aquifer discharges to the Snake River, itself a TNW, but also a major tributary to the Columbia River. As far back as 1985, the Walla Walla Corps District documented fishing, hunting, recreation, and agriculture connections to interstate and foreign commerce that established Clean Water Act jurisdiction over the Lost River drainages.[260] Based on the 2003 *SWANCC* Guidance, the Corps ultimately designated some of the Lost Rivers, including the Big Lost, but not the Little Lost, to be jurisdictional as TNWs. Others, including the Little Lost, should qualify as a TNW because of kayaking and guided recreation. The ESA-listed bull trout inhabits a number of these drainages as well.[261]

In the wake of the *2003 SWANCC* Guidance, the Albuquerque Corps District has disclaimed jurisdiction over entire "isolated" or "closed" basins in New Mexico, including the Sacramento, Yseltano Canyon (Tularosa Creek and tributaries), the Mimbres, the San Augustine Plains, Santa Clara Canyon, Estancia, Jornado del Muerto, and the Tularosa River Basins. [262] The New Mexico Department of Game and Fish noted the *SWANCC*-induced risk to these basins in a 2003 letter to EPA noting that about 20% of New Mexico's waters could be considered within closed basins, and "[m]ore than 84 miles of perennial and 3900 miles of intermittent waters exist within these close basins, representing over 14% of the perennial and intermittent waters in the state."[263]

In 2007, the Corps found an eight-acre playa in Colorado's Washington County non-jurisdictional because it was "isolated, … surrounded by uplands, … 4000-5800 feet from any potentially jurisdictional tributary, and [prior to *SWANCC,* likely] regulated solely based upon the presence of migratory birds."[264] The Corps made no effort, even though its determination was made in 2007, after *Rapanos*, to determine whether the playa, alone or aggregated with similarly situated wetlands, had a significant nexus to other waters of the United States.

Over 60% of Montana's mapped wetlands, accounting for almost 25% of the state's wetlands acreage, may be considered geographically "isolated" and at continued risk of losing Clean Water Act protections, even under this proposed rule.[265]

In finalizing this rule, we urge the agencies to consider all the scientific literature, as well as other documentation of physical, chemical, and biological connectivity, that is presented herein and in the administrative record.

[259] *Id.; see also,* Idaho National Laboratory Oversight Program, State of Idaho, *The Eastern Snake Plain Aquifer* 2-3 (May 2005) *available at: https://www.deq.idaho.gov/media/552772-newsletter_0505.pdf*
[260] *Id.* 13 *citing Initial Report on Isolated Waters in the State of Idaho Subject to Clean Water Act Jurisdiction,"* Walla Walla District, April 26, 1985.
[261] *Id.; See, e.g.*, USFS, Bull Trout Final Critical Habitat Justification, Chapter 28 (2010), *available at* http://www.fws.gov/pacific/bulltrout/pdf/Justification%20Docs/BTChapter28.pdf.
[262] *Imperiled Treasures, supra,* at 13-14.
[263] *Id.* at 14; *Reckless Abandon, supra,* at 7 *citing* Letter from Larry G. Bell, Commissioner, New Mexico Department of Fish and Game, to U.S. EPA, April 15, 2003.
[264] Buechler (2010), *supra,* at 15.
[265] *See* Vance, Linda K. 2009 *Geographically Isolated Wetlands and Intermittent/Ephemeral Streams in Montana: Extent, Distribution, and Function.* Report to the Montana Department for Environmental Quality and the U.S. Environmental Protection Agency. Montana Natural Heritage Program, Helena, Montana.

N. For the first time, the proposed rule is expressly excluding many ditches and other water features from CWA jurisdiction.

In the interest of increasing clarity and certainty about the scope of the Clean Water Act, we support the agencies' proposed list of waters to be explicitly excluded from jurisdiction by rule. We support the agencies' proposal to explicitly exclude erosional and artificial water features such as gullies, rills, non-wetland swales, small ornamental waters, water-filled depressions incidental to construction activity, among others. Expressly making these kinds of waters non-jurisdictional by rule should help convey clarity and address many of the concerns of important segments of the landowning public and, in particular, the farming and ranching communities.

Here, as the agencies note, they are clearly "drawing lines and concluding that certain waters and features are not subject to the jurisdiction of the Clean water Act. 79 Fed. Reg. at 22218. The proposed rule goes further in excluding waters than previous regulatory guidance has gone as set forth in the Corps' 1986 preamble language at 51 Fed. Reg. 41206, 41217 (November 13, 1986) and the 1988 EPA preamble language at 53 Fed. Reg. 20764 (June 6, 1988).

1. Further clarification of excluded erosional features and other waters must not be at the expense of ephemeral streams and groundwater connections.

We applaud the agencies' efforts at 79 Fed. Reg. 22218-19 to clearly distinguish between regulated tributaries on the one hand, and excluded ditches, gullies, and rills on the other. We support the agencies exclusions for and definitions of gullies, rills, and non-wetland swales, essentially as erosional features that lack an Ordinary High Water Mark (OHWM). We encourage the agencies to continue outreach to landowners to clarify these and related exclusions. We caution, however, that further clarification must be consistent with and not at the expense of the science and the goals of the CWA. **Further clarification between excluded erosional features such as gullies and ephemeral streams must not be addressed by excluding ephemeral streams from CWA jurisdiction.**

With respect to ditches, it is critically important that the agencies stand by their proposed rule, existing guidance, legal and regulatory precedent, and the science and continue to regulate *as tributaries* ditches created by altering wetlands and streams that function as tributaries. With respect to "upland" ditches excluded by (b)(3), we question the proposal to exclude "upland" ditches that have less than year-round flow. The agencies acknowledge that this perennial flow regime is proposed because it is "familiar to the public and agency field personnel," not because it is a scientifically sound jurisdictional line drawing. 79 Fed. Reg. at 22219. To satisfy the CWA objectives to maintain and restore the physical, chemical, and biological integrity of the nation's waters, this ditch exclusion should properly be limited to upland ditches with less than intermittent flow.

We also support the agencies' express exclusion of groundwater, recognizing that the agencies "have never interpreted "waters of the United States" to include groundwater." *Id.* at 22218. We note, however, that it is scientifically appropriate and necessary that groundwater be recognized as among the most important types of connectivity that exists

between adjacent, neighboring, and "other waters" and tributaries, TNWs, and IWs. The agencies must recognize at least shallow groundwater as an avenue of documenting significant nexus despite not being jurisdictional waters in their own right. For example, a "gully" or "arroyo" connected via ground water to a tributary of a TNW, and which flows in response to storm events, likely qualifies as a waters of the United States.[266]

Along these lines, we strongly support the agencies' preamble clarification that even when not jurisdictional waters, non-wetland swales, gullies, rills and specific types of ditches may still be a surface hydrologic connection for purposes of the proposed definition of adjacent under paragraph (a)(6) or for purpose of a significant nexus analysis under paragraph (a)(7). We also support the clarification that these geographic features may function as "point sources" under the CWA such that discharges of pollutants to waters through these features would subject to CWA permitting requirements such as CWA section 402. 79 Fed. Reg. at 22219.

X. Clarifying and Restoring Clean Water Act Protections Fosters Strong Local Economies and Millions of Jobs.

Even EPA's conservative economic analysis demonstrates that this rule clarifying and restoring clean water protections is good for the economy. "Overall, a comparison indicates that the benefits justify the costs of this proposed action."[267]As EPA and Corps economic analysis notes, the definition of "waters of the U.S." does not itself impose direct costs. EPA estimates the indirect costs and benefits of implementing the proposed rule as compared to implementation of the existing guidance."[268]

The agencies estimate a 3% change in overall CWA jurisdiction from the existing guidance will result in indirect costs associated with some additional CWA 404 and 402 permitting costs, including wetland and stream mitigation (along with administrative costs), and CWA 311 oil spill implementation. The total annual indirect cost is estimated to be $133.7 to $231 million. [269] EPA's estimated annual indirect benefits of $300.7 million to $497.6 million are based primarily on estimates of ecosystem services flowing from protected or mitigated aquatic resources as a result of this increased compliance, as well as government savings on enforcement expenses:

> Benefits that accrue from this action include the value of the many ecosystem services provided by the small streams, wetlands, and other open waters protected by the many CWA provisions that would apply to them. These waters provide habitat and biodiversity, support recreational fishing and hunting, filter sediment and contaminants, reduce flooding, stabilize shorelines and prevent erosion, recharge ground water, and maintain biogeochemical cycling. Other benefits include government savings on enforcement expenses through reduced need for costly jurisdictional determinations where jurisdiction has been unclear under the current interpretation of the existing regulation. Business and government may

[266] *See, e.g., Quivira Mining, supra.*
[267] Economic Analysis of Proposed Revised Definition of Waters of the United States (March 2014) at 32.
[268] Economic Analysis of Proposed Revised Definition of Waters of the United States (March 2014).
[269] *Id.* at Exhibit 16.

also achieve savings from reduced uncertainty in where CWA jurisdiction applies. *Id*. at 32.

We cannot resist noting that the private sector mitigation banking industry with its jobs and other fiscal contributions to local economies survives and thrives on a broad, strong, and strictly enforced Clean Water Act.[270]

The agencies' benefit estimates are solidly supported by other economic analyses. Some of these are summarized here, as well as in the economics considerations discussion above (particularly with respect to flood storage and avoided flood damage costs. Costanza et al (2014) estimated that the value of ecosystem services for "inland wetlands" averaged $25,682/ha/yr., significantly higher than their 1997 estimates, in part because of the continued loss of those wetland habitats. For comparison, the value of the services provided by the navigable waters themselves (included within "rivers and lakes") averaged only $4,267/ha/yr.

Healthy wetlands and streams are economic engines for local recreation-based economies. Every year 47 million Americans head to the field to hunt or fish. For example, the American Sportfishing Association reports that anglers generated more than $201 billion in total economic activity in 2011, supporting more than 1.5 million jobs.[271] The U.S Fish and Wildlife Service estimated that duck hunting in 2006 had a positive economic impact of more than $2.3 billion, supporting more than 27,000 private sector jobs.[272]

As Western Resource Advocates notes, clarifying and restoring Clean Water Act protections will foster the local economies of the western mountain states. Through the final rule, the agencies will be able to confirm jurisdiction for many more headwater rivers and streams that support economically important river recreation. In some rural, mountain communities, river recreation and related activities generate the largest share of the local economy. Indeed, throughout the headwaters states, river recreation, including boating, fishing and wildlife watching, represent billions of dollars in commerce:[273]

- In the Colorado River Basin portion of Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming, 2.26 million people participated in water sports in 2011, spending $1.7 billion that generated $2.5 billion in total economic output.[274]

- Commercial guides take rafting clients on numerous sections of the Green, Yampa, and Dolores Rivers in Colorado and Utah, the San Juan River in New Mexico and Utah, and the Cache La Poudre, Arkansas, Gunnison and Upper Colorado Rivers in the state of Colorado.

[270] *See* National Mitigation Banking Association website and members list *available at* *http://www.mitigationbanking.org/index.html* (last visited November 14, 2014).
[271] American Sportfishing Association, *Sportfishing in America* (January 2013).
[272] Economic Impact of Waterfowl Hunting in the United States, Addendum to the 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation, November 2008. US Fish and Wildlife Service.
[273] Western Resource Advocates 2014 Rule Comments.
[274] SOUTHWICK ASSOC., ECONOMIC CONTRIBUTIONS OF OUTDOOR RECREATION ON THE COLORADO RIVER & ITS TRIBUTARIES (May 3, 2012) (Table E-3), *available at* http://protectflows.com/wp-content/uploads/2013/09/Colorado-River-Recreational-Economic-Impacts-Southwick-Associates-5-3-12_2.pdf.

- The Colorado River Outfitters Association 2013 annual assessment reports almost $57 million in direct expenditures for commercial rafting in the state, with the overall economic impact estimated at over $145 million.[275]

- Companies like Renaissance Adventure Guides[276] in Colorado offers classes to teach kayaking on the Colorado River, and to teach swiftwater rescue in the Waterton Canyon reach of the Upper South Platte River, upstream of Denver, CO, while Arizona Outback Adventures takes kayakers on trips down the Salt River.[277]

- Cities in Colorado bordering rivers host water competitions on surprisingly small streams. In 2010, there were 30 whitewater parks across the state.[278] For example, Vail uses Gore Creek, tributary to the Eagle River which is tributary to the Colorado River above its confluence with the Gunnison; the recent Mountain Games event attracted 58,000 spectators who spent $4M.[279] Golden pioneered a summer whitewater competition on Clear Creek, tributary to the South Platte;[280] Boulder hosts kayak competitions on Boulder Creek. Utah has one park, in Ogden,[281] while Nevada has at least three, in Reno,[282] Sparks,[283] and Carson City.

The 2011 U.S. Fish and Wildlife survey on freshwater fishing expenditures reports that 2.2M anglers, 16 years old and up, fished in Arizona, Colorado, New Mexico, Nevada and Utah, with between 16 and 23% of these recreationists coming from out of state to do so. For the equipment

[275] Colorado River Outfitter's Association, *Commercial River Use in the State of Colorado, 1988-2013: 2013 Year End Report*, *available at* http://www.croa.org/wp-content/uploads/2014/05/2013-Commercial-Rafting-Use-Report.pdf.
[276] http://raguides.com/ (last visited Oct. 8, 2014).
[277] Arizona Outback Adventures Half-Day Kayaking Tour, http://aoa-adventures.com/guided-half-day-kayaking-tour/ (last visited Oct 1, 2014). Note that the Salt River above Roosevelt Lake is seasonal, with paddling limited to March-May in most years. Salt River Report, http://southwestpaddler.com/docs/salt2.html (last visited on Oct. 1,2014). Below Phoenix' wastewater treatment plant discharge, the river is effluent dependent, both due to seasonal flows and extensive diversions for the Salt River Project. Joseph R. Gebler, Water Quality of Selected Effluent-Dependent Stream Reaches in Southern Arizona as Indicated by Concentrations of Periphytic Chlorophyll a and Aquatic-Invertebrate Communities (USGS 1998), *available at* http://pubs.er.usgs.gov/publication/wri984199.
[278] Pete Gauvin & Wendy Lautner, *California's Dearth of Whitewater Parks*, CALIFORNIA'S ADVENTURE SPORTS JOURNAL, May 4, 2010, *available at* http://adventuresportsjournal.com/water_sports/kayaking/california%E2%80%99s-dearth-of-whitewater-parks.
[279] Melanie Wong, *GoPro Mountain Games in Vail Draw Record Crowds,* VAIL DAILY, June 13, 2014, *available at* http://www.vaildaily.com/news/sports/11810089-113/games-vail-gopro-crowds. These events appear to be growing. A few years earlier, the Games attracted 30,000 people who spent $3M. COLEY/FORREST INC. FOR NORTHWEST CO. COUNCIL OF GOV'TS FOUND., INC., WATER AND ITS RELATIONSHIP TO THE ECONOMIES OF THE HEADWATERS COUNTIES 24 (2011), *available at* http://nwccog.org/docs/qq/QQStudy_Report_Jan%202012.pdf.
[280] Colorado Whitewater Competition, http://www.coloradowhitewater.org/racing-competition. (last visited on Oct. 1, 2014).
[281] Ogden's Kayak Park – Ogden City, http://www.ogdencity.com/en/community/parks/kayak_park.aspx (last visited Oct. 3, 2014).
[282] Truckee River White Water Kayak Park, Reno, NV, http://www.visitrenotahoe.com/reno-tahoe/what-to-do/water-adventures/kayak-park (last visited Oct. 3, 2014).
[283] White Water Park at Rock Park, http://www.cityofsparks.us/residents/parks-and-facilities/whitewater-park-rock-park (last visited Oct. 3, 2014).

and trips, these anglers spent $2.4 billion and their expenditures supported almost 38,000 jobs.[284] These figures include both guided and non-guided trips, and show that angling represents a significant contribution to these states' economies and to interstate commerce. Even more so than boating, a significant percentage of fishing trips occur on smaller headwaters rivers and streams. For those anglers interested specifically in fly fishing for native trout in this region, for example, all of the options are on relatively small streams, such as those in Rocky Mountain National Park.

Another indication of the economic implications of protecting the Nation's water resources is revealed in the example of the actions taken by New York City to initiate a $250 million program to acquire and protect up to 350,000 acres of wetlands and riparian lands in the Catskill Mountains to protect the quality of its water supply rather than constructing water treatment plants which could cost as much as $6-8 billion. (Dailey et al. 1999). In South Carolina, a study showed that without the wetland services provided by the Congaree Swamp, a $5 million wastewater treatment plant would be required (www.epa.gov/owow/wetlands 2003). *See* Ducks Unlimited 2014 Rule Comments.

The algal blooms that cause health problems also come at high economic costs. For example, Dodds et al (2009) estimated that the total annual cost of the eutrophication of U.S. freshwaters was $2.2 billion. This estimate included recreational and angling costs, property values, drinking water treatment costs, and a conservative estimate of the costs of the loss of biodiversity. Polasky and Ren (2010) cited research that estimated that if two lakes (Big Sandy and Leech) in Minnesota had an increase in water clarity of three feet, lakefront property owners would realize a benefit of between $50 and $100 million. Southwick Associates (2006) estimated that the present value of Saginaw Bay coastal marshes for active recreational use was $239 million, or approximately $10,000 per acre. *See* Ducks Unlimited 2014 Rule Comments.

By any measure, clarifying and restoring clean water protections for America's waters is a good investment for healthy communities and a healthy economy.

CONCLUSION

National Wildlife Federation strongly supports this "waters of the United States" rulemaking as necessary and the best chance in a generation to clarify which waters are – and are not – "waters of the United States" protected by the 1972 Clean Water Act. We urge the agencies to move expeditiously to finalize the important rule.

We strongly support the overall approach to the proposed rule, and its categorical findings of jurisdiction for tributaries and adjacent waters as both scientifically and legally sound. We respect the agencies' efforts to draft clarifying definitions of tributary, adjacency, and significant nexus that are also consistent with the science, the legal precedent, and the objectives of the Clean Water Act. We urge the agencies to carefully craft a final rule that remains consistent with these principles.

[284] U.S. FISH & WILDLIFE SERV., NATIONAL SURVEY OF FISHING, HUNTING, AND WILDLIFE-ASSOCIATED RECREATION (Tables 56 and 60), *available at* https://www.census.gov/prod/2012pubs/fhw11-nat.pdf.

We urge the agencies to carefully consider the strong scientific evidence and legal support for finding the prairie pothole region wetlands and several additional categories of non-floodplain wetlands and waters to be jurisdictional by rule. We urge the agencies to issue a final rule that includes these categories of non-floodplain waters as jurisdictional by rule where supported by the scientific evidence.

We appreciate the agencies' leadership in spearheading this historic "waters of the United States" rule revision, and we look forward to a final rule in 2015 that will provide greater long-term certainty for landowners and advance our collective efforts to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."

Respectfully Submitted,

Jan Goldman-Carter
Senior Manager, Wetlands and Water Resources
National Wildlife Federation
901 E. St. NW, Suite 401
Washington, DC 20004

OW-2011-0880

Pennsylvania Fish & Boat Commission

established 1866

Division of Environmental Services
450 Robinson Lane
Bellefonte, PA 16823
Phone: 814-359-5228
Fax: 814-359-5175

July 17, 2014

Environmental Protection Agency, Water Docket
1200 Pennsylvania Avenue N.W.
Mail Code 2822T
Washington, DC 20460

RECEIVED
JUL 23 2014
EPA DOCKET CENTER

Attn: Docket ID No. EPA-HQ-OW-2011-0880

Dear Sir/Madam:

The Pennsylvania Fish and Boat Commission (PFBC) appreciates the opportunity to provide comments on Docket ID No. EPA-HQ-OW-2011-0880 published in the Federal Register Vol. 79, No. 76, Monday April 21, 2014; Department of the Army, Corps of Engineers 33 CFR Part 328; Environmental Protection Agency 40 CFR Parts, 110, 112, 116, et al., Definition of "Waters of the United States" Under the Clean Water Act; Proposed Rule.

The PFBC has reviewed the proposed rule as the definition of the "waters of the United States" in section (a) for all sections of the Clean Water Act (CWA) to mean: Traditional navigable waters; interstate waters, including interstate wetlands and territorial seas; impoundments of traditional navigable waters, interstate waters, including interstate wetlands, the territorial seas, and tributaries, as defined, of traditional navigable waters, interstate waters, or the territorial seas; and adjacent waters, including adjacent wetlands.

The PFBC supports the effort of the agencies in this matter and further believes that the agencies have, in general, achieved a "less complicated, more effective and transparent" rule regarding the CWA regulatory definition of "waters of the United States." The three United States Supreme Court cases: U.S. v. Riverside Bayview Homes, Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (SWANCC), and Rapanos v. United States have over time required the U.S. Supreme Court Justices to render rulings and opinions either in plurality or individually to further clarify the intent of the "waters of the United States" definition and provide direction for the agencies to propose the current definition

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From a state resource agency's perspective, the PFBC interprets most of the proposed rule as straightforward, however the "tributaries" and "other waters" components of the rule appear to be the most challenging to achieve consistency on a nationwide basis. The PFBC firmly lauds the facts from scientific peer reviewed literature that reveal the importance of tributaries and the ecological importance of maintaining the biological, physical, and chemical integrity to the downstream watershed. The PFBC has in fact, recognized the value of tributaries and has included in agency policy the following provision regarding tributaries within Pennsylvania Code Title 58 Recreation § 57.11 Statements of Policy, Listing of wild trout streams. *(4) Tributary linkages. Tributaries of wild trout streams are classified as wild trout stream for their function as habitat for segments of wild trout populations, including nurseries and refuges, and in sustaining water quality necessary for wild trout.* This language provides protection for a specific fish community based on maintenance of the physical, and chemical quality of tributaries in a watershed that supports a cold water fish community. The PFBC suggests this policy language is analogous in intent and in support of language defining tributaries and their functions in the proposed "waters of the United States" definition.

Within the tributary language section in the proposed rule, the agencies introduced the term "distant headwaters". In Part II: Additional Scientific Support, the agencies provide evidence for the importance of tributaries and indicate that, "distant headwaters with stronger connections to groundwater or consistently higher precipitation levels than downstream reaches contribute more water to downstream rivers". The proposed rule also indicates that, "to understand the health, behavior and sustainability of downstream waters, the effects of small waterbodies in a watershed need to be considered in aggregate". In Pennsylvania, the Ridge and Valley Ecoregion supports small first order tributaries with their genesis on a ridge with continued stream flow toward the valley floor. Many of these streams flow into a sinkhole or other opening in the landscape and, not having a distinguishable significant nexus to a traditional navigable water, interstate water or territorial sea, enter the groundwater and arise as springs in the downstream watershed. Geological formations, (e.g., sandstone ridges and limestone/dolomitic valleys) are often the landscape features that create this flow pattern. In the Ridge and Valley Ecoregion, these flow patterns are common and provide significant biological, physical and chemical benefits to the watershed. The PFBC strongly recommends that the agencies consider these "distant headwaters" or tributary waters as jurisdictional within the CWA definition of "waters of the United States."

Under the definition of "other waters" in the proposed rule, the PFBC suggests that isolated wetlands without a significant nexus, not adjacent to or outside the floodplain or outside the riparian zone of a navigable water, interstate water, or territorial sea are considered by the agencies as jurisdictional "neighboring" waters. The interpretation of neighboring waters in the proposed rule has been identified as, "those waters having a significant effect on the chemical,

physical, and biological integrity of traditional navigable waters, interstate waters, or the territorial seas." The PFBC suggests that these waters should be protected as "neighboring" waters if threatened or endangered species are present for some part of their life cycle or if these waters are used by a biological community that has a significant effect on the integrity of the watershed. These waters may be similar to "adjacent" waters that perform similar functions in the landscape independent of their spatial arrangement or lack of a significant nexus in the watershed. The states can provide the agencies with scientific documentation that support the jurisdictional protection of these waters which could be critical to extant or disjunct populations. Loss of these habitats will likely contribute to range fragmentation of such populations and habitat fragmentation of suitable habitats creating isolated populations and loss of genetic diversity.

The PFBC concurs with the exclusion of most specific waters and features from the definition of "waters of the United States" including, waste treatment systems, prior converted cropland, ditches that are excavated wholly in uplands, artificially irrigated areas that would revert to upland, ditches that do not contribute flow, either directionally or through another water, artificial lakes/ponds created by excavating or diking dry land used exclusively for stock watering, irrigation, settling, etc., reflecting pools, ornamental waters used for aesthetic purposes, gullies and rills and non-wetland swales. The PFBC suggests that the agencies clarify "water-filled depressions created incidental to construction activity" by re-defining this feature as "water-filled depressions created temporarily and incidental to construction activity". Such depressions left in the landscape under typical climatic conditions will over time develop into wetland habitat that may qualify for jurisdictional protection under "other waters".

After consideration of the clarification of the proposed language, the Pennsylvania Fish and Boat Commission supports the proposed rule defining "waters of the United States" protected under the Clean Water Act.

Sincerely,

Tom Shervinskie, Chief
Watershed Analysis Section

c: PFBC - Spotts, Young

CITY OF PHILADELPHIA

WATER DEPARTMENT
ARAMARK Tower
1101 Market Street
Philadelphia, PA 19107-2994

HOWARD M. NEUKRUG,P.E.
Water Commissioner

August 4, 2014

The Honorable Gina McCarthy, Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

The Honorable Jo-Ellen Darcy, Assistant Secretary of the Army
Department of the Army, Civil Works
108 Army Pentagon
Washington, DC 20310-0108

Re: Clean Waters Rule Definition *"Waters of the United States"*

Dear Administrator McCarthy and Assistant Secretary Darcy:

I am writing to confirm the Philadelphia Water Department's support of the U.S. Environmental Protection Agency and Army Corps of Engineers proposed *Clean Water Act Rule Definition of "Waters of the United States" Under the Clean Water Act.* This clarifying rulemaking restores protection for streams and wetlands previously protected under the Clean Water Act, safeguards water quality in the nation's waters, protects jobs in businesses that depend on clean water and safeguards drinking water.

Over the next 25 years, the Philadelphia Water Department will invest more than $10 billion to improve Philadelphia's water, sewer and stormwater infrastructure to meet regulatory requirements and continue our pledge to protect and preserve the water resources that allow us to protect public health and provide top quality service.

This ruling enhances our ability – and the ability of utilities across the nation – to honor this pledge.

Sincerely,

HOWARD M. NEUKRUG, P.E., BCEE
Water Commissioner

"AN EQUAL OPPORTUNITY EMPLOYER"

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1985 NOBEL PEACE PRIZE

United States Affiliate of International Physicians for the Prevention of Nuclear War

October 13, 2014

The Honorable Gina McCarthy
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460

Re: Docket ID No. EPA-HQ-OW-2011-0880

Dear Administrator McCarthy,

As members of Physicians for Social Responsibility, an organization of health professionals living and serving across the United States, we are writing to express our strong support of the "Waters of the United States" (U.S.) proposed rule. The rule protects the nation's rain-dependent streams and wetlands from toxic pollution under the Clean Water Act (CWA). Because it would protect the streams that are the headwaters of drinking water supplies for one in three Americans, this rule is a health imperative. We urge the EPA to finalize and implement the rule as soon as possible.

For years, uncertainty about which bodies of water are protected by law created loopholes that put clean water supplies at risk. The issuance of several unclear and confusing Supreme Court rulings has resulted in little to no protection from pollution for these headwaters that provide critical drinking water for U.S. residents.

The "Waters of the U.S." rule clears up that confusion by safeguarding the sources of our water supplies, and ensures every community is again entitled to clean water. The proposed rule uses the law and science to clarify that waters like tributaries and adjacent waters must be protected under the CWA because they significantly affect the quality of downstream waters. Science demonstrates that upstream headwaters, wetlands, lakes, or other waters act together to significantly influence downstream waters by contributing clean water for drinking, irrigation, recreation, and commercial fishing; filtering pollution and reducing downstream treatment costs; and reducing downstream flooding.

Healthy wetlands and streams provide many public health benefits to communities, including improving drinking water quality and preventing flooding. Wetlands serve as natural buffers, filtering out pollutants before they impact water sources and absorbing floodwaters before they hit land. As the climate changes and we begin to see more extreme weather events, wetlands can serve as an invaluable protection against flooding. Yet without CWA protections, there is often nothing stopping floods, sediment, sewage or toxic chemicals from threatening our health.

Clean drinking water is essential for everyone. Thousands of U.S. residents become ill each year from drinking water contaminated with human and animal waste, pesticides, and heavy metals such as arsenic and lead. Bacteria or parasites in drinking water pose health risks of waterborne diseases, which some studies estimate to affect 7 million or more people each year, 560,000 of them severe cases.

Bacteria and parasites are not the only contaminants in drinking water that cause illness. Arsenic, which occurs naturally in some rocks that dissolve into water supplies, is known to cause cancer of the bladder, lung, and skin and is suspected to cause cancers of the liver and kidney. Perchlorate, a component of rocket fuels and explosives, seeps into the drinking water supply, where it then exposes people to risks of diminished levels of thyroid hormone—a hormone essential for normal brain development in infants and fetuses and also essential for normal functioning of all organ systems.

Lead may enter tap water through corrosion of plumbing materials. In babies and children, exposure to lead in drinking water above harmful levels can result in delays in physical and mental development, along with deficits in attention span and learning abilities. In adults, it can cause increases in blood pressure.

Pesticides are typically present throughout most of the year in streams in agricultural or urban areas. Pesticide contamination of groundwater is especially harmful to people living in the agricultural areas where pesticides are most often used, as about 95 percent of that population relies upon groundwater for drinking water. National surveys have found that pesticides occur in streams at concentrations that may also have effects on aquatic life or fish-eating wildlife.

Nitrates found in fertilizers and human and animal feces wash into drinking water sources, where they can interfere with the blood's ability to carry oxygen to the brain and vital organs. Mercury is another water contaminant. About half the mercury that enters public water treatment systems comes from dental offices, where it is used in dental fillings. Coal combustion, especially from coal-burning power plants, is also a major source of mercury emissions in the U.S. When mercury enters bodies of water – either directly as from dental offices, or deposited by rainfall from the smoke leaving coal plants, it can transform into methylmercury, a highly toxic form of mercury that builds up in seafood. People can be harmed by methylmercury when they eat contaminated fish and shellfish. Mercury has been

linked to preterm delivery, autism and other developmental disorders in children as well as heart problems in adults.

Access to clean water is also an issue of equity. Communities of color are more likely to live in areas with unsafe drinking water. Latinos are 165 percent more likely to live in counties with unhealthy levels of air pollution, unsafe drinking water, and lead and mercury contamination – all of which can cause health problems. Unincorporated, low-income, rural communities of color spend over 10% of their annual incomes purchasing water.

The CWA sought to protect wetlands and streams over 40 years ago, but Supreme Court decisions and federal guidance changes have rolled back these protections, allowing polluters to contaminate and destroy these vital public health resources. It is imperative that the EPA restore the protections promised in the CWA in order to prevent pollution in all headwaters, streams, and wetlands.

We strongly urge the EPA to finalize a "Waters of the U.S." rule that will improve the health of our nation's people as well as our rivers, lakes and bays by protecting the small streams and wetlands they depend on.

Sincerely,

Catherine Thomasson, MD, Executive Director, Physicians for Social Responsibility

Bob Gould, MD, President, Physicians for Social Responsibility- San Francisco

Kelly Campbell, Executive Director, Physicians for Social Responsibility- Oregon

Cherie Eichholz, Executive Director, Physicians for Social Responsibility- Philadelphia

Karen D'Andrea, Executive Director, Physicians for Social Responsibility- Maine

Ann T. Behrmann, MD, Steering Committee Member, Physicians for Social Responsibility- Wisconsin

Anjum Hanafi, Executive Director, Physicians for Social Responsibility- Texas

Marybeth Dunn, Executive Director, Physicians for Social Responsibility- Florida

Sara Lovinger, MD, Executive Director, Physicians for Social Responsibility- Chicago

Martha Dina Argüello, Executive Director, Physicians for Social Responsibility-LA

CITY OF PITTSBURGH
"AMERICA'S MOST LIVABLE CITY"

June 13, 2014

The Honorable Gina McCarthy, Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Re: Docket ID # EPA-HQ-OW-20011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy,

We support the US Environmental Protection Agency and US Army Corps of Engineers proposed *Definition of "Waters of the United States Under the Clean Water Act*" to clarify which streams, wetlands and other waters are covered by Clean Water Act protections, Wetlands and small streams, including those that flow only seasonally, have a direct impact on the health and quality of larger streams and rivers downstream. These resources are critical drinking water sources, and they protect communities from flooding and filter pollutants.

For its first thirty years, the Clean Water Act safeguarded nearly all of our nation's waters. These protections are necessary to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," as intended by Congress when it passed the Clean Water Act in 1972. Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction. These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's streams miles and at least 20 percent of the 110 million acres of wetlands in the continental United States. This confusion has put the drinking water for 117 million Americans at risk, including 8 million Pennsylvanians. Millions of small streams and wetlands provide most of the flow to our most treasured rivers, including The Allegheny, the Monongahela and the Ohio – Pittsburgh's treasured Three Rivers. If we do not protect these networks of small streams, we cannot protect and restore the lakes, rivers and bays that our economy and way of life depend on. We will also be jeopardizing jobs and revenue in businesses that depend on clean water, including outdoor activities like angling and water-based recreation.

As local and state decision makers, we believe broad federal protections are critical to protecting our local waters. Water flows downhill, and each of the lower 48 states have water bodies that are downstream of one or more other states. Maintaining consistency among water pollution programs

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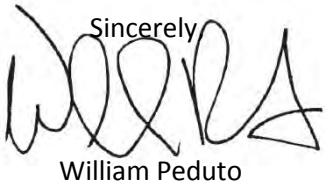
throughout these states is essential. Since the passage of the Clean Water Act, states have come to rely on the Act's core provisions and have structured our own water pollution programs accordingly.
We support the draft rule's proposal to restore Clean Water Act protection to all tributaries of navigable waterways. Failure to do so would jeopardize water quality in our larger riversheds and estuaries. It would also put at risk the millions of dollars and thousands of jobs generated by water related tourism activities and other businesses that are dependent on clean water supplies.

This commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade and better protection for critical water resources on which our communities depend. We strongly support finalization of *Definition of "Waters of the United States Under the Clean Water Act.*"

Sincerely



William Peduto
Mayor

Pittsburgh City Council

Proclamation

WHEREAS, the nation's rivers, streams, lakes and other bodies of water are economic drivers of our communities, provide recreational opportunities to countless people each year and are essential for public health; and,

WHEREAS, the Clean Water Act is the fundamental federal law protecting these waterways from pollution, degradation and destruction; and,

WHEREAS, streams and wetlands that supply drinking water, protect against floods and filter pollution were previously protected under the Clean Water Act, but federal policy changes over the last decade have left these streams and wetlands vulnerable to degradation or destruction; and,

WHEREAS, these vulnerable waterways impact sources of drinking water for more than 117 million Americans and 8 million Pennsylvanians; and,

WHEREAS, strong federal standards are needed because water does not respect political boundaries and flows from one state to another; and,

WHEREAS, more than 1,000 peer-reviewed scientific studies have confirmed that headwater, intermittent and ephemeral streams, and wetlands affect the quantity and quality of water in larger bodies of water downstream, including the Allegheny, Monongahela and Ohio Rivers; and,

WHEREAS, the U.S. Environmental Protection Agency and Army Corps of Engineers have proposed a clarifying rulemaking to restore protection for streams and wetlands previously protected under the Clean Water Act, safeguarding water quality in the nation's waters, protecting jobs in businesses that depend on clean water and safeguarding drinking water for one in three Americans; and,

WHEREAS, the proposed rule, supported by the National Farmers Union, leaves in place all agricultural exemptions and creates new exemptions for agricultural practices related to conservation; and,

WHEREAS, the proposed rule would not extend the scope of the Clean Water Act beyond its original limitations, and would reduce red tape to help America secure safe drinking water for all of its citizens.

NOW THEREFORE BE IT RESOLVED, that the Council of the City of Pittsburgh supports the proposed *Definition of "Waters of the U.S." Under the Clean Water Act* and urges the Environmental Protection Agency and Army Corps of Engineers to finalize these important protections for our nation's water resources.

BE IT FURTHER RESOLVED that a copy of this Will of Council shall be sent to The Honorable Gina McCarthy, U.S. Environmental Protection Agency Administrator, and The Honorable Jo-Ellen Darcy, Assistant Secretary of the Army, Department of the Army, Civil Works.

Sponsored by Councilmembers Dan Gilman and Corey O'Connor

Co-sponsored by Council President Bruce Kraus, Councilmembers Deb Gross, Theresa Kail-Smith, Darlene M. Harris, Natalia Rudiak, R. Daniel Lavelle, and Rev. Ricky V. Burgess

Bruce Kraus
President of Council

Attest: Mary Beth Doheny
Clerk of Council

In Council, July 8, 2014

983

The Honorable James M. Inhofe
Chairman, Committee on Environment and Public Works
United States Senate
410 Dirksen Senate Office Building
Washington DC 20510

The Honorable Bill Shuster
Chairman, Committee on Transportation and Infrastructure
United States House of Representatives
2165 Rayburn House Office Building
Washington, DC 20515

The Honorable Barbara Boxer
Ranking Member, Committee on Environment and Public Works
United States Senate
456 Dirksen Senate Office Building
Washington, DC 20510

The Honorable Peter A. DeFazio
Ranking Member, Committee on Transportation and Infrastructure
United States House of Representatives
2163 Rayburn House Office Building
Washington, DC 20515

On behalf of the Union for Reform Judaism, whose 900 congregations across North America include 1.5 million Reform Jews, as well as the Central Conference of Americans Rabbis, whose membership includes more than 2000 Reform rabbis, I am pleased to submit this testimony on "Impacts of the Proposed Waters of the United States Rule on State and Local Governments" to the U.S. Senate Committee on Environment and Public Works and the U.S. House of Representative Committee on Transportation and Infrastructure.

Sincerely,

Barbara Weinstein
Associate Director, Religious Action Center of Reform Judaism

On behalf of the Union for Reform Judaism, whose 900 congregations across North America include 1.5 million Reform Jews, as well as the Central Conference of Americans Rabbis, whose membership includes more than 2000 Reform rabbis, I am pleased to share our support of the EPA and Army Corps of Engineers' Proposed Definition of the "Waters of the U.S." under the Clean Water Act (Docket ID No. EPA-HQ-OW-2011-0880).

The proposed rule would provide a new regulatory definition of "Waters of the U.S." protected under the Clean Water Act. The new definition would allow the Environmental Protection Agency to regulate and protect tributary streams, waters adjacent to such streams, and other waters that are shown to collectively play a significant function with respect to downstream waters in the watershed. The rule would also reaffirm pre-existing exemptions and codify for the first time exemptions that had previously only been followed as a matter of administrative policy.

This proposed new definition is necessary because of the legal ambiguity created by the Supreme Court's 2001 ruling in Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers, 531 U.S. 159 (2001) and again in 2006 under Rapanos vs Untied States, 547 U.S. 715 (2006). These decisions raised questions about the scope of waters protected by the Clean Water Act. Legal uncertainty and the resources required to argue jurisdiction have made Clean Water Act enforcement more narrow that rightfully allowed under law. Now, for example, when crude oil is discharged into a creek and pollutes the water, the prohibitive resource requirements of establishing jurisdiction can prevent EPA from exerting its authority to pursue a cleanup action and protect the area that provides water to the region and a habitat for local wildlife. This threatens the well-being of a significant portion of the U.S. population, which "get[s] some or all of their drinking water from public drinking water systems that rely at least in part on intermittent, ephemeral or headwater streams," according to EPA analysis.

Water pollution is an immense environmental and political challenge, and for the Reform Jewish Movement, it is a moral and spiritual challenge as well. Biblical commentary in Kohelet Rabbah (1:4) reminds us that "one generation goes, another comes, but the earth remains the same forever." We understand that as stewards of the environment, we have a responsibility to safeguard our planet so that future generation will have clean, potable water.

Water in particular has also always been an important part of the Jewish relationship with God. In Isaiah 41:17-18, God promises: "I will open rivers in high places and fountains in the midst of valleys; I will make the wilderness a pool of water and the dry land springs of water." We are inspired by the notion that water is among God's gifts to humanity and we must work to preserve are protect that which sustains us.

For far too long, our water resources have been weakly protected and vulnerable to pollutants. The Environmental Protection Agency and Army Corps of Engineers' proposed definition of "Waters of the U.S." under the Clean Air Act would address this dangerous problem by protecting critical water resources across the United States.

The Reform Movement applauds the EPA and Army Corps of Engineers' effort to strengthen and clarify the Clean Water Act's definition of "Waters of the U.S."

To Whom It May Concern:

We write today to give our support to the the Waters of the U.S. rulemaking that is underway by the US EPA and the Corps of Engineers.

As St. Louis' largest craft brewery, we carefully select our ingredients to create exceptional beers. Many of those ingredients are plentiful in Missourigrain and water. However, we know that the safe, reliable clean water is at risk. Our businesses make up a thriving revival in Missouris local food and drink economy, however we need assurance that our water will be protected for our future. We know that while regulatory rule-making and enforcement can be problematic, only US Federal and State Agencies can provide that protection for all concerned.

For years, tens of thousands of miles of rivers and streams have not been subject to water quality protections because the State of Missouri has not implemented the basic requirements of the Clean Water Act. Wetlands have not fared much better, owing to the fact that Missouri does not currently have any water quality standards for wetlands and we have already lost 87% of them to drainage and development. In the absence of clarity, millions of taxpayer dollars have been spent litigating over which waters are protected and which are open for dumping.

Because of this confusion, many previously protected waters lack adequate protection, leaving drinking water supplies for one-third of Americans at risk. In Missouri, over half of the population relies on rivers and streams for their drinking water and the other half rely on groundwater sources that are also vulnerable to contamination. This new rule would ensure that all small streams and wetlands are protected by the Clean Water Act.

Senator Blunt and others have painted the proposed Clean Water Rule clarification as egregious government overreach that threatens the livelihoods of Missouri businesses and farmers. This is simply untrue. The proposed Clean Water Rule clarification takes into account water usage by agriculture and private businesses and has been endorsed by many farmers and water dependent businesses. The bottom line for our businesses is that if we can continue to grow we must have reliable, safe, clean water.

Thank you for considering our comments in support of the Waters of the U.S. rulemaking. We know that you are an independent advocate and will make the best choices for Missouris future by supporting the clarification of the Clean Water Act.

Sincerely,
Tom Flood
Properties and Sustainability Manager
Schlafly Brand Beers

Science, not politics, should guide Clean Water Act Clarification
By Bernard W. Sweeney, Ph.D., Director, Stroud Water Research Center

Fresh water is our most precious natural resource, as essential to life as the air we breathe. Fortunately, most of us in the United States dont have to give it much thought. But news of several water emergencies this year should shake us out of complacency.

On August 2, nearly a half-million people in Toledo, Ohio were told their tap water was contaminated with microcystin, a neurotoxin produced by a massive bloom of the algae Cyanobacteria, in Lake Erie. Its thought that nutrient overload contributed to the algae bloom.

In January, the drinking water for more than 300,000 West Virginians was poisoned when a Freedom Industries storage tank leaked, spewing 7,500 gallons of 4-methylcyclohexane into the Elk River, just upstream from a water treatment plant.
In February, an estimated 140,000 tons of toxic waste polluted the Dan River when a stormwater pipe burst beneath a coal ash impoundment at Duke Energys retired Dan River Power Station near Eden, North Carolina.

This year, more than half of California is suffering through a record-breaking drought.

Such events highlight the vulnerability of our freshwater resources and, logically, demand that the Environmental Protection Agency (EPA) have the necessary resources and authority to enforce the Clean Water Act rigorously.

Instead, the EPA is being barraged by an army of opponents. Developers, property rights groups, the American Farm Bureau, the fertilizer industry and a number of politicians are attacking its proposed clarificationnot an expansionof which waters of the United States are covered by the Clean Water Act.

A clarification would enable the EPA to better protect our wetlands, small streams and other important watershed features without being dragged into court every time someone wants to avoid compliance by exploiting an ambiguity.

Opponents are using inflammatory language like overreach, and land grab. Some are even telling farmers that the EPA would be regulating ponds, upland ditches and puddles,none of which is true.

Their arguments ignore that the EPAs proposed clarification is informed by decades of scientific research about freshwater ecosystems, such as the work our scientists have been doing since 1967. The River Continuum Concept, published in 1980 by a team of scientists led by Stroud Water Research Center, is a foundational concept in freshwater ecology. It states that a river system represents a physical, chemical, and biological continuum from the smallest headwater streams to the main stem river at its confluence with the estuary. Subsequent research around the world has not only supported this concept but demonstrated that, in fact, small headwater streams are the most critical and most vulnerable parts of a river.

Our scientists were part of the scientific advisory panel that helped the EPA's Office of Research and

Development conduct a comprehensive review of more than 1,000 peer-reviewed publications in the scientific literature. This report (U.S. Environmental Protection Agency, Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence, Washington, DC: U.S. Environmental Protection Agency, 2013) concludes: The scientific literature clearly demonstrates that streams, regardless of their size, or how frequently they flow, strongly influence how downstream waters function.

More than 85 percent of the nation's stream miles are small enough to jump across and manyif not mostof these flow through private property.

For decades, science has demonstrated the necessity of a holistic approach to understanding, protecting and restoring freshwater ecosystems. This requires a nationwide effort. Water, like air, transcends state, legislative and private property boundaries. Whatever happens upstream affects us all.

The EPA must have the authority to enforce appropriate safeguards so that our freshwater resources will neither be subject to the vagaries of state and local authorities, nor to the whims of private landowners.
.
We need the intestinal fortitude to enforce the legislation currently available to us, restore aspects that have been lost and resist diluting what remains.

The alarm has sounded. We hit the snooze button at our peril.

Bernard Sweeney, Ph.D., is director and president of Stroud Water Research Center, a nonprofit organization, based in Avondale, Pennsylvania, focused on freshwater research, environmental public education and watershed restoration. The website address is www.StroudCenter.org.

From: bezanson@texas.net <janicecrumpbezanson@gmail.com>
To: OW-Docket
Date: 10/14/2014 1:16:04 AM
Subject: EPA-HQ-OW-2011-0880 / Clean Water Act - Waters of the United States
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Texas Conservation Alliance (TCA), a statewide wildlife conservation organization with a 45-year history of protecting wildlife habitat in Texas, appreciates the Environmental Protection Agency (EPA) for proposing a rule to restore protections to the millions of acres of wetlands whose protection under the Clean Water Act has been put in limbo by court rulings and regulations. TCA strongly supports the proposed rule and urges the EPA to adopt it.

Importance to Texas

Approximately 75% of the streams in Texas are intermittent or ephemeral streams that would be protected by the proposed rule. Eleven million citizens draw some or all of their drinking water from these streams.

Texas has the most playa lakes of any state - roughly 20,000 -- which provide habitat to 90% of the region's wintering waterfowl. Three million ducks and geese and 90% of the mid-continent population of sandhill cranes use these playa lakes.

A third of all Texans over 16 participate in wildlife-associated recreation and wildlife-related recreation generates more than $8 billion in revenues for the state economy. A significant portion of this economic activity is dependent on wetlands.

Reasons to Adopt the Proposed Rule

The proposed rule, EPA-HQ-OW-2011-0880 / Clean Water Act - Waters of the United States, would follow the Congressional intent of the Clean Water Act and restore protections to wetlands crucial both as wildlife habitat and as an economic engine for Texas and other states.

It would eliminate confusion that will help landowners, industries, and others know what they can and cannot do.

Protecting these wetlands now will help avoid impacts to them as Texas and other western states face continuing droughts and other effects of climate change.

TCA appreciates the EPA for excluding man-made ditches and ponds, irrigation systems, and other wet areas associated with farming, ranching, and forestry activities.

Conclusion

Texas Conservation Alliance supports adoption of EPA-HQ-OW-2011-0880 and appreciates the opportunity to comment on the proposed rule.

Sincerely,

Janice Bezanson

Janice Bezanson, Executive Director
Texas Conservation Alliance
254-947-5572, Cell 512-327-4119
bezanson@texas.net
TCAtexas.org

TOWN OF HERNDON, VIRGINIA

RESOLUTION

NOVEMBER 11, 2014

Resolution- Supporting the United States Environmental Protection Agency and Army Corps of Engineers' proposed *Definition of "Waters of the United States"* under the Clean Water Act.

WHEREAS, for the purpose of protection of public health, recreational resources, economic livelihood related to clean water, under the Waters of the United States as it provides an extraordinary value for the Town of Herndon; and

WHEREAS, the Mayor and Council recognize that the Clean Water Act is the fundamental federal law protecting the Waters of the United States from pollution, degradation and destruction, and that strong federal standards are needed because water does not respect political boundaries; and

WHEREAS, critical streams and wetlands which supply drinking water, protect against floods and filter pollution previously were protected under the Clean Water Act, but federal policy changes over the last decade have left these streams and wetlands vulnerable to degradation or destruction; and

WHEREAS, these vulnerable waters of the United States impact sources of drinking water for over 117 million Americans, including 2.36 million residents in Virginia; and

WHEREAS, more than 1,000 peer reviewed scientific studies have confirmed that headwater intermittent and ephemeral streams and wetlands affect the quantity and quality of water in larger bodies of water downstream; and

WHEREAS, the U.S. Environmental Protection Agency and Army Corps of Engineers have proposed a clarifying rulemaking that all tributary streams, regardless of size or frequency of flow are covered under the Clean Water Act, which will restore protections to over 5,000 miles of streams in Virginia that 57% of our residents depend on for drinking water.

NOW, THEREFORE, BE IT RESOLVED that the Town Council of the Town of Herndon, Virginia, hereby supports the proposed *Definition of "Waters of the United States"* under the Clean Water Act with exclusions as endorsed by the Virginia Municipal Stormwater Association to stormwater ditches, BMP's and other MS4 stormwater treatment and conveyance systems.

14-G-101

OW-2011-0880

SAMUEL T. BISCOE
COUNTY JUDGE

TRAVIS COUNTY ADMINISTRATION BUILDING
P.O. BOX 1748
700 LAVACA STREET
AUSTIN, TEXAS 78767
(512) 854-9555
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EPA DOCKET CENTER

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue NW.
Washington, DC 20460
Attention: Docket ID No. EPA–HQ–OW–2011–0880

16 July 2014

Re: Proposed Rule: Waters of the United States, Docket ID No. EPA–HQ–OW–2011– 0880

Dear Sir or Madame:

I appreciate the opportunity provided by the U.S. Environmental Protection Agency and U.S. Army Corps of Engineers (The Agencies) to submit written comments on the proposed regulations referenced above. I submit these comments on behalf of the entire Travis County (Texas) Commissioners' Court. These comments were approved by the Travis County Commissioners' Court on July 15, 2014.

1. Travis County supports this rule making because it more explicitly defines the scope of "waters of the United States" and establishes clearer and more transparent standards in federal rules, rather than maintaining an overreliance on staff interpretation and judgment during the permitting processes.

2. The definition of "waters of the United States" appropriately conforms to recent Supreme Court decisions. The rule neither narrows nor expands the scope of federal Clean Water Act programs.

3. The more defined scope and definition of several terms in rule will aid the development community in understanding potential impacts upfront in the planning and scoping of a project, instead of relying on a less clear decision making process once a project is submitted in a permit application to a federal agency. As one example, the proposed rule lists specific situations and systems that are not "waters in the United States" such as ditches and waste treatment systems.

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JUL 16 2014
EPA DOCKET CENTER

4. The Agencies seek public comment and recommendations on a proposal to identify large geographic areas (for example, ecoregions) that have water bodies of similar characteristics. Within such areas a specific class of water bodies would be identified up-front as being subject to federal jurisdiction. Although Travis County has not identified a distinct class of waters locally for consideration, we are supportive of the Agencies using this identification process. This ultimately could reduce individual or site-specific analysis during the federal permitting process.

5. Travis County agrees with the Agencies that a clearer regulatory framework will enhance the protection of the Nation's water resources because the requirements are more understandable to the public, knowledge will lead to higher compliance, and the decision making may become less arbitrary.

If we can be of any assistance, please contact Mr. Thomas Weber at (512) 854-4629 or by e-mail at thomas.weber@co.travis.tx.us.

Sincerely,

Samuel T. Biscoe

Samuel T. Biscoe
County Judge
Travis County, Texas

STB/tw

Steve Moyer
Vice President for Government Affairs

November 14, 2014

Re: Comments of Trout Unlimited (TU) on the EPA/Army Corps of Engineers (Corps) proposal Definition of ''Waters of the United States'' Under the Clean Water Act

Docket ID No. EPA–HQ–OW–2011–0880

On behalf of Trout Unlimited's (TU) 153,000 members nationwide, I am writing to strongly support the proposed rule to clearly define the Waters of the United States considered jurisdictional under the Clean Water Act. We commend the EPA and Corps of Engineers for its strong, scientifically-supported proposal.

TU strongly supports the rule.

TU strongly supports the proposed rule because it will clarify and strengthen the very foundation of the Clean Water Act's protections for important fish and wildlife habitat. Based on our experience working in the field with the Clean Water Act, and the detailed analysis completed by the U.S. Army Corps of Engineers, EPA, and OMB for the proposal, we believe that the new rule is sound. It will provide landowners, conservationists, and businesses with substantial improvements in how the law is implemented.

The jurisdictional foundation of the law needs to be fixed.

The nation's clean water safety net is broken, and TU appreciates the efforts of the agencies to resolve the law's most fundamental question: which waters are – and are not – covered by the Clean Water Act.

Over the last 15 years, agency guidance following a series of Supreme Court decisions have weakened and confused these protections. The agencies' proposal takes important steps to clarify and restore protections to intermittent and ephemeral streams that may only flow part of the year. These intermittent and ephemeral streams provide habitat for spawning and juvenile trout, salmon, and other species, and protecting these streams means protecting the water quality of larger rivers downstream. Sportsmen and women strongly support the effort to clarify and restore the protection of the Clean Water Act to these bodies of water where we spend much of our time hunting and fishing.

Because of the uncertainties caused by the Supreme Court cases, a rulemaking was sought by many business interests, as well as by Supreme Court Justice Roberts who presided over the *Rapanos* case. This rulemaking will finally provide certainty to conservation groups and regulated industries alike.

TU supports the proposal because it restores protection for headwater streams.

Connectivity and Clean Water Act jurisdictional protection are most important for small headwater streams and the trout and salmon that call them home. Unfortunately, the two Supreme Court decisions have put at risk the jurisdictional protection of the Clean Water Act for these small streams, particularly for ephemeral and headwater streams which may not flow the entire year. At least 80% of

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the stream miles in the country are headwater streams, with 53% of total stream length categorized as first-order streams. Headwater streams are incredibly important not only for downstream water quality, but also as habitat for trout and salmon. Lahontan cutthroat trout, for instance, exist entirely in terminal waters in the Great Basin Desert. Having already been extirpated from 90% of its stream habitat, over 70% of the remaining populations occupy only the highest headwater streams, many of which dry up seasonally before reaching mainstem rivers.

There are a variety of activities that threaten headwater streams. Increased development of natural gas, and the roadbuilding and land clearing associated with gas development, are prominent examples of the existing challenges our headwater streams are facing.

The rule has a strong scientific basis.

The proposed rule is well justified by existing, peer-reviewed science on the chemical, biological, and hydrological connections of tributaries and wetlands to traditionally navigable waters. The EPA's *Connectivity of Streams and Wetlands*, a draft of which was released before the rule was proposed, synthesizes this existing body of research. Recently, the EPA's Scientific Advisory Board (SAB) concurred that the science contained within this document was well founded in regards to the connectivity of tributaries, including intermittent and ephemeral streams, and argued there was scientific evidence for the connectivity of wetlands and other waters. In addition, the SAB reviewed the scientific basis of the proposed rule itself with almost identical comments. Trout Unlimited employs a team of scientists in order to utilize the best available data and knowledge in our restoration and protection work. This team of scientists, including our own Dr. Helen Neville who submitted our comments on the connectivity report, agrees that there is strong scientific justification for the hydrological, biological, and chemical connectivity of headwater and tributary streams to downstream waters.

The Clean Water Act provides essential baseline protections that support TU's mission.

Our mission is to conserve, protect and restore North America's trout and salmon fisheries and their watersheds. Our volunteers and staff work with industry, farmers, and local, state and federal agencies around the nation to achieve this mission. On average, each TU volunteer chapter annually donates more than 1,000 hours of volunteer time to stream and river restoration and youth education. The Act, and its splendid goal to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters" serves as the foundation to all of this work. Whether TU is working with farmers to restore small headwater streams in West Virginia, removing acidic pollution caused by abandoned mines in Pennsylvania, or protecting the world famous salmon-producing, 14,000-jobs-sustaining watershed of Bristol Bay, Alaska, we rely on the Clean Water Act to safeguard the water quality improvements that our volunteers, staff and partners work hard to create and maintain.

TU partners with agricultural producers across the nation to restore habitat and improve water quality.

Conservation of our nation's water resources is not only critically important to TU, but also to the success of the agriculture industry. Partnering with farmers and ranchers is an integral part of the work that we do. In the Midwest Driftless Area (southwest Wisconsin, southeast Minnesota, northeast Iowa,

and northwest Illinois), TU's work with dairy farmers has restored watersheds and tripled trout populations in some streams, creating excellent fishing opportunities for sportsmen throughout the upper Midwestern states. In West Virginia, working with dairy farmers and beef ranchers, TU has installed over one million feet of stream-side fencing to reduce the impacts of cattle on streams, while adding upslope water sources to allow cattle access to water. Additionally, TU has worked extensively with ranchers and landowners in many parts of the western United States to upgrade irrigation infrastructure in order to improve agriculture production, ensure fish passage, and keep more water in streams to aid watershed health. These ongoing partnerships depend on a viable and willing agricultural sector that is supported by clear application and exemption of agricultural practices under the Clean Water Act.

TU supports language in the proposal to clarify what waters are NOT covered.

The proposal also seeks to clarify what waters are **not** jurisdictional. The proposed rule and preamble reiterates all existing exemptions from Clean Water Act jurisdiction, including many farming, ranching, and forestry activities. These exemptions include activities associated with irrigation and drainage ditches, as well as sediment basins on construction sites. Moreover, for the first time, the proposed rule codifies specific exempt waters, including many upland drainage ditches, artificial lakes and stock watering ponds, and water filled areas created by construction activity. As highlighted above, TU works with farmers, ranchers, and other landowners across the nation to protect and restore trout and salmon habitat. We have a keen interest in ensuring that the proposal works well for landowners on the ground.

TU urges the agencies to provide additional jurisdictional assurances to agriculture producers by improving the Interpretive Rule.

The rule recognizes the great conservation strides the agriculture community has made since the 1970s, when the Clean Water Act first came into effect, especially those improvements made via the Farm Bill conservation programs. The intent of the Interpretive Rule (IR) is to clarify that certain conservation practices in waters of the United States following NRCS standards are also exempt from Section 404 permitting requirements in addition to the other exemptions provided by the law.

Some of our producer partners have expressed considerable criticism of the IR. The agencies can resolve these concerns by holding additional work or listening sessions with stakeholders on the WOTUS rule as it nears adoption. Per your March 2014 memorandum of understanding, the agencies concurrently should consider stakeholder input on the IR prior to its first annual review in the spring of 2015. We agree with some agricultural interests that the list of exemptions in the IR needs to be expanded to include additional agricultural and conservation practices that lead to viable agriculture operations, improved fish and wildlife habitat, and clean water supplies. We believe that a continually evolving and flexible IR will enable future partnerships that support healthy agriculture and healthy streams.

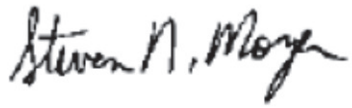
Improve and finalize the proposal—a once in a lifetime opportunity to improve clean water protections of all Americans

The WOTUS proposal and an improved IR will provide a clearer framework for protecting our waterways while avoiding harmful impacts to agriculture. The policies also should benefit farmers and ranchers by providing more predictability about how the CWA works and what producers need to do to comply with

it. TU will be there on-the-ground to help producers and local stakeholders develop innovative and collaborative solutions to clean water issues on jurisdictional waters.

TU, and sportsmen and women around the Nation, and support the reasonable and science-based efforts of the Corps and EPA to clarify and restore the Act's jurisdictional coverage. We support this proposal.

Thank you for considering our views,



Steve Moyer
Vice President of Government Affairs
Trout Unlimited

TULANE ENVIRONMENTAL LAW CLINIC

November 14, 2014

Via e-mail to ow-docket@epa.gov and U.S. MAIL *Re: 101-130*
Water Docket / Administrator McCarthy & Asst. Secretary Darcy
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Ave.
NW, Washington, DC 20460
Attention: Docket ID No. EPA-HQ-OW-2011-0880

Re: Docket ID No. EPA-HQ-OW-2011-0880; Proposed Rule Amending Definitions of Waters of the United States under the Clean Water Act

Dear Administrator McCarthy & Asst. Secretary Darcy,

On behalf of the Louisiana Environmental Action Network ("LEAN"),[1] please consider the following comments on the Environmental Protection Agency's ("EPA") and the U.S. Army Corps of Engineers' (the "Corps" and, together with EPA, the "Agencies") proposed rule defining the scope of waters protected under the Clean Water Act (CWA); Docket ID No. EPA-HQ-OW-2011-0880 (the "Proposed Rule"). Three copies accompany the mailed set of these original comments. LEAN reserves the right to rely on all public comments submitted.

Generally, LEAN applauds the Agencies' stated purpose to and efforts towards "enhance protection for the nation's public health and aquatic resources, and increase CWA program predictability and consistency by increasing clarity as to the scope of 'waters of the United States' protected under the Act." *See* 79 Fed. Reg. 22188, 22191 (proposed April 21, 2014). While LEAN appreciates the Proposed Rule's steps towards clarity, EPA should go further in its revisions of the definition of water of the United States to protect those waters as the Clean Water Act intends and the Constitution allows. Specifically, the Agencies must ***1)*** maximize the Clean Water Act's applied jurisdiction to meet Congress' broad intent, ***2)*** clarify that the waste treatment facilities exclusion from waters of the United States does not apply to natural streams and lakes, ***3)*** provide an opportunity for waters exempted subsection (b) to revert to jurisdictional waters. In addition to these specific comments, LEAN supports the Mississippi River Collaborative comments submitted on November 14, 2014. LEAN reserves the right to rely on all public comments submitted.

[1] LEAN is a non-profit corporation organized under the laws of the State of Louisiana. LEAN serves as an umbrella organization for environmental and citizen groups. LEAN's purpose is to preserve and protect the state's land, air, water, and other natural resources, and to protect its members and other residents of the state from threats of pollution. LEAN has members statewide, including members who live, work, or recreate in the project area.

Specific Comments

(1) The Clean Water Act Intends the Broadest Definition of "Waters of the United States" Consistent with the U.S. Constitution and Prevents the Agencies from Narrowing Its Scope by Regulation.

Because Congress intended the Clean Water Act (the "Act") "be given the broadest constitutional interpretation," the Proposed Rule may clarify or broaden the definition of "waters of the United States," but may not narrow it. *See* S. Rep. 111-361, 18-19. Indeed, the Corps has recognized Congress' intent that the term "waters of the United States . . . be given the broadest constitutional interpretation unencumbered by agency determinations which have been made or may be made for administrative purposes." 42 Fed. Reg. 37122, 37144 (July 19, 1977). This broad Congressional intent supports the Agencies' efforts to simplify the analysis for identifying "waters of the United States," for example by defining those wetlands that are *per se* jurisdictional because they have an established significant nexus with waters more easily understood (*i.e.* without scientific analysis) as "waters of the United States." *See Rapanos v. United States*, 547 U.S. 715, 782, (2006) (J. Kennedy, concurring) ("***Absent more specific regulations***, . . . the Corps must establish a significant nexus on a case-by-case basis when it seeks to regulate wetlands based on adjacency to nonnavigable tributaries.") (emphasis added). In other words, Justice Kennedy's opinion in *Rapanos* supports the Proposed Rule to the extent that it is specific about which waters have a significant nexus on a categorical basis. *See id.*

However, Proposed Rule ***may not*** categorically exclude waters when those waters may have a significant nexus. Given Congress' broad intent, the Agencies have no authority to narrow the application of Clean Water Act. *See Chevron, U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837, 842-43 (1984) ("If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress."). Accordingly, the Agencies must revise several changes in the Proposed Rule that may have an unsupportable narrowing effect on the scope of the Act's jurisdiction. For examples, the Proposed Rule:

- categorically removes from jurisdiction certain ditches and other waters that the Clean Water Act now expressly includes as "waters of the United States" when there is a significant nexus – a connection the Proposed Rule recognizes may be present for such waters. *See infra* § (3).

- precludes any opportunity to recapture waters that are or become excluded from the definition of "waters of the United States," regardless of whether qualification in the exclude category is temporary. *See infra* § (4).

- categorically removes "groundwater, including groundwater drained through subsurface drainage systems" from Clean Water Act jurisdiction – a preclusion not included in current law and contrary to evidence of a significant nexus cited in the Proposed Rule. *See*, *e.g.*, 79 Fed. Reg. at 22196-97 (summary of significant nexus conclusions); *id.* at 22209 ("While they may provide the connection establishing

> jurisdiction, these shallow subsurface flows are not "waters of the United States."); *id.* at 22224 ("The ability of streams to keep flowing even during dry periods typically depends on the delayed (lagged) release of local groundwater, also referred to as shallow groundwater . . . .").

- fails to reinstate, or even address, suspended language clarifying the narrow application of the waste treatment system exemption. *See infra* § (2).

(2) The Agencies Must Clarify that the Wastewater Treatment Systems Exclusion Does Not Apply to Systems Built in Natural Streams and Lakes.

The Agencies must revise the categorical exclusion for waste treatment systems to clarify - consistent with EPA's long-standing interpretation - that it does not apply to systems built in natural streams or lakes. *See W. Va. Coal Ass'n v. Reilly*, 728 F. Supp. 1276, 1290 (S.D.W. Va. 1989) (upholding EPA's interpretation that "the exclusion for treatment ponds was never meant to apply to treatment ponds constructed in United States waters."), *aff'd* 932 F.2d 964 (4th Cir. 1991). Although the Proposed Rule does not purport to expand the current waste treatment system exclusion, it fails to clarify the ambiguity that EPA created in 1980 by suspending regulatory language that would have specifically limited the waste treatment system exception to manmade bodies of water. *See* 45 Fed. Reg. 48620, 48620 (July 21, 1980). The suspended language remains in EPA's current and Proposed Rule definition of "waters of the United States at 40 C.F.R. § 122.2, together with a note explaining the suspension remains in place:

> Waste treatment systems . . . are not waters of the United States. ***This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States. [See Note 1 of this section.]***
> …
> Note 1: At 45 FR 48620, July 21, 1980, the Environmental Protection Agency suspended until further notice in § 122.2, the last sentence, beginning "This exclusion applies ___" in the definition of "Waters of the United States." This revision continues that suspension.

40 C.F.R. § 122.2 (emphasis added); 79 Fed. Reg. at 22268.

When it suspended the clarifying language, EPA affirmed its purpose "to ensure that dischargers did not escape treatment requirements by impounding waters of the United States and claiming the impoundment was a waste treatment system, or by discharging wastes into wetlands." 45 Fed. Reg. at 48620; *see* 45 Fed. Reg. 33290, 33298 (May 19, 1980) (Prior Clean Water Act regulations, like the Act itself, were "not intended to license dischargers to freely use waters of the United States as waste treatment systems."). Nevertheless, EPA agreed to re-consider the language to avoid overbreadth. 45 Fed. Reg. at 48620; 07/15/1980, Memo Re: Suspension of portion of definition of "Waters of the United States" in Consolidated Permit Regulations (noting EPA "did not intend [the] result" that, "could require many power plants and oil refineries (among other industries) to apply

for NPDES permits for discharges into their ash ponds and treatment lagoons.")[2] EPA also stated that it "intends promptly to . . . amend the rule, or terminate the suspension." 45 Fed. Reg. at 48620. EPA has still not amended the rule or terminated the suspension. The Proposed Rule is the opportunity to do so.

EPA's failure to amend the rule has led to the sort of confusion that the Proposed Rule seeks to avoid. The prolonged limbo of suspension has reduced EPA's clear regulatory mandate to interpretations requiring court intervention or agency guidance to confirm. *See, e.g.*, *W. Va. Coal v. Reilly*, 932 F.2d 964, 1991 WL 75217 *5 (4th Cir. 1991) ("[W]e agree with the district court's conclusion that the in-stream treatment ponds and the waters above such ponds fall within the definition of 'waters of the United States' . . . and the EPA did not act beyond its statutory authority in regulating these waters."); 10/25/2007, Memorandum for POA-1992-574 & POA-1992-574-Z (Oct. 25, 2007) ("EPA and the Corps agree that the agencies' designation of a portion of waters of the U.S. as part of a waste treatment system does not itself alter CWA jurisdiction over any waters remaining upstream of such system. Both the Corps and EPA believe that all the waters upstream and downstream of the tailings dam that were jurisdictional prior to the authorized activity and that qualify as jurisdictional waters of the U.S. under the *Rapanos* guidance are still subject to CWA jurisdiction . . . .").[3] Moreover, guidance and court intervention have developed a further exception, declining to apply the exclusion to natural streams and lakes unless a U.S. Army Corps of Engineers § 404 permit authorized conversion of waters of the United States to a treatment system. *See Ohio Valley Envtl. Coalition v. Aracoma Coal Co.*, 556 F.3d 177, 215 (4th Cir. 2009) (finding an exception when the Corps "exercises its § 404 authority to permit the use of a stream segment as part of the treatment system for fill runoff, [because] it has allowed the temporary removal of these waters from the definition of 'waters of the United States' only after analyzing the impacts of creating the system and mitigating those impacts as necessary") (citing Letter from Benjamin H. Grumbles, Asst. Administrator for the EPA, to the Hon. John Paul Woodley, Assistant Secretary of the Army (Civil Works) (Mar. 1, 2006); Memo from LaJuana S. Wilcher, Asst. Administrator for the EPA, to Charles E. Findley, Director, Water Division, Region X, United States Army Corps of Engineers, on Clean Water Act Regulation of Mine Tailings Disposal (Oct. 2, 1992)).

In short, to accomplish its purpose of clarity, the Agencies must revise the Proposed Rule to confirm that the wastewater treatment exclusion does not allow a discharger to convert any water of the United States into non-jurisdictional waters by building an in-stream treatment system. Indeed, the failure to "terminate the suspension" or amend the rule now that the opportunity is at hand may increase confusion. Notably, however, if the failure to address the suspended language were to signal an expansion of the waste-treatment system exclusion from the definition of "waters of the United States," such a narrowing of jurisdiction would be arbitrary and capricious and unlawful as contrary to Congress' stated intent for the Clean Water Act.

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[2] *Available at* http://www.epa.gov/npdes/pubs/owm560.pdf .

[3] *Available at* http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/cwa_guide/WTS_POA-1992-574_POA-1992-574-Z.pdf .

(3) Upland Non-Perennially Flowing Ditches Should Not Be Excluded from the Definition of Waters of the United States.

The Proposed Rule's exemption of certain ditches from regulation as "waters of the United States" if they "are excavated wholly in uplands, drain only uplands, and have less than perennial flow" unlawfully narrows the jurisdiction of the Clean Water Act. *See* 79 Fed. Reg. at 22203. First, this exclusion is contrary to the Act's broad jurisdictional intent because it precludes jurisdiction over waters that the Agencies explicitly recognize often perform the same functions as tributaries – a class of waters that the agencies agree should be categorically protected because of their significant nexus to traditionally jurisdictional waters. *See*, *e.g.*, *id.* Moreover, EPA provides no scientific basis for categorically excluding these waters. If a ditch functions as a tributary, then it should be regulated as a tributary regardless of its location.

The practical implications of categorically excluding upland ditches will also lead to confusion, inefficiencies, and an enforcement quagmire, *i.e.* the opposite of the Agencies' goal for the Proposed Rules. For example, while the Proposed Rules exclude upland ditches from being jurisdictional waters, they remain potential point sources under the law. *See* 33 U.S.C. § 1362(14) ("The term 'point source' means any discernable, confined, and discrete conveyance, including . . . any . . . ditch . . . ."). Under current regulations, when a ditch is a tributary and so "waters of the United States," each set of discharges into that ditch may be regulated at the point of entry. Under the Proposed Rule, however, a pollutant discharges into an upland ditch that is a tributary will not be regulated until the point of entry into the next downstream tributary (unless it too is an upland ditch) or stream or lake. Such downstream regulation condones dilution, interferes with monitoring, and impedes enforcement. These shortcomings lead to additional questions such as: Who will be responsible for obtaining permits at points of entry into upland "waters of the United States?" How will agencies enforce prohibitions on dilution? *See*, *e.g.*, 40 C.F.R. § 125.3(f).

In short, the proposed exclusion of all upland ditches is overly broad: EPA and the Corps may not exempt ditches that function as tributaries. The agencies must reject this wholesale exemption and provide for upland ditches to be considered "waters of the United States" whenever they meet the definition of tributaries. Because the science does not demonstrate a functional difference between natural and manmade tributaries, or support the idea that upland ditches can never have a significant nexus to navigable waters, the wholesale exemption of upland ditches from ever being treated as "waters of the United States" is arbitrary, capricious, and an abuse of discretion.

(4) The Proposed Rule Must Provide an Opportunity for Waters Excluded from the Definition of "water of the United States" to Become or Revert to "waters of the United States."

The Proposed Rule's absolute no re-capture of excluded waters is unsupported by science, contrary to the purpose and intent of the Clean Water Act, and outside the Agencies' authority. Although the Agencies state "there is no recapture provision for these excluded waters in the

proposal," they fail to support the permanency of these exclusions with science. *See* 79 Fed. Reg. at 22189. While the Agencies state that the exclusions are for "certain waters and features over which the agencies have as a policy matter generally not asserted CWA jurisdiction," they do not provide factual support that these are "longstanding practices." *Id.* Moreover, the statement that jurisdiction is "generally not asserted" does not support a categorical exclusion with "no recapture provision." On the contrary, because the term "generally" indicates exceptions to the policy, the Agencies' position can only support, at most, categorical exclusions when there is a recapture provision.

Moreover, changing landscapes and the law support providing for recapture of waters into the Act's jurisdiction in the final rule. For example, the Proposed Rule states "Absolutely no .uplands located in 'riparian areas' and 'flood plains' can ever be 'waters of the United States' subject to jurisdiction of the CWA." 79 Fed. Reg. at 22207. But such uplands may erode naturally and become wetlands that would otherwise be jurisdictional wetlands. In another example, the current exception to the limited scope of the wastewater treatment systems exclusion, *see supra* § (2), is only supportable (if at all) based on its temporary nature. *See Ohio Valley Envtl. Coalition v. Aracoma Coal Co.*, 556 F.3d 177, 215 (4th Cir. 2009) (noting the waste water treatment system exclusion may apply to natural streams when the Corps "exercises its § 404 authority . . . [and] allowed the ***temporary removal*** of these waters from the definition of 'waters of the United States' . . .") (emphasis added).

In short, while LEAN appreciates the Agencies' effort towards simplicity, the Proposed Rule's failure to include a recapture provision for waters excluded from the definition of "waters of the United States" under subsection (b) is arbitrary and capricious, without support of evidence, an abuse of discretion, contrary to the purpose and broad jurisdictional intent of the Clean Water Act, and outside the Agencies' authority.

Respectfully submitted by:

Elizabeth Livingston de Calderón
Tulane Environmental Law Clinic
6329 Freret Street
New Orleans, Louisiana 70118
(504) 865-8814
(504) 862-8721 (fax)
Counsel for Louisiana Environmental Action Network

STATE OF WASHINGTON

November 13, 2014

Water Docket
Environmental Protection Agency
Mail Code 2822T
1200 Pennsylvania Avenue NW
Washington DC 20460

Attention: Docket ID No. EPA-HQ-OW-2011-0880

Dear Administrator McCarthy:

Washington State agencies submit the following comments on the proposed rule from the United States Army Corps of Engineers (Corps) and the Environmental Protection Agency (EPA), *Definition of Waters of the United States under the Clean Water Act*, EPA Docket ID No. EPA-HQ-OW-2011-0880. This letter represents the consensus comments of the state departments of Ecology, Transportation, Fish and Wildlife, and Agriculture on the proposed rule. We appreciate the Corps' and EPA's attempt to clarify the definition of "waters of the US."

Final implementation of the rule will affect each of these state agencies. The Washington State Department Ecology (Ecology) is the water quality authority for Washington State. Ecology implements the state's water pollution control act (RCW 90.48) and is delegated by EPA as the state water pollution control agency responsible for implementing all federal water pollution control laws and regulations. Ecology issues Section 401 water quality certifications on federal Section 404 permits. Ecology has enjoyed a cooperative working relationship with our federal partners and looks forward to supporting the implementation of the rule.

Jurisdiction is clarified

Washington appreciates the clarity the rule provides regarding the scope of federal jurisdiction over waters of the United States in the context of U.S. Supreme Court decisions including *Solid Waste Agency of Northern Cook County v U.S. Army Corps of Engineers*[1], and *Rapanos v. United States*[2]. These two decisions addressed the extent of federal jurisdiction but did not provide a clear and comprehensive definition of jurisdiction. The plurality decision in *Rapanos*

[1] 531 U.S. 159 (2001)
[2] 547 U.S. 715 (2006)

in particular has resulted in uncertainty regarding the correct scope of federal jurisdiction, especially for wetlands.

The proposed rule provides more clarity on which waters are per se jurisdictional. It also provides some guidance on assessing a "significant nexus" when determining the jurisdictional status of other waters. The rule provides clarity for some waters such as tributaries, but it contains language that is in need of further clarification. "Floodplain," "riparian" and "contributing flow" are all terms whose definitions should be articulated more clearly on a regional basis, since their defining characteristics may vary in different parts of the country.

Additionally, the proposed rule applies to Section 404 permitting as well as other permitting programs such as Section 402. The rule should explain how these two programs compare and overlap. For example, the relationship between the rule and management of municipal separate storm sewer systems needs to be explicit.

Rule is Consistent with Existing Practices

Washington supports the inclusion of the types of "waters of the US" outlined in the proposed rule. These waters are consistent with the jurisdictional determinations that we have seen in Washington. In Washington State, both the Corps and Ecology consider the following waters jurisdictional:

- Perennial, intermittent and ephemeral streams (tributaries)
- Channelized streams in ditches (tributaries)
- Wetlands linked to a navigable water through shallow subsurface flows such as hyporheic flows (in the floodplain)
- Ditches excavated through wetlands or other "waters of the US" (tributary)

No Change for State Waters

Washington interprets the draft rule to not affect the way the state regulates its waters. Washington's definition of "waters of the state" in the state water pollution control act (RCW 90.48) protects additional waters not covered under the federal Clean Water Act such as prior converted croplands and isolated wetlands. Washington will continue to regulate all waters of the state regardless of federal jurisdiction. However, Washington appreciates that the rule more clearly identifies what types of waters would be considered jurisdictional under the federal Clean Water Act. This is important when proponents may need Section 404 permits from the Corps and related Section 401 certifications from the state.

These clarifications regarding "waters of the US" should help streamline permitting since those waters identified in the rule would not require individual jurisdictional determinations. While Washington protects its waters under state law, this uncertainty in federal jurisdiction has resulted in permitting delays when a jurisdictional determination is required. Although this

proposed rule may help streamline determination for some waters, such as tributaries, it may take longer to receive a jurisdictional call when using the significant nexus test since these will require case-by-case determinations.

Significant Nexus

Washington requests that the rule, preamble or guidance should be amended to provide more specificity on what is needed to document a significant nexus. Washington supports the use of remote sensing to identify similarly situated classes of waters when making significant nexus determinations as well as the use of single point of entry watersheds and ecoregions to identify "in the region" where waters are "similarly-situated." Using the watershed and ecoregion in significant nexus determinations will allow states and the Corps and EPA to accommodate the variety of landforms and systems across the country.

Given the broad nature of the rule and the diversity of waters across the United States, Washington recommends that the Corps and EPA work regionally with the states in identifying classes of "other waters" that have a significant effect on downstream waters. Identifying classes that have a significant nexus with downstream waters would reduce the number of individual determinations needed. As part of this work, Washington recommends that the Corps and EPA work with the state to identify appropriate regions in our state that may contain classes of similarly situated waters that provide a significant nexus to a "water of the US."

Permit streamlining could result from identifying classes of "other waters" as jurisdictional by reducing the number of individual significant nexus determinations necessary and; reducing the time needed to process permits. When an individual determination is necessary, we recommend that the Corps strive to meet a 180-day timeframe for a decision. A timeframe for individual determinations will provide a clear standard for regulatory staff and will help reassure applicants and the public that projects will be processed in a timely manner.

Support of Tributary Definition

Washington supports the inclusion of the presence of a bed and bank and evidence of flow in the definition of tributary. Regional manuals on determining the Ordinary High Water Mark on tributaries will be important to ensure clarity. We recommend that the Corps and EPA work with states to develop regionally appropriate methods and tools for delineating tributaries. In response to EPA's request, we feel it is appropriate to include wetlands as tributaries rather than just as adjacent waters when they are part of a tributary system.

The change from "adjacent wetlands" to "adjacent waters" to include other water features (such as oxbow lakes) is appropriate when they are adjacent to jurisdictional waters, bordering, contiguous or located in the riparian area or floodplain of a "water of the US."

Clarification on Floodplains, Riparian Areas, and Contributing Flow

Washington supports the inclusion of waters located in the floodplain of jurisdictional waters or in riparian areas along waters and tributaries as "neighboring" waters because of their importance in protecting the physical, chemical and biological integrity of the nation's waters.

Regulatory protection of these critical waters is important in our state. Washington has several federally listed salmonid species. Loss of in-water, floodplain and riparian habitats has been a key contributor to their decline. Washington floodplains support many wetlands that are used by salmonids for refuge and rearing. These wetlands are often connected to rivers via shallow subsurface hyporheic flows and overbank flooding. Wetlands in riparian areas provide critical functions such as nutrient cycling, flow attenuation, and habitat for invertebrates, amphibians, and fish. Wetlands in these areas directly affect the physical, chemical, and biological integrity of "waters of the US." Therefore, Washington agrees that wetlands located in floodplains and riparian areas are appropriately included as "waters of the US."

Washington also concluded that regional specificity is needed to refine these definitions. For example, we believe that a spatial extent is needed on a regional basis for determining which riparian and floodplain wetlands are de facto jurisdictional. These definitions and delineation guidance should be developed cooperatively with the state. It should also be noted that the ecological value of these resources in riparian and floodplains notwithstanding, federal jurisdiction in these waters may result in additional cost to applicants, federal and state permitting agencies, and for actions requiring federal Endangered Species Act consultation when federal permitting is needed. The Corps and EPA should consider potential added costs as the rule is finalized.

"Contributing flow" should be defined based on stream size and significance of the contribution. While the feasibility of doing this on a national basis may not be practical given the diversity of climatic conditions, ecoregions, and landforms among the states; regional guidance could be developed to determine what constitutes a significant contribution for different stream types.

Therefore, Washington recommends that Corps and EPA work with the State and tribes to develop regionally appropriate definitions of "floodplains," "riparian areas," and "contributing flow." In addition, methods for determining their physical extent are needed so that the state and federal agencies have a common understanding of how these terms apply in Washington.

Drainage and irrigation ditches in agricultural areas

Washington supports the existing Section 404 permitting exemptions for normal and ongoing farming, silviculture, and ranching activities as described in 33 CFR § 323.4(a)(1):

> *(i) Normal farming, silviculture and ranching activities such as plowing, seeding, cultivating, minor drainage, and harvesting for the production of food, fiber, and*

forest products, or upland soil and water conservation practices, as defined in paragraph (a)(1)(iii) of this section.

(ii) To fall under this exemption, the activities specified in paragraph (a)(1)(i) of this section must be part of an established (i.e., on-going) farming, silviculture, or ranching operation and must be in accordance with definitions in §323.4(a)(1)(iii).

In cases where farm ditches contain channelized streams, they should, under the proposed rule, be considered jurisdictional even if they only contain intermittent flow. However, under the existing exemption for ongoing agriculture, maintaining them in the course of normal farming, silviculture, and ranching continues to be exempt from Section 404. Under Washington State law, established and ongoing agricultural operations and activities such as ditch maintenance may continue without the need for a wetland authorization. As long as producers are using best management practices approved by Ecology, their ongoing farming activities are considered to be protective of water quality. However, new ditches and new or expanded drain tile systems draining a "water of the US" to convert it to a new use would require a Section 404 permit.

In Western Washington, farmers often construct shallow ditches ($\leq$ 18") on actively farmed fields in the spring. The purpose is to drain surface water from their fields to allow planting. Washington is looking for clarification and affirmation by EPA that shallow, temporary ditches dug specifically for the purpose of draining surface waters from previously converted farmland within floodplains and adjacent to tributaries are not jurisdictional under the new definition.

Clarification Needed for Non-Agricultural Ditches

State agencies and local governments have expressed concern that the wording in the "water of the US" definition for excluding ditches from Section 328.3 (§ 328.3(b)(3) and (4)) is somewhat ambiguous. The exclusion should clearly identify that sections of roadside ditches and other drainage ditches excavated in uplands that drain only upland areas, are not jurisdictional upstream of the discharge point even if the ditch periodically "contributes flow" to a "water of the US." Clarifying these distinctions would eliminate much of the confusion.

Roadside or other drainage ditches containing a perennial and intermittent channelized stream would be jurisdictional if it meets the definition of a tributary, as proposed in the rule. The rule should be amended to specifically clarify that ditches that contain tributaries are jurisdictional, and are not excluded simply because they flow through a ditch.

Stormwater systems

It is not clear how Section 402 permitted facilities will be treated under the proposed rule. The proposed language could be interpreted to mean that any ditch system that discharges to a "water of the US" would be jurisdictional. Many roadside ditches and municipal separate storm sewer systems (MS4s) discharge to jurisdictional wetlands and streams. These systems are permitted and regulated under Section 402 and require periodic maintenance. Where they do not contain

streams, they should be able to be maintained without the need for permitting. Washington recommends that ditches in uplands and draining only uplands as part of an MS4 management system should be non-jurisdictional upstream of the discharge point to a wetland or tributary.

The proposed rule should also clarify that those constructed parts of stormwater management systems that often look and act like natural systems (for example, treatment swales and ponds, infiltration ponds, treatment wetlands, rain gardens, and compost filters) are exempt similar to the wastewater treatment exemption. Some of these treatment systems, permitted pursuant to Section 402, meet wetland criteria, especially if they were thoughtfully designed and implemented. However, when they are specifically constructed for stormwater conveyance and treatment those features should be excluded from the definition of "waters of the US". This clarification could be in the preamble or regulatory guidance letters for implementing the rule.

Regional Manuals

As previously noted, Washington strongly recommends that EPA, and the Corps work with their state partners to develop regional manuals, definitions, and guidance to implement the rule. We recognize the difficulty in providing clear definitions and standards nationwide due to the diversity of climate, landforms and ecosystems across the country. Because of this diversity, the rule is understandably vague which makes it imperative that the agencies develop regional definitions and guidance. With the states as co-regulators, the agencies should work directly with the states as they develop implementation guidance in their region.

Connectivity report

We recommend that the agencies wait to finalize and adopt the "waters of the US" rule until after the science advisory board review is completed and the report is finalized. Washington believes that the timing of the final report, *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence*, and how it interacts with the proposed "waters of the US" rule process is important. Since the connectivity study will be used to provide the scientific basis for the determination of jurisdiction under the rule, it seems appropriate that the agencies wait to finalize the rule until after the Scientific Advisory Board has completed their review and the report is finalized. To adopt the rule prior to the final report being released would miss an opportunity to refine the rule based on the scientific findings of the final connectivity report.

Summary

Washington appreciates the opportunity to comment on the proposed rule, and hopes that our comments are helpful. Washington recognizes the challenges inherent in defining the extent of jurisdiction under the Clean Water Act. We commend EPA and the Corps for the thought and hard work that went into the development of the proposed rule. We appreciate EPA's outreach to the states and the number of calls with states that have been available where EPA has explained some of the rationale behind the rule language. The calls have been very helpful. In

closing, Washington would like to emphasize a repeated theme: the importance of EPA and the Corps working with states on a regional basis to develop guidance on the implementation of the rule.

Sincerely,

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Washington State Department of Ecology

Philip Anderson, Director
Washington State Department of Fish & Wildlife

Lynn A. Peterson, Secretary
Washington State Department of Transportation

Don R. "Bud" Hover, Director
Washington State Department of Agriculture

November 14, 2014

U.S. Environmental Protection Agency
Water Docket, Environmental Protection Agency, Mail Code 2822T
1200 Pennsylvania Avenue NW
Washington, DC 20460
Attention: Docket ID No. EPA–HQ–OW–2011–0880.

Subject: Comments of the Water Environment Federation on the Proposed Rule Defining "Waters of the United States"

Submitted via Federal eRulemaking Portal & E-mail to ow-docket@epa.gov

The Water Environment Federation (WEF) thanks the U.S. Environmental Protection Agency for the opportunity to comment on the proposed rule to define "waters of the United States" (hereafter "proposed rule") under the federal Clean Water Act (CWA). WEF supports science-based protection of our nation's wetlands, rivers and lakes and the continued improvement of their quality and welcomes a continued dialogue on some key areas of this proposed rule. WEF's comments reflect input from members associations and its members across the United States. In addition, WEF appreciates the extensive outreach EPA conducted regarding this proposed rule. Specifically, the Office of Water staff participated in two webinars designed for wastewater and stormwater utilities. WEF supports EPA's intent in protecting our nations' waters and provides input in these comments on how the proposed rule may be clarified.

WEF is a not-for-profit association that has provided technical education and training for the world's water quality professionals since 1928. The Federation has 36,000 individual members and 75 affiliated Member Associations who support its mission to preserve and enhance the global water environment. WEF is supportive of regulations that are science based, achievable, and protective of human health and the environment.

WEF appreciates that the proposed rule explicitly specifies that the agencies propose no changes to the longstanding regulations that exclude waste treatment systems designed to meet the requirements of the CWA and prior converted cropland from the definition of ''waters of the United States.'' (79 FR 22217) These regulations provide an essential component of the existing regulatory framework that ensures effective agency operations. The retention of the waste treatment exemption is one of the highest priorities for WEF and its Member Associations.

WEF delineates below certain areas of primary interest to its members and suggests clarifications which would help in clarifying them and otherwise help in the implementation of a final rule.

The Waste Treatment Exemption Should Specifically Include Water Recycling Facilities and Effluent Storage Ponds

In order to address the historic drought conditions currently plaguing the western states, water and wastewater agencies must rely on a full suite of flexible options to provide potable and recycled water supplies for a variety of ongoing uses. Thus, WEF opposes any direct or indirect regulatory impacts on water recycling, water storage, and other mechanisms that play a part in recycled water infrastructure and processes as a result of the proposed rule.

As noted above, we appreciate the explicit acknowledgement and codification of the waste treatment exemption in the proposed rule. However, we believe it is important that the proposed rule expressly states that the waste treatment exemption extends to recycled water facilities. States' water recycling projects often depend upon artificially created wetlands and storage ponds to treat millions of gallons of water a day. If these features are considered waters of the U.S. and are excluded from the waste treatment exemption, they could theoretically no longer be used as an integral component of the waste treatment systems, forcing the closure of important recycled water projects critical to states's water supply. Moreover, a lack of clarity on this issue may stall or halt the development of recycled water projects at a time when recycling is needed the most to address climate resiliency priorities.

Because recycled water demand is variable with time of day and season, recycled water agencies maintain reservoirs or storage basins/ponds to store recycled water during periods of low usage in anticipation of peak demands. These features are an essential component of the recycled water process and integral to an agency's ability to continue reliably producing and supplying recycled water in many instances. The proposed rule should affirm that such reservoirs along with influent and treated effluent storage ponds are within the scope of the waste treatment exemption, consistent with the regulatory definition of "complete waste treatment system" found in existing federal regulations[1]. As the proposed rule and existing practice acknowledge, waste treatment systems designed to meet the requirements of the Clean Water Act are not waters of the U.S., and treatment systems should include any facilities, including storage ponds and basins, related not only to traditional treatment facilities and processes, but also to the production of recycled water.

In the alternative, recycled water facilities and features (including storage ponds, basins, artificially created wetlands, recycled water reservoirs and other features associated with water recycling) should be expressly exempted as part of the specifically identified features that are not considered waters of the United States. within the proposed rule. In this case, recycled water facilities would be treated similar to artificial lakes, ponds, swimming pools, ornamental waters, and groundwater, which are specifically identified and expressly exempted. In either case, whether recycled water facilities are considered part of the waste treatment exemption or have their own specifically identified exemption, it is essential that the proposed rule not interfere with recycled water production and treatment by making those features jurisdictional.

The failure to include an explicit statement in the final rule would leave open the question of whether these features are considered "waters of the United States." Such a situation could lead to regulatory

[1] See 40 C.F.R. §35.2005(b)(12), defining "complete waste treatment system" as "all the treatment works necessary to meet the requirements of title III of the [CWA], involving . . . the ultimate disposal, *including recycling or reuse*, of the treated wastewater and residues which result from the treatment process." (Emphasis added); *see also* 40 C.F.R. §35.2005(b)(49) [definition of "treatment works" includes "storage of treated wastewater in land treatment systems before land application" among other things].

disincentives to produce recycled water in western states, including California, compounding a water scarcity situation that is already dire. Pending and adopted federal and state legislation to address the impacts of our historic drought contain a number of approaches to encourage recycled water projects. Transforming components of the recycled water process (including integral systems such as storage ponds) into jurisdictional waters would undercut efforts to address the drought.

NPDES Implications of the Proposed "Waters of the United States" Rule

WEF and its members are concerned with the lack of clarity in the apparent intent for direct EPA NPDES permitting authority for non-point pollution sources. Since the definitions for "Waters of the United States" are being added to 40 CFR, Part 122 under the NPDES program, would the Proposed Rule conceivably provide EPA with direct NPDES permitting authority over certain qualifying non-point pollution sources for the first time? It is suggested that EPA clearly state its intent on this issue to avoid unnecessary confusion over the basis for program control, especially under the more difficult case-specific instances involving "Other Waters" and ephemeral areas.

A parallel authority issue with "Waters of the State" may be created in this proposed rule. The proposed rule does not address parallel "Waters of the State" authority already in place for various States as to which entity will likely have primary responsibility for program management and enforcement. For example, the Nebraska Department of Environmental Quality has legislation in place that already addresses the key elements contained in the Proposed Rule, including groundwater nexus considerations, which the Proposed Rule excludes. Similar to above, it is suggested that EPA clearly state its intent on the issue of either independent EPA or parallel authority among States, in order to avoid unnecessary confusion over the basis for program control; especially where States already possess similar or even greater authority.

Spreading Grounds and Related Features of the Wastewater Treatment Process Should Be Expressly Exempted Under the Final Rule

As the proposed rule and existing practice acknowledge, waste treatment systems designed to meet the requirements of the Clean Water Act are not waters of the United States., and WEF wants to ensure that as part of these proposed amendments spreading grounds/basins, treatment ponds/lagoons, and constructed treatment wetlands used as part of the wastewater process are subject to the same exemption. Since these facilities are clearly part of the treatment process, providing additional treatment, residence and settling prior to discharge, these facilities should be expressly recognized in the rule as falling under the Waste Treatment Exception.

In addition, many WEF members utilize spreading grounds or basins in order to facilitate groundwater replenishment; a vital part of water management throughout certain states. Others utilize artificially created effluent storage ponds as part of their treatment process. Many agencies maintain reservoirs or storage basins/ponds to store recycled water. These artificially created features and spreading grounds have not previously been defined or regulated as "waters of the United States," and should remain separate. For this reason, the proposed rule should expressly include treatment ponds/lagoons, spreading grounds/basins, and constructed treatment wetlands within the scope of the Waste Treatment Exception, along with effluent storage reservoirs and recycled water storage facilities discussed previously.

The Proposed Amendments to What is Considered an "Adjacent Water" Must be Reexamined to Consider Wastewater Treatment Processes

Many wastewater treatment processes, including man-made spreading basins, are located near or even "adjacent" to rivers and tributaries that have been (or under the proposed rule, would be) designated as waters of the United States. and may be located in the riparian or floodplain areas of these rivers. Because the proposed rule defines "adjacency" and includes the incorporation of waters within the flood plain or riparian area of a designated water of the U.S. as also being a jurisdictional water (see section 328.3(c)(2)-(4), FR 22263), this could lead to an interpretation that such spreading basins and artificial storage ponds are jurisdictional.

Specifically, the proposed rule would revise the current category of an "adjacent wetland" to include all "adjacent waters." (FR 22206) As a result, numerous treatment ponds, recycled water reservoirs, and spreading grounds/basins could become jurisdictional, creating a significant problem and interference with existing wastewater treatment processes. For example, under the proposed rule, the Montebello Forebay spreading grounds in Southern California would appear to become jurisdictional. Under existing rules, regulations and case law, a waterbody is considered a water of the U.S. if it is a wetland adjacent to a water of the U.S. In contrast, under the proposed rule, all waterbodies (of many types) adjacent to a water of the U.S. could be considered themselves waters of the United States., regardless of whether any sort of nexus or hydraulic connection has been shown and without any consideration of whether a berm or levee separates them. Under the proposed rule, a significant nexus appears to be assumed, as it states "…even in cases where a hydrologic connection may not exist, there are other important considerations…that result in a significant nexus between the adjacent wetlands or waters and the nearby "waters of the United States" and (a)(1) through (a)(3) waters." (79 FR 22244) As one seeming justification for this expanded interpretation, the proposed rule states that "many major species that prefer habitats at the interface of wetland and stream ecosystems remain able to utilize both habitats despite the presence of such a berm." (*Id.* at 22245) This use of species preference and behavior to justify incorporation of a water with no proven hydrologic connection as a water of the U.S. closely resembles the previously invalidated migratory bird rule. As such, terrestrial species preference is not an acceptable basis for the assertion of jurisdiction.

If these "adjacent" wastewater and recycled water facilities, including spreading grounds, are defined to be within the jurisdiction of the CWA, it would adversely impact WEF's member agencies' ability to augment groundwater supplies and to effectively provide wastewater treatment services. The plethora of additional and unnecessary requirements, regulations, and permitting associated with making these areas into jurisdictional waters, including but not limited to the procurement of an NPDES permit, assigning designated uses, exposure to penalties and potential third party liability for effluent violations, and impairment of the ability to operate and maintain these areas, would erect new mandates with no benefit to the surrounding ecosystems and waterbodies. Such a result represents an extreme disincentive to sustainable water supply development and a significant impairment of wastewater agencies' ability to protect public health and safety through innovative and effective wastewater treatment.

Within the proposed rule, there are two specific exemptions that could potentially address this issue. Pursuant to section 328.3(b)(5)(i) and 122.2(b)(5)(i)[2], a spreading ground could fall under the

[2] All references are to Part 328 and Part 122, however the language suggestions contained herein similarly apply to other regulatory sections that have the potential to impact wastewater entities, including Part 230 (79 FR 22268- 22269), Part 232 (79 FR 22269-

definition of "[a]rtificially irrigated areas that would revert to upland should application of irrigation water to that area cease" (79 FR 22263 and 22268) Spreading grounds utilized by wastewater treatment facilities are generally artificially created and might not otherwise exist aside from the application of wastewater effluent to the area. However, without being explicitly stated, it is not clear enough that this definition would apply to upland wastewater spreading grounds. Similarly, pursuant to section 328.3(b)(5)(ii) and 122.2(b(5)(ii), wastewater and recycled water ponds and spreading grounds could fall under an expanded definition of "[a]rtificial lakes or ponds created by excavating and/or diking dry land and used exclusively for such purposes as stock water, irrigation, settling basins, or rice growing." (79 FR 22263 and 22268) The word "such" seems to indicate that these are merely examples, not an exhaustive list, and thus spreading grounds utilized in conjunction with and/or as part of the overall wastewater treatment process could fall under this exclusion. However, without specific references within these provisions to treatment ponds and spreading grounds, WEF and its members are very concerned that these facilities could become jurisdictional and create significant problems for agencies attempting to protect public health and the environment. This, we would request the explicit inclusion of the terms such as "spreading grounds" and "wastewater and recycled water storage," within this section.

"Tributary" is Defined Too Broadly and Will Likely be Construed to Include Certain Conveyances and Ditches

For the first time, the proposed rule seeks to define what constitutes a "tributary" under the Clean Water Act. The proposed rule drastically expands the number of waters potentially subject to federal jurisdiction. Specifically, the proposed rule defines ''tributary'' as a water "physically characterized by the presence of a bed and banks and ordinary high water mark…which contributes flow, either directly or through another water…" to a water of the U.S. (79 FR 22201-22202) Even wetlands, lakes, and ponds without an ordinary high water mark (OHWM) or bed and banks would be considered tributaries if they contribute flow, either directly or through another water to a water of the U.S. (*Id.* at 22201-22202) Perhaps most significantly, under the proposed rule, a tributary, including wetlands, can be a natural, man- altered, or man-made water and includes waters such as rivers, streams, lakes, ponds, impoundments, canals, and ditches not otherwise explicitly excluded. (*Id.* at 22202)

This overly broad definition of tributary could potentially increase the number of man- made conveyances, ditches and conveyance facilities, including those utilized by wastewater entities, under federal jurisdiction, and the lack of certainty surrounding the rule's definition of a tributary could lead to regulation of previously unregulated waters. This broad classification of "tributaries" would be considered jurisdictional regardless of perennial, intermittent or ephemeral flow. Even dry washes could be considered jurisdictional under the proposed rule. This is significant for a variety of reasons.

One example of the potential impacts of defining what constitutes a "tributary" too broadly is the potential discharge from sanitary sewer systems to dry creeks/sloughs/washes when no pollutants ever actually reach water. It is entirely unclear whether this constitutes a discharge of pollutants to a water of the U.S. Under the broad definition of tributary in the proposed rule, it is possible that spills to dry creeks, sloughs, or washes would be considered a "discharge" even if there are no real or potential impacts to surface waters of any kind. Similarly, there are circumstances where sewer spills occur in a street that drains to a roadside ditch or local creek bed that has no flow and is unconnected

22270), and Part 401 (79 FR 22273-22274).

to a water of the U.S. The responsible party may fully remediate the spill and address all real and potential water quality impacts before the spill ever reaches a water source. It is difficult to understand how can this kind of circumstance could be envisioned as a discharge to "waters of the United States" when there is no actual water in a dry creek or ditch nor an adverse impact to the environment.

The proposed rule provides exceptions for ditches that are generally created in uplands and drain uplands, but it does not define upland. It gives specific exceptions but does not speak to the limits of those exceptions in terms of ditch length. For instance, roadside ditches often have characteristics of both perennial tributaries and of dry upland wet weather ditches along their sometimes very long lengths. The proposed rule promotes protection of water quality and addresses ditches, but it does not mention green infrastructure. Ditches that treat runoff are elements of green infrastructure. WEF's position is that by not being clear on this issue, it may be inadvertently impacting the future adoption of green infrastructure activities as they relate to ditches.

Finally, there is the issue of the cost of bringing these ditches into compliance. In its economic analysis, EPA calculated a net positive impact nationwide of around $200 million, but that analysis used a very narrow assumption of "new" waters included in the rule. In contrast, for example, studies[3] by the Florida Stormwater Association (FSA) show that the cost of bringing ditches up to current water quality standards typically runs about $1 million per mile. More comprehensive studies found that the rule would cost between $200 million and more than $1 billion per county in areas examined.[4]

Stormwater and Wet Weather Related Issues

Wet Weather Frequency, Duration, and Water Quality-Based Risk Factors. EPA has long struggled with evaluating water quality impacts and risk factors associated with short-term wet weather conditions, and to date this regulatory area has not been adequately resolved. However, the Proposed Rule cites various nexus situations that would very much depend on such short-term wet weather conditions. Therefore, WEF recommends that EPA stipulate the basic technical and administrative approaches that are intended to be used at the source in order to define frequency, duration, and water quality-based risk factors that are directly associated with wet weather events that reportedly transport pollutants of concern to downstream designated beneficial use areas. In other words, how does EPA intend to establish applicable, defensible water quality standards and monitoring requirements at the claimed pollutant sources, such as ephemeral stream areas under short-term wet weather conveyance conditions?

Due to past litigation, the inherent problem with EPA guidance and many of the State water quality standards to date is that there has been no ability to establish upper bounds in stormwater flow and resultant stream flows for the evaluation of pollutants of concern within any water quality-based NPDES permitting activities. Quite the opposite – NPDES wastewater point-source discharge permits are primarily based on applying water quality standards under extreme low flow dry weather conditions for acute and chronic toxicity periods of exposure; that is, during times where transport of pollutants of concern from ephemeral source areas would not logically occur. Therefore, if the ultimate intent of the Proposed Rule under the various "Waters of the United States" classifications is to include and manage short-term stormwater flow condition events, then EPA must also logically address the corresponding frequency, duration, and risk factors under such short-term

[3] "*Proposed Regulations Waters of the United States: Assessment of Impacts,*" July 25, 2014.

[4] *"Estimated Fiscal Impacts on Selected Municipal Separate Storm Sewer System Permittees"*, Study by the Florida H2O Coalition, August 29, 2014.

conditions to be applied to pollutant source ephemeral areas and appropriate "Other Waters" areas under the Proposed Rule. It is not sufficient to simply cite cases of technical evidence for "connectivity" involving various physical, chemical, and biological factors without mentioning the underlying causative statistical stormwater flow boundary conditions for each of those cases.

As a related matter, such "connectivity" link to water quality standards will be very important in extending the Proposed Rule to the existing TMDL Program where downstream water quality shows impairment. In addition, the Proposed Rule mentions that certain means of stormwater conveyance may potentially be considered to be "point sources"; whereas such point sources may have been previously considered to represent non-point sources. This would imply that certain previous TMDL determinations, involving both point source waste load allocations and non-point source load allocations, may have to be re-examined and re-issued as a result of the Proposed Rule. Therefore, it is suggested that "connectivity" factors need to separately distinguish short-term wet weather impacts from long-term impacts (eg. bio-accumulative impacts) and must describe how established water quality standards are to be addressed in a meaningful, defensible manner at the pollutant source.

Finally, on a related "connectivity" issue - WEF would like to note that, as written, and in conjunction with the Connectivity Report, EPA and the USCOE appear to advocate deep consideration be given to biological/chemical/physical (BCP) connections. WEF members have experienced occasions where the focus seem to be only on the hydrologic connectivity. For instance, during wet weather, gullies, ditches, and ephemeral streams will deposit large woody debris (LWD) and food sources for the downstream aquatic populations life cycles. This may make those waters jurisdictional through the unmentioned BCP connections. WEF's concern is that a disproportional focus may be given by regulators to BCP with a resulting disproportionate finding of jurisdiction. WEF asks that EPA clarifies when and how these BDPs will be applied.

Impacts on MS4 Communities: The proposed rule will impact MS4 communities as it relates to the issue of waste treatment system exclusions in the context of stormwater management. Currently, exclusions listed in 40 CFR 122.3 specifically target discharges associated with pest control, nonpoint sources and agricultural activities, sewage and industrial wastes, water transfer activities[5], and even sewage discharged from vessels.

Not included here are stormwater management and treatment systems. The proposed rule plainly states that it "does not change regulatory exclusions for waste treatment systems." However, EPA and the Corps do not intend for traditional stormwater practices, such as detention ponds, or green infrastructure practices, such as bioretention facilities and permeable pavements, to be considered jurisdictional Waters of the United States, but the lack of language explicitly outlining the exclusion of these systems leaves the rule open for interpretation as to whether stormwater controls are considered jurisdictional. WEF asks that EPA specifically exempts these so to avoid their inclusion.

To clarify that waters associated with stormwater infrastructure are not considered Waters of the United States, WEF suggests that specific terms, such as "stormwater control measures" or "best management practices," be integrated into the regulations and clearly exempted. This would help to codify that infrastructure used to treat, manage, infiltrate, or retain urban stormwater runoff is covered under the waste system treatment exclusions. The rule also should further define the systems to which the exemption applies and could include man-made structures and devices as well as treatment measures used to improve water quality, reduce stormwater volume, control flow rate and flooding, convey stormwater, or any combination of

[5] WEF is submitting comments specific to the issue of water transfer activities through a different letter in coordination with other water sector organizations incorporated by reference in these comments.

these purposes. WEF suggests the following language to address this issue:

> Added to (c) "Definitions"
> "Fully-constructed Stormwater Control Measures. The term fully-constructed stormwater control measures (SCMs) means man-made structures, devices, measures, or Best Management Practices (BMPs) that are constructed by the purpose of water quality treatment, stormwater runoff volume reduction, stormwater runoff rate control, flood control, or any combination of these purposes. Fully-constructed SCMs include constructed stormwater ponds, constructed stormwater wetlands, rain gardens, infiltration devices and structures, Low Impact Development structures and BMPs, and other stormwater control and conveyance structures, devices, and features. SCMs that have been built at the approximate location of similar types of natural waters (such as stormwater ponds constructed at the location of natural lakes or wetlands, ditches constructed at the location of natural streams or creeks, or stormwater channels constructed at the location of natural rivers) shall not be considered to be fully-constructed SCMs. Natural lakes, ponds, and wetlands with stormwater conveyance pipes discharging to them and constructed outlets shall not be considered to be fully-constructed SCMs."
>
> Added to "(b) The following are not "waters of the United States" notwithstanding whether they meet the terms of paragraphs (a)(1) through (7) of this section- (5) The following features:"
>
> (viii) Fully-constructed stormwater control measures.

The term "Stormwater Control Measures" is used in the 2008 National Research Council report "Urban Stormwater Management in the U.S." and would present a simple exclusion language to a now unclear provision. WEF finds that the use of the term "fully-constructed SCMs" is narrow enough to allow a reasonable application of what otherwise could be a broad term. We also intend for this to be narrow and by listing examples, achieve such narrow objective.

WEF offers an example of why the language above is needed: An upscale condominium was constructed in an upland with heavy soils. A requirement for a restricted flow rate was imposed on the stormwater discharge from the development. The engineer designed a typical rectangular stormwater wet-detention basin with a controlled outlet to meet the requirement. The developer rejected the design as "visually unacceptable". The subsequent design had a stormwater wet-detention basin with the same outlet control structure, but the basin had a curvilinear shape and benched sideslopes to encourage emergent vegetation and wildlife. The result was a "very attractive" amenity. After construction the condominium association took over control of development, and added a fishing pier, a paddleboat livery, and a swimming beach. Does the stormwater detention basin fall under the exemption, or is it a WOTUS?

Conclusion

WEF requests that the explicit exclusions in this rule be affirmed and extended to other highly regulated activities such as MS4s, along with "green infrastructure" practices; water reuse, recycling, and reclamation operations; and commercial, industrial and manufacturing water treatment systems. In the case of MS4s, any new proposal for exclusion and solicitation of public comment should extend to their conveyances that channel and discharge stormwater runoff as well as "green infrastructure" approaches which attempt to infiltrate, reuse, retain and evaporate stormwater flows.

WEF, again thanks EPA and the US Corps of Engineers for the opportunity to comment in this important

rulemaking and invites the Agencies to maintain a continuous dialogues on the issues identified here and to explore together opportunities to address them.

Again, thank you for the opportunity to comment on this rulemaking and should you have any questions or comments, please contact me at (703) 684-2416, or at cternieden@wef.org.

Sincerely,



Claudio H. Ternieden
Director, Regulatory Affairs
Water Environment Federation

Water Docket
Environmental Protection Agency
Mail Code: 2822T
1200 Pennsylvania Ave. NW
Washington, DC 20460
Docket ID No. EPA-HQ-OW-2011-0880

ATTN: Docket IDNo. EPA-HQ-OW-2011-0880: Definition of "Waters of the United States Under the Clean Water Act"

Dear Administrator McCarthy and Lieutenant General Bostick:

The Western Organization of Resource Councils (WORC) appreciates the opportunity to comment on the rule proposed by the Environmental Protection Agency and U.S. Army Corps of Engineers (the EPA and the Corps) concerning the definition of "Waters of the United States" under the Clean Water Act. WORC is network of community organizations in seven western states which has worked to protect the interests of farmers, ranchers, and other citizens of rural communities in the West for 35 years.

WORC supports the purpose and intent of the proposed rule as we understand it: to clarify and give certainty to the definition of "Waters of the United States;" to protect water that farmers, ranchers, and other rural residents use and depend on, without expanding the water features and water bodies under the jurisdiction of the Clean Water Act beyond its historical reach; and to provide certainty concerning agricultural practices which are exempt from regulation under the Clean Water Act.

WORC and its member groups have an interest in maintaining clear protection of water quality and quantity for waters that our farmer-rancher members depend on from pollution from oil and gas development, coal, hard rock and uranium mining, other industrial development, and industrial scale factory farms. At the same time, WORC has sought to ensure that definitions and interpretation of the Clean Water Act do not have unintended application to the common agricultural practices of family farmers and ranchers across the country, which are no threat to water quality that the Clean Water Act was intended to protect.

Accordingly, we have worked for clarification and common sense definitions of terms under the Clean Water Act in rulemakings on Concentrated Animal Feeding Operations; we have joined in friend of the court briefs in the Supreme Court cases which created the uncertainty EPA and the Corps seek to end with this rulemaking; and we worked for legislative clarification during consideration of the proposed Clean Water Restoration Act.

As with those previous efforts, in supporting the purpose and intent of EPA and the Corps in this rulemaking, we want to ensure that the proposed rule has the effect of protecting farmers, ranchers, and other Americans from industrial water pollution, without needlessly interfering with normal, everyday agricultural practices, or resource conservation actions farmers and ranches take to comply with Natural Resource Conservation Service guidelines. We therefore urge EPA to ensure that the final rulemaking provides assurances that the proposed rule, in conjunction with the previously issued interpretive rule on exempt agricultural practices, does not have unintended effects restricting normal farming practices. We agree with the comments in Senator Jon Tester's letter of October 20, 2014, and the suggestions in National Farmers Union's comment letter of September 22, 2014. We hope you will also make sure to respond to the questions posed in the letter of 13 other Senators of July 31, 2014.

Specifically, we support the EPA's intent that the proposed definition of Waters of the U.S. not affect existing regulatory exemptions for agricultural activities, but we share the concerns of many about the definitions of normal farming practices in the interpretive rule. In particular, we urge EPA to take extra care to be clear that agricultural practices not specifically included in the interpretive rule, but which might be required to meet NRCS guidelines, will not trigger permitting requirements under the Act. We hope EPA will clarify how the list of practices will be reviewed and updated over time to avoid unnecessary interference with normal and resource conserving agricultural practices. We share the concerns of the Senators in the letters cited above that EPA ensure the protection of the privacy of farmers and ranchers, to further clarify and limit the application of the proposed rule to farm drainage and irrigation ditches and upland ditches.

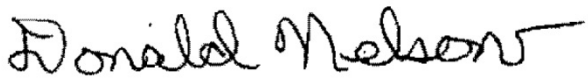
We support the suggestions of National Farmers Union (NFU) to clarify the rule in regard to the definition of "tributary," and incorporation of the existing Corps definition of "ordinary high water mark." As NFU explains, those clarifications will ensure that the definition of tributary will not bring any water under jurisdiction of the act that would not already be there under the Supreme Court's "significant nexus" test.

We also support NFU's suggestion to adopt the alternative to treating wetlands connected to tributaries as tributaries themselves, but rather treat them as "adjacent wetlands." As NFU explains, this gives a clear definition of tributary, separate from wetlands, without leaving important water resources unprotected.

Finally, we support NFU's suggestion to adopt the alternative of asserting jurisdiction of adjacent waters only if they are located in the floodplain or riparian area of a jurisdictional water. This option also provides greater certainty for those regulated or potentially regulated under the Act, without restricting the ability of the EPA and the Corps to protect water under the Act.

WORC urges EPA and the Corps to adopt a final rule and definitions that protect our clean water, but allow farmers, ranchers, and small business to continue to operate without new permitting requirements under the Clean Water Act. We understand this to be the intent of EPA and the Corps, and we believe clarifying the meaning of Waters of the United States as the agencies have said they intend to to is very important and will have great benefits. We hope you will consider these comments and the others we have referenced to ensure that the final rule clarifies the historical jurisdictional reach of the Clean Water Act and the established exemptions for agriculture to protect water quality and enable prosperity for family farmers and ranchers.

Sincerely,



Donny Nelson, Chair
WORC Oil and Gas Campaign Team



Mabel Dobbs, Chair
WORC Agriculture and Food Campaign Team

City of Newark Environmental Commission
Kim Gaddy
Chairperson
September 2014

In Support of:

EPA/Army Corps proposed *Definition of "Waters of the United States Under the Clean Water Act*

WHEREAS, the Waters of the United States provide an extraordinary value for the protection of public health, recreational resources, economic livelihood related to clean water, and are a treasured resource, and

WHEREAS, the Clean Water Act is the fundamental federal law protecting the Waters of the United States from pollution, degradation and destruction, and

WHEREAS, critical streams and wetlands which supply drinking water protect against floods and filter pollution previously were protected under the Clean Water Act but federal policy changes over the last decade have left these streams and wetlands vulnerable to degradation or destruction, and

WHEREAS, more than 1,000 peer-reviewed scientific studies have confirmed that headwater, intermittent and ephemeral streams, and wetlands affect the quantity and quality of water in larger bodies of water downstream, including the Delaware, Millstone, Raritan, Passaic and Hackensack in North Jersey and the Metedeconk, Manasquan, Toms, Great Egg and Rancocas along the Jersey Shore and Delaware Bayshore; and,

WHEREAS, these vulnerable Waters of the United States impact sources of drinking water for over 117 million Americans, including 4.3 million New Jerseyans, and

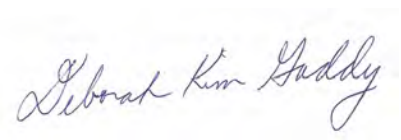
WHEREAS, the U.S. Environmental Protection Agency and Army Corps of Engineers have proposed a clarifying rulemaking to restore protection for streams and wetlands previously protected under the Clean Water Act, safeguarding water quality in the nation's waters, protecting jobs in businesses that depend on clean water and safeguarding drinking water for one in three Americans, and

WHEREAS, the proposal leaves in place all agricultural exemptions and creates new exemptions for agricultural practices related to conservation.

NOW THEREFORE BE IT RESOLVED, that the City of Newark Environmental Commission supports the proposed *Definition of "Waters of the U.S." Under the Clean Water Act* and urges the Environmental Protection Agency and Army Corps of Engineers to finalize these important protections for our nation's water resources.

SIGNATURE:

Deborah Kim Gaddy



Joseph N. DiVincenzo, Jr.
Essex County Executive

COUNTY OF ESSEX
DEPARTMENT OF PARKS, RECREATION AND CULTURAL AFFAIRS

ESSEX COUNTY ENVIRONMENTAL COMMISSION

ESSEX COUNTY ENVIRONMENTAL CENTER
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Thomas Pietrykoski
Herbert E. Spiegel
Honorable Freeholder
Patricia Sebold
Freeholder Alternate
Dawn Spango
Honorable Freeholder
Leonard M. Luciano
Essex County, Liaison Environmental Coordinator
Tara M Casella

In Support of:

EPA/Army Corps proposed *Definition of "Waters of the United States Under the Clean Water Act*

WHEREAS, the Waters of the United States provide an extraordinary value for the protection of public health, recreational resources, economic livelihood related to clean water, and are a treasured resource, and

WHEREAS, the Clean Water Act is the fundamental federal law protecting the Waters of the United States from pollution, degradation and destruction, and

WHEREAS, critical streams and wetlands which supply drinking water protect against floods and filter pollution previously were protected under the Clean Water Act but federal policy changes over the last decade have left these streams and wetlands vulnerable to degradation or destruction, and

WHEREAS, more than 1,000 peer-reviewed scientific studies have confirmed that headwater, intermittent and ephemeral streams, and wetlands affect the quantity and quality of water in larger bodies of water downstream, including the Delaware, Millstone, Raritan, Passaic and Hackensack in North Jersey and the Metedeconk, Manasquan, Toms, Great Egg and Rancocas along the Jersey Shore and Delaware Bayshore; and,

WHEREAS, these vulnerable Waters of the United States impact sources of drinking water for over 117 million Americans, including 4.3 million New Jerseyans, and

WHEREAS, strong federal standards are needed because water does not respect political boundaries and flows from one state to another, and

WHEREAS, the U.S. Environmental Protection Agency and Army Corps of Engineers have proposed a clarifying rulemaking to restore protection for streams and wetlands previously protected under the Clean Water Act, safeguarding water quality in the nation's waters, protecting jobs in businesses that depend on clean water and safeguarding drinking water for one in three Americans, and

WHEREAS, the proposal leaves in place all agricultural exemptions and creates new exemptions for agricultural practices related to conservation.

NOW THEREFORE BE IT RESOLVED, that the Essex County Environmental Commission supports the proposed *Definition of "Waters of the U.S." Under the Clean Water Act* and urges the Environmental Protection Agency and Army Corps of Engineers to finalize these important protections for our nation's water resources.

CO-CHAIR CO-CHAIR

Putting Essex County First

ESSEX COUNTY IS AN EQUAL OPPORTUNITY EMPLOYER

Thursday, November 14, 2014

The Honorable Gina McCarthy
Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Water Docket, Environmental Protection Agency
Mail Code 2822T1200, Pennsylvania Avenue
Washington, DC 20460

Email to: ow-docket@epa.gov

Re: Clean Water Rule Docket ID # EPA-HQ-OW-2011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy,

We, the undersigned former governors and current federal, state and county elected officials from New Jersey, support the US Environmental Protection Agency and US Army Corps of Engineers proposed *Definition of "Waters of the United States Under the Clean Water Act*" (Docket ID # EPA-HQ-OW-20011-0880) to clarify which streams, wetlands and other waters are covered by Clean Water Act protections, Wetlands and small streams, including those that flow only seasonally, have a direct impact on the health and quality of larger streams and rivers downstream. These resources are critical drinking water sources, and they protect communities from flooding and filter pollutants.

For its first thirty years, the Clean Water Act safeguarded nearly all of our nation's waters. These protections are necessary to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," as intended by Congress when it passed the Clean Water Act in 1972.

Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction.

These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's streams miles and at least 20 percent of the 110 million acres of wetlands in the continental United States. This confusion has put the drinking water for 117 million Americans at risk, including 4.3 million New Jerseyans. Countless small streams and wetlands provide most of the flow to our most treasured rivers from the Delaware, Millstone, Raritan, Passaic and Hackensack in North Jersey to the Metedeconk, Manasquan, Toms, Great Egg and Rancocas along the Jersey Shore and Delaware Bayshore. If we do not protect these networks of small streams, we cannot protect and restore the lakes, rivers and bays that our economy and way of life depend on. We will also jeopardize jobs and revenue in businesses that depend on clean water, including outdoor activities like angling and water-based recreation.

As local and state decision makers, we believe broad federal protections and permitting additional non-federal protections are critical to protecting our local waters. Water flows downhill, and each of the lower 48 states have water bodies that are downstream of one or more

other states. Maintaining consistency among water pollution programs throughout these states is essential. Since the passage of the Clean Water Act, states have come to rely on the Act's core provisions and have structured our own water pollution programs accordingly.

We support the draft rule's proposal to restore Clean Water Act protection to all tributaries of navigable waterways. Failure to do so would jeopardize water quality in our larger river sheds and estuaries. It would also put at risk the millions of dollars and thousands of jobs generated by water related tourism activities and other businesses that are dependent on clean water supplies.

This commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade and better protection for critical water resources on which our communities depends. We strongly support adopting the *Definition of "Waters of the US Under the Clean Water Act.*"

Sincerely,

NJ Governors:
Richard Codey (D: 2004 to 2006) and current State Senator (D-27)
James Florio (D: 1990 to 1994)
Tom Kean, Sr. (R: 1982 to 1990)

US Congress:
Represenative-elect Bonnie Watson Coleman and current NJ Assemblywoman (D-15)

NJ Senate:
Peter Barnes III (D-18)
Christopher Bateman (R-16)
Jennifer Beck (R-11)
Robert Gordon (D-38)
Linda Greenstein (D-14)
Paul Sarlo (D-36)
Joseph Vitale (D-19)
Loretta Weinberg (D-37)

NJ Assembly:
Daniel Benson (D-14)
Ralph Caputo (D-28)
Marlene Caride (D-36)
Joseph Cryan (D-20) and **Union County Sheriff-elect**
Patrick Diegnan (D-18)
Timothy Eustace (D-38)
Carmelo Garcia (D-33)
Thomas Giblin (D-34)
Reed Gusciora (D-15)
Mila Jasey (D-27)
Gordon Johnson (D-37)
Sean T. Kean (R-30)
John McKeon (D-27)
Sheila Oliver (D-34)
Raj Mukherji (D-33)
Gary Schaer (D-36)
Linda Stender (D-22)
Valerie Vainieri Huttle (D-37)
Annette Quijano (D-20)

Thursday, November 13, 2014

The Honorable Gina McCarthy
Administrator
US Environmental Protection Agency

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army
Department of the Army, Civil Works

Water Docket, Environmental Protection Agency
Mail Code 2822T1200, Pennsylvania Avenue
Washington, DC 20460

Email to: ow-docket@epa.gov

Re: Clean Water Rule Docket ID # EPA-HQ-OW-2011-0880

Dear Administrator McCarthy and Assistant Secretary Darcy:

The undersigned 30 NJ organizations appreciate the opportunity to comment on the US Environmental Protection Agency (EPA) and US Army Corps of Engineers (Corps) proposed *Definition of "Waters of the United States Under the Clean Water Act*" to clarify which streams, wetlands and other waters are protected under the Clean Water Act. This rule is long overdue. Many of our organizations have spent more than a decade advocating to restore Clean Water Act protections to all wetlands and tributary streams, as Congress originally intended when it passed the landmark Act in 1972.

For its first thirty years, the Clean Water Act safeguarded nearly all of our rivers, streams, lakes and wetlands, in order to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Despite the law's dramatic progress at combating water pollution nationally, federal policy changes in the last decade have left many small streams and "isolated" wetlands vulnerable to pollution or destruction. These federal policy changes have called into question Clean Water Act protections for nearly 60% of our nation's stream miles and at least 20 million acres of wetlands in the continental United States.

We support the proposed rule for the clear protections it restores to headwaters, intermittent and ephemeral streams, and to wetlands and other waters located near or within the floodplain of these tributaries. We urge the Agencies to strengthen the final rule by further clarifying that important wetlands and other waters located beyond floodplains are also categorically protected under the Clean Water Act. Nearly a million small streams and wetlands provide most of the flow to our most treasured rivers, including but not limited in New Jersey to the Delaware, Great Egg, Hackensack, Manasquan, Metedeconk, Millstone, Navesink, Passaic, Rahway, Rancocas, Ramapo, Raritan, Rockaway, Shrewsbury, Toms, Wallkill, and Wanaque.

If we do not protect these streams and wetlands, we cannot protect and restore the lakes, rivers and bays on which communities and local economies depend. Leaving critical water resources vulnerable jeopardizes jobs and revenue for businesses that depend on clean water, including outdoor activities like angling and water-based recreation. Whether or not a stream or wetland is a "water of the U.S" determines whether or not a polluter must get a permit to limit the amount of pollution that can be dumped into that water. In 2007, EPA estimated that 34% of individual NPDES discharge permits in New Jersey are for discharges into headwater streams, including some streams that do not flow year round. Clarifying that these streams fall under the Clean Water Act will ensure they are protected from pollution or destruction, and therefore better protect the quality and health of downstream tributaries and rivers.

We support the Agencies' proposal to define all tributaries as "waters of the United States," including headwaters and small streams that may only flow seasonally. Headwater streams provide most of the flow to downstream streams and rivers, and make up 48% of New Jersey's stream miles. Intermittent and ephemeral streams may only flow during parts of the year, but they support water quality in downstream

waters by filtering pollutants and capturing nutrients and make up 6% of NJ's stream miles. These streams, like the Pequannock are also critical habitat for fish and other aquatic species.

Headwater and seasonal streams also feed the drinking water sources of 117 million Americans, including 4.3 million New Jerseyans. Clarifying that all tributary streams, regardless of size or frequency of flow are covered under the Clean Water Act will restore protections to 1,157 miles of streams in New Jersey that 48% of our residents depend on for drinking water.

In addition, we support the Agencies' definition of tributary and strongly agree that ditches should be defined as "waters of the U.S." where they function as tributaries. There is sufficient scientific evidence that some ditches function as tributaries moving water and pollutants downstream. In those cases protection is important.

We support the Agencies' determination that all adjacent wetlands are "Waters of the U.S." Wetlands perform critical functions that support aquatic life, clean drinking water and safeguard communities from floods. Wetlands protect the water quality of entire watersheds by filtering pollutants. They also store floodwaters, reducing flood flows that can threaten property and infrastructure. Wetlands also provide essential fish and wildlife habitat that support robust outdoor recreation and tourism. When wetlands are polluted, dredged or filled, these benefits are lost. The Great Swamp and Troy Meadows are critical for flood control and drinking water for downstream communities in Union, Morris, Essex, and Passaic Counties. Further communities with more wetlands along Barnegat Bay and the Delaware Bayshore fared much better from Super Storm Sandy's storm surge than those that had less.

In order to protect wetlands and other resources, we also urge the agency to:

- **Categorically define certain non-adjacent "other waters" as "Waters of the United States" and identify additional subcategories of waters that are jurisdictional, rather than requiring case-by-case determinations.** Wetlands and other waters, even so-called isolated ones that are not adjacent to tributaries, provide many of the same natural benefits as adjacent waters located within floodplains. In fact, it is because of their placement outside of floodplains that they function as "sinks" to capture and filter pollutants and store floodwaters, protecting the physical, biological and chemical integrity of downstream waters. Examples of "other waters" where the science supports our recommendation that they should be categorically protected by rule include: prairie potholes, Carolina and Delmarva Bays including in coastal New Jersey, Texas coastal prairie wetlands and vernal pools including in New Jersey's Highlands and Skylands.
- **Provide for new science by not categorically excluding any of the "other waters," and establishing a process by which evolving science can inform jurisdictional decisions in the future.** "Other waters" that cannot be defined as jurisdictional in the final rule should still be assessed on a case-by-case basis and provisions made for categorically including them as "Waters of the United States" if and when evolving science indicates that this is appropriate.

New Jersey's economy and local businesses depend on a safe, affordable and adequate water supply from tourism, recreation and fishing industries to food processors (M&M Mars, Anheuser-Busch, Goya Foods, Manischewitz …) and the pharmaceutical industry. For example, protecting small streams and wetlands is vital for fish and wildlife and New Jersey's vibrant recreational industry. The U.S. Fish and Wildlife Service reports that New Jersey residents and nonresidents spent $2.3 billion on wildlife recreation, including $1.1

billion on fishing, in 2011. More than 2.4 million New Jersey residents participated in wildlife recreation activities in 2011.

The Agencies' commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recre-ation and recharging groundwater – far outweigh the costs. When finalized, this rule will pro-vide the regulatory assurance that has been absent for over a decade, eliminate permit confusion and delay, and better protect the critical water resources on which our communities depend.

Our groups urge the Agencies to swiftly finalize a rule to clarify all waters with a "signifi-cant nexus" to downstream waters are clearly protected under the Clean Water Act. We thank the Agencies efforts to protect these waters and look forward to working with them to adopt and implement a strong *"Definition of Waters of the US under the Clean Water Act."*

Sincerely,

Clean Water Action
Amy Goldsmith
New Jersey State Director

American Littoral Society
Tim Dillingham
Executive Director

Association of NJ Environmental Commissions
Jen Coffey
Executive Director

Bergen Save the Watershed Action Network
Lori Charkey
Administrator

CATA, The Farmworkers Support Committee
Margaret Niedda
Director

Citizens United for Renewable Energy (CURE)
Georgina Shanley
Founder

Clean Ocean Action
Cindy Zipf
Executive Director

Climate Mama
Harriet Sugarman
Founder

Comeback Farms
Mark Canright
Farmer

Delaware Riverkeeper Network
Maya von Rossum
Executive Director

Environment New Jersey
Doug O'Malley
Director

Food & Water Watch New Jersey
Jim Walsh
Mid-Atlantic Region Director

Genesis Farms
Miriam MacGillis
Executive Director

Grandmothers, Mothers & More for Energy Safety
Janet Tauro
Co-Founder

Greater Newark Conservancy
Robin Dougherty
Executive Director

International Brotherhood of Teamsters- Port Division
Christina Montorio
International Representative

The Land Conservancy of New Jersey
David Epstein
President

NJ Conservation Foundation
Michele Byers
Executive Director

NJ Environmental Lobby
Michael Pisauro
Legislative Director

NJ Highlands Coalition
Julia Somers
Executive Director

NJ Work Environment Council
Rick Engler
Executive Director

North Jersey Pipeline Walkers
Diane Wexler
Co-Founder

Pinelands Preservation Alliance
Jaclyn Rhoads
Executive Director

Raritan Headwaters Association
William S. Kibler
Director of Policy and Science

Save Barnegat Bay
William DeCamp
President

Sierra Club, NJ Chapter
Jeff Tittel
State Director

Stony Brook Millstone Watershed Association
Jim Waltman
Executive Director

Surfers Environmental Alliance
Richard Lee
Executive Director/East Coast Director

Surfrider Foundation – NJ Chapter
Jon Weber
Mid-Atlantic Regional Manager

Unitarian Universalist Legislative Ministries of NJ
Dr. Rev. Craig Hirshberg
Director

Waterspirit
Jean-Marie Donahue
Senior Manager

congressionally authorized projects if they have already been reviewed in an environmental assessment. In my view, the filing of a 404 permit application is simply duplicative effort on the part of those involved in trying to develop a project which has already received the intense scrutiny of congressional committees and also has been subject to the environmental impact statement process.

The PRESIDING OFFICER. The question is on agreeing to the amendment of the Senator from Texas. The yeas and nays have been ordered, and the clerk will call the roll.

The legislative clerk called the roll.

Mr. CRANSTON. I announce that the Senator from Arkansas (Mr. McCLELLAN), the Senator from Minnesota (Mr. HUMPHREY), and the Senator from Alabama (Mr. SPARKMAN) are necessarily absent.

I further announce that, if present and voting, the Senator from Arkansas (Mr. McCLELLAN), would vote "yea."

I further announce that, if present and voting, the Senator from Minnesota (Mr. HUMPHREY), would vote "nay."

Mr. STEVENS. I announce that the Senator from Illinois (Mr. PERCY) is necessarily absent.

The result was announced—yeas 45, nays 51, as follows:

[Rollcall Vote No. 332 Leg.]

YEAS—45

Abourezk	Gravel	Nunn
Allen	Hansen	Packwood
Bartlett	Hatch	Pearson
Bellmon	Hayakawa	Sasser
Byrd, Harry F., Jr.	Helms	Schmitt
Cannon	Hollings	Scott
Church	Huddleston	Stennis
Curtis	Johnston	Stevens
Danforth	Laxalt	Talmadge
Dole	Long	Thurmond
Domenici	Lugar	Tower
Eastland	McClure	Wallop
Ford	McGovern	Young
Garn	Melcher	Zorinsky
Goldwater	Metcalf	
	Morgan	

NAYS—51

Anderson	Eagleton	Metzenbaum
Baker	Glenn	Moynihan
Bayh	Griffin	Muskie
Bentsen	Hart	Nelson
Biden	Haskell	Pell
Brooke	Hatfield	Proxmire
Bumpers	Hathaway	Randolph
Burdick	Heinz	Ribicoff
Byrd, Robert C.	Inouye	Riegle
Case	Jackson	Roth
Chafee	Javits	Sarbanes
Chiles	Kennedy	Schweiker
Clark	Leahy	Stafford
Cranston	Magnuson	Stevenson
Culver	Mathias	Stone
DeConcini	Matsunaga	Weicker
Durkin	McIntyre	Williams

NOT VOTING—4

Humphrey	Percy	Sparkman
McClellan		

So the amendment of Mr. BENTSEN was rejected.

Mr. BENTSEN. Mr. President, I move to reconsider the vote by which the amendment was rejected. I ask for the yeas and nays.

The PRESIDING OFFICER. Is there a sufficient second? There is a sufficient second.

The yeas and nays were ordered.

The PRESIDING OFFICER. The yeas and nays have been ordered. The clerk will call the roll.

Mr. TOWER. Mr. President, a motion to reconsider is debatable, is it not?

The PRESIDING OFFICER. A motion to reconsider is debatable. There are 30 minutes, under the special order, for debate on the motion to reconsider.

Mr. MUSKIE. Mr. President, I move to lay that motion on the table.

The PRESIDING OFFICER. The motion is not in order until the time has been used under the agreement.

Mr. TOWER. Mr. President, I suggest the absence of a quorum and ask unanimous consent that the time be equally divided between the two sides.

The PRESIDING OFFICER. Is there objection? The Chair hears none. Without objection, it is so ordered. The clerk will call the roll.

Mr. METCALF. Mr. President, the Senate is not in order. We cannot hear the responses.

The PRESIDING OFFICER. The Senate will be in order.

The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

The PRESIDING OFFICER. The clerk will suspend the call of the roll until we have order in the Senate. Will all Senators please take their seats or retire to the cloakroom? Will all Senators either take their seats or retire to the cloakroom, please? Order has been requested. The request is well taken.

The clerk may proceed.

The assistant legislative clerk resumed the call of the roll.

Mr. BENTSEN. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. BENTSEN. May I speak to the Senator from Colorado and the manager of the bill. I ask if we can have an agreement that 5 minutes be allowed to the proponent and 5 minutes to the opponent, that it be limited to that, and that we not use the time of the Senate beyond that.

The PRESIDING OFFICER. Is there objection?

Mr. MUSKIE. If it is agreeable to the manager of the bill, Mr. President, I have no objection to that. I think that, since the attendance was so sparse this morning, the Senate is going to benefit from a 10-minute debate. I have no objection.

The PRESIDING OFFICER. Does the Senator from Wisconsin wish to object?

Mr. NELSON. No.

The PRESIDING OFFICER. In that case, the agreement will be 5 minutes on either side, 5 minutes to be controlled by the junior Senator from Texas and 5 minutes by the Senator from Minnesota.

Mr. NELSON addressed the Chair.

The PRESIDING OFFICER. Who yields time?

Mr. NELSON. I want to make a unanimous-consent request.

The PRESIDING OFFICER. Does anybody wish to yield time to the Senator from Wisconsin for him to make that request?

Mr. NELSON. Mr. President, I ask unanimous consent that I be allowed 10 seconds for a unanimous-consent request, without the time being deducted from either side.

The following Senators requested and, by unanimous consent, the privilege of the floor was granted in behalf of the following staff members: Mr. NELSON, Jeffery Nedelman and Judy Affeldt; Mr. BARTLETT, Ed King and Joe Heaton; Mr. CHAFEE, Mimi Feller; Mr. McCLURE, Marsha Johnson; Mr. GRIFFIN, Cathy Shafran and Sue Corbett; Mr. MOYNIHAN, Dr. Jared Cohon; Mr. DOMENICI, Lee Rawls; Mr. STAFFORD, Mary Goldde; Mr. ANDERSON, Deming Cowles; Mr. EAGLETON, Jack Lewis; and Mr. GLENN, Tom Dougherty.

The PRESIDING OFFICER. Who yields time?

There are 5 minutes on either side. Who yields time?

Is all time yielded back? If neither side yields time, time runs equally against both sides.

Mr. MUSKIE. Mr. President, I will be glad to open the debate.

First of all, let me disabuse the Senate on one point. There is not a Senator on the floor, including the Senator who is speaking, who supports section 404 as it has been interpreted and implemented by the Corps of Engineers. Much of the rationale of the Bentsen amendment is based on the reaction of the country to overregulation by the Corps of Engineers of small farmers, foresters, normal agricultural activities, and so on.

Nobody defends section 404. The committee bill does not defend section 404. The Bentsen amendment is aimed at section 404.

So what we are talking about is two approaches to deal with a national problem. What is that national problem? That national problem, if there is one, involves the protection of the Nation's wetlands.

With respect to the Bentsen amendment, if it is adopted, 85 percent of the wetlands of this country will be left unprotected. Two percent of the waterways of the country will be left unprotected.

Now, what the committee bill does is very simple. It undertakes to continue the corps' traditional jurisdiction exercised since the Refuse Act of 1899 and before.

It was under that jurisdiction that the corps for all these decades has policed and monitored and approved dredging in the waterways of our country and disposing of the dredged spoil wherever it chose without any consideration for the environmental values concerned or the damage that was done because of that insensitivity.

For the purpose of disciplining the corps in that respect, section 404 was enacted into law in 1972. The corps proceeded to take that section and, by its interpretation, expand it far beyond any intent of the Congress so that it found itself threatening regulation in areas of the country which the corps had never imagined it had any jurisdiction over.

We all began to get letters from farmers, foresters, ranchers, from people whose activities in the mind of the Congress were not in the slightest bit intended to be affected by 404 when we enacted section 404.

National Farmers Union

UNITED TO GROW FAMILY AGRICULTURE

September 22, 2014

Water Docket
Environmental Protection Agency
Mail Code: 2822T
1200 Pennsylvania Ave. NW.
Washington, DC 20460
Docket ID No. EPA-HQ-OW-2011-0880

Attention: Docket ID No. EPA-HQ-OW-2011-0880: Definition of "Waters of the United States Under the Clean Water Act"

Dear Administrator McCarthy and Lieutenant General Bostick:

National Farmers Union (NFU) welcomes the opportunity to submit comments to the Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (Corps) on the proposed rule regarding the definition of "waters of the United States" under the Clean Water Act (CWA). As this rulemaking process continues, NFU may submit additional comments.

Since 1902, NFU has advocated for the economic and social well-being and quality of life of family farmers and their communities through the sustainable production of food, fiber, feed and fuel. NFU represents nearly 200,000 members nationwide, with members in all 50 states and organized divisions in 33 states. NFU is a federation of state and regional organizations.

Clean water is vital to the productivity and well-being of America's farms, ranches and rural communities. The CWA seeks to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters.[1] NFU's members understand the importance of respecting clean water as a shared resource and believe the integrity of the nation's water can be protected without unnecessarily encumbering the activities of the regulated community. NFU's policy, enacted annually by delegates to the organization's national convention, opposes broadening the definition of what waters are considered jurisdictional[2] and supports the uniform administration of EPA policies nationwide.[3]

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[1] 33 USC §1241(a).
[2] Nat'l Farmers Union, *2014 Policy of the National Farmers Union* 61 (2014) *available at* http://nfu.org/images/03%2011%2014%20FINAL%202014%20POLICY%20CLEAN%20COPY.pdf
[3] *Id.* at 59.

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The EPA and Corps' (agencies) stated goal for the proposed rule is to improve protection of public health and water resources while increasing certainty for the regulated community and reducing troublesome and costly litigation. Protecting the nation's water resources is a complicated matter, and so by necessity are the CWA and any rule implementing it. This topic requires careful consideration and measured discourse over the legitimate concerns facing the regulated community. This proposed rule is so important because all discharges made to waters of the United States from point sources require a National Pollutant Discharge Elimination System (NPDES) Permit under the CWA. A discharge is any addition of a pollutant to a "water of the United States," including dredge or fill material. Although normal farming, silviculture and ranching activities are exempt from dredge and fill requirements under §404(f)(1)(A) of the CWA and certain activities pursuant to agriculture are exempted from NPDES permitting requirements under §402, the legal basis for the regulation of many construction and business activities rests on the definition of "waters of the United States."

It is not satisfactorily clear whether the proposed rule, in its present form, would implement policies that NFU supports. However, NFU's members recognize the agencies' rulemaking process on this matter as an opportunity to achieve their policy goals because the current regulatory landscape allows for inconsistent determinations that expand the CWA's definition of jurisdictional waters. The purpose of the following comments is to provide the agencies with advice for drafting a final rule that does not increase CWA jurisdiction and promotes consistent application of EPA policies, which aligns with the agencies' stated intent. NFU will oppose a rule that does not respect these critical components of the organization's policy. These comments will help the agencies avoid language that, even when drafted in good faith, could be taken out of context and used to stretch CWA jurisdiction in the future.

The agencies' stated intent is to replace inconsistent practices with clear, bright-line tests through this proposed rule. If the comments below are given proper consideration, the final rule will allow the regulated community the certainty it needs to conduct its business free from fear of undue regulatory interference and without sacrificing the agencies' ability to protect the United States' water resources. The proposed rule warrants comments on the agencies' changes to the definition of "waters of the United States" and the exclusions of certain waters from that definition.

I. Proposed Definition of "waters of the United States."

"Tributary"

The CWA establishes the agencies' permitting jurisdiction over specifically-listed waters. Paragraphs (a)(1)-(a)(5) of the proposed rule restate well-settled tenets of the agencies' jurisdiction under the CWA and do not warrant further comment. However, section (a)(5)'s inclusion of "All tributaries of waters identified in paragraphs (a)(1) through (4) of this section" warrants examination. This language has

invoked significant concern in the regulated community that the proposed rule would increase the jurisdictional reach of the CWA. The agencies should address this concern and confirm this language does not increase jurisdiction by incorporating the following points in the final rule.

The preamble to the proposed rule notes that the proposed rule sets forth, for the first time, a regulatory definition of "tributary."[4] The proposed rule defines "tributary" as "a water physically characterized by the presence of a bed and banks and ordinary high water mark. . . which contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4) of this section."[5] In order to provide more clarity to the regulated community, the agencies should note in the final rule that these features take years to form. This should mitigate concern that temporary accumulations directly related to isolated rain events will be considered jurisdictional. The agencies should add further clarifying language, including but not limited to descriptive examples of water and events that are not considered tributaries, in the final rule in order to ensure these distinctions are well-understood in the regulated community.

The preamble notes that existing Corps regulations define the ordinary high water mark (OHWM) "as the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the banks, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. 33 CFR 328.3(e)."[6] The agencies should incorporate this definition within the final rule so that the regulated community can refer to one place for as much of the information that is needed to maintain compliance as possible.

These points should ensure that the definition of "tributary" in the proposed rule will not bring any water into jurisdiction that would not be found jurisdictional under the "significant nexus" test that is applied to "other waters." If incorporated, they would create regulatory certainty and lessen administrative burden by settling jurisdiction for waters that would have been subject to a case-by-case determination but ultimately found jurisdictional.

Also, the proposed rule treats wetlands that are connected to tributaries as tributaries themselves, but the preamble requests comment on this approach and offers an alternative.[7] Wetlands should not be considered tributaries. Treating wetlands as tributaries would negate the bed, bank and OHWM criteria

[4] Definition of "Waters of the United States" Under the Clean Water Act, 79 Fed. Reg. 22198,(proposed April 21,2014) (amending 33 C.F.R. §328.3).
[5] *Id.*,at 22263.
[6] *Id.* .at 22202.
[7] *Id.* at 22203

the Corps uses for identifying tributaries. The agencies should enact the alternative proposed in the preamble and "clarify that wetlands that connect tributary segments are adjacent wetlands, and as such are jurisdictional waters of the United States under (a)(6)." This alternative creates a bright-line definition for "tributary" without relinquishing any opportunities to protect water resources.

"Adjacent"

The proposed rule would change section (a)(6) from an articulation of the CWA's jurisdiction over wetlands adjacent to "waters of the United States" to an explanation of the CWA's jurisdiction over "All waters, including wetlands, adjacent to" waters identified in (a)(1) to (a)(5) as jurisdictional. As with the definition of "tributary" discussed above, this change is causing apprehension among the regulated community. The agencies should consider the following points in drafting the final rule to make clear that this change does not expand jurisdiction.

The proposed rule defines "adjacent" as "bordering, contiguous or neighboring" at (c)(1). It notes further that "Waters, including wetlands, separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes and the like are 'adjacent waters.'"

The jurisdictional reach of "adjacent waters," then, is largely dependent on the definition of "neighboring." This proposed rule defines "neighboring" for the first time. The preamble notes that the term is currently applied broadly, but the proposed rule defines "neighboring" as "waters located within the riparian area or floodplain of a water identified in (a)(1) through (5) of this section, or waters with a shallow subsurface hydrological connection or confined surface hydrologic connection to such a jurisdictional water."[8]

Waters located in the riparian area or floodplain of a jurisdictional water, or with a confined surface hydrologic connection to a jurisdictional water, would be found jurisdictional under the "significant nexus" test, even without the proposed rule's explanation of jurisdiction over adjacent waters. This inclusion of "adjacent waters" as per se jurisdictional increases certainty for the regulated community and alleviates administrative burden without increasing the CWA's jurisdictional reach.

The preamble explains that, to date, the agencies' professional judgment has been a factor in determining matters of adjacency. "The agencies recognize that this may result in some uncertainty as to whether a particular water connected through confined surface or shallow subsurface hydrology is an 'adjacent' water." The preamble then specifically requests comments on options for providing clarity and certainty on these matters.

[8] *Id.* at 22207.

One of the proposed alternatives put forth by the agencies is "asserting jurisdiction over adjacent waters only if they are located in the floodplain or riparian area of a jurisdictional water."[9] This is the proper way to address these waters. It creates certainty for the regulated community since waters located a substantial distance from a jurisdictional water would not be subject to jurisdiction due to an insubstantial connection to the jurisdictional water. Even in the current regulatory framework, the agencies consider distance from a jurisdictional water when determining whether a water that is located outside the floodplain or riparian area of the jurisdictional water, but that is connected to the jurisdictional water by a shallow subsurface or confined surface hydrologic connection, is adjacent to that jurisdictional water.[10]

This alternative also reserves to the agencies the ability to address waters that could actually have a consequential impact on the quality of a water of the United States, since the water located outside the floodplain and riparian area of the jurisdictional water, unless otherwise excluded, would be subject to the "significant nexus" test. Holding the definition of "adjacent water" to waters within a jurisdictional water's floodplain or riparian area allows the regulated community maximum certainty without encumbering the agencies' ability to protect water resources.

The agencies also request comment on whether a water with only a small confined surface or shallow subsurface hydrologic connection to a jurisdictional water should be exempt if it is outside a specified distance from the jurisdictional water. For the same reasons why the best approach to "adjacent waters" is to limit the category to waters within the floodplain or riparian area of a jurisdictional water as discussed above, placing a cap on the distance from a jurisdictional water within which other waters may be considered "adjacent" is a second-best alternative. Under this approach, more waters that do not have the actual ability to affect the water quality of a jurisdictional water will be considered jurisdictional than the "floodplain and riparian area-only" alternative. This will result in greater administrative burden for the regulated community and the agencies. However, a bright-line rule limiting the area surrounding a jurisdictional water in which a water may be found "adjacent" could still be referenced, increasing certainty compared to the regulatory framework as it exists today.

The preamble also asks for specific comment "on whether the rule text should provide greater specificity with regard to how the agencies will determine if a water is located in the floodplain of a jurisdictional water."[11] The agencies should uniformly use a 20 year flood interval zone when evaluating these waters. This will provide the regulated community with certainty without inhibiting the agencies' ability to protect waters of the United States, since waters not captured within this zone will still be

[9] *Id.* at 22208.
[10] *Id.*
[11] *Id.* at 22209.

jurisdictional under the "significant nexus" test if they have the potential to impact a jurisdictional water.

The agencies should also provide clarity to the regulated community by stating in the final rule, "mere proximity to a jurisdictional water is not cause for a determination that a water is jurisdictional as 'neighboring' or 'adjacent,' and a scientifically-verifiable, substantial surface connection must be present for any water outside a floodplain or riparian zone to be found jurisdictional."

"Significant Nexus"

Other waters not covered by the above-discussed jurisdictional categories may fall within the CWA's jurisdiction if a case-by-case determination is made finding the water has a "significant nexus" with a water identified in sections (a)(1) through (3).

The proposed rule at section (c)(7) says "The term *significant nexus* means that a water, including wetlands, either alone or in combination with other similarly situated waters in the region (i.e., the watershed that drains to the nearest water identified in paragraphs(a)(1) through(3) of this section), significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section." The proposed rule also states "Other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a 'water of the United States' so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through(a)(3) of this section." The agencies intend that this language more precisely describes the scope of jurisdiction by explicitly leaving out waters that have a mere commercial connection to navigable waters and codifies the agencies' practice since the Supreme Court's decision in *Solid Waste Agency of Northern Cook County* v. *U.S. Army Corps of Engineers,* 531 U.S. 159 (2001).

The term "similarly situated" must be examined, since it allows the agencies to consider multiple waters together in making "significant nexus" determinations. The prerequisite condition for "other waters" to be considered "similarly situated," before any assessment of geographic proximity to additional "other waters" or jurisdictional waters, is performance of similar functions. The preamble further explains that a "similarly situated" determination requires an evaluation of whether waters in a region "can reasonably be expected to function together in their effect on the chemical, physical, or biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas," and whether waters are "sufficiently close" to each other or a jurisdictional water.[12]

[12] *Id.* at 22213.

The description of "similarly situated" waters above includes so many variables that it would be difficult for the regulated community to accurately anticipate the outcome of such a determination, opening the door to increased uncertainty. To give the regulated community more clarity in anticipating the results of "similarly situated" evaluations, the agencies should provide a list of functions that a group of waters must perform together in order to be considered "similarly situated." These functions include affecting the reach and flow of a jurisdictional water and allowing or barring the movement of aquatic species, nutrients, pollutants or sediments to a jurisdictional water.

The agencies should also require "other waters" to have a confined surface connection to each other in order to be considered "similarly situated." This distinction would be helpful to the agencies and to the regulated community because "other waters" that are completely separate and distinct from a jurisdictional water will not be able to form a significant nexus with a jurisdictional water cumulatively unless they maintain such a nexus individually or with each other. The final rule should also strictly limit the distance allowed between separate waters that can be considered "similarly situated."

Otherwise, no "other waters" should be determined to be similarly situated, as the agencies put forth as an alternative in the preamble.[13] The limited environmental benefit of bringing waters that would not trigger jurisdiction by themselves into jurisdiction as "similarly situated" does not justify the uncertainty and administrative burden that would be created for the agencies and the regulated community. The "significant nexus" evaluation ensures that waters of genuine concern are jurisdictional.

This added clarity would ease concerns regarding the rule held by NFU members in the Prairie Pothole Region, in which a farm may be littered with potholes. In many cases, a pothole may be located near a jurisdictional water and have a physical surface connection to that jurisdictional water. Another pothole may be located near to the first pothole and yet have no connection to it. The agencies should assure farmers the second pothole, even though it is near to the first pothole, will not automatically be considered "similarly situated" to the first pothole strictly due to geographic proximity. At the very least, the final rule should clarify that the term "similarly situated," for purposes of determining whether "other waters" maintain a "significant nexus" with jurisdictional waters, is not a simple geographic determination. The agencies should elaborate that "similarly situated" means both waters that are near to each other and sharing an identifiable hydrogeological feature in common. A water would not be considered "similarly situated" due to geographic proximity alone.

The agencies request comment as to whether the agencies should evaluate all "other waters" in a single point of entry watershed as a single landscape unit for purposes of determining whether these "other

[13] *Id.* at 22215.

waters" are jurisdictional.[14] This would create substantial negative economic impact by unduly imposing a regulatory burden on many waters that cannot affect the integrity of "waters of the United States." It would also increase the agencies' administrative load without a return of environmental benefit, since the agencies would have to perform more case-by-case jurisdictional determinations. Since this approach to evaluating "other waters" would create significant administrative burden for the agencies and the regulated community, and would not produce an environmental benefit, the agencies should not include this approach in the final rule.

Additional Clarity

The agencies can alleviate agriculture's concerns by noting that waters not listed under section (b) of the proposed rule are not jurisdictional by default and will not be considered within CWA jurisdiction unless they fall into one of the categories listed in sections (a)(1) to (a)(7).

The agencies should also make clear in the final rule that any wetland determination made by the Department of Agriculture's Natural Resource Conservation Service (NRCS) will be considered final and ruling. While NRCS' wetlands determinations are not jurisdictional determinations, the ability to rely on NRCS' decisions regarding the presence of a wetland would increase clarity for the regulated community, reduce the agencies' administrative burden and prevent inconsistent wetland determination.

II. Excluded Waters and Exempted Activities

Ditches

In section (b) of the proposed rule, the agencies list several categories of waters that are explicitly excluded from the definition of "waters of the United States," placing them outside the jurisdiction of the CWA. The proposed rule specifically excludes two types of ditches that otherwise would have been subject to a case-by-case determination, increasing regulatory certainty and reducing the CWA's jurisdictional reach. The exclusion of these ditches increases certainty for the regulated community without impairing the agencies' ability to protect the nation's water resources.

Sections (b)(3) and (b)(4) explain the circumstances in which a "ditch" is not a "water of the United States." These sections exclude ditches that do not contribute flow, directly or through other waters, to a "water of the United States," and any ditches that are wholly within an upland and drain only uplands and are without perennial flow. These explicitly-stated exclusions do not interfere with the CWA's objective of protecting water resources because the ditches concerned are unlikely to impact the

[14] *Id.* at 22217.

integrity of waters of the United States. The exclusions at (b)(3) and (b)(4) will give the regulated community added certainty, allowing them to conduct their business without fear of regulatory action.

With regards to section (b)(3), the preamble states "Ditches that are excavated wholly in uplands means ditches that at no point along their length are excavated in a jurisdictional wetland (or other water)."[15] The agencies should restate this description of "upland ditches" as a definition of "uplands" by writing, "an upland is any land that is not a wetland, floodplain, riparian area or water." This definition should be included in the final rule in order to provide clarity.

The agencies should provide further clarity to the regulated community by defining "perennial flow" in section (c) of the final rule. The description of "perennial flow" in the preamble[16] could be altered slightly to function as the definition, codifying that "perennial flow" is "the presence of water in a tributary year round when rainfall is normal." Including this definition in the final rule would reduce the administrative burden for members of the regulated community as they attempt to maintain compliance with the CWA.

The agencies request comment on whether perennial flow is the proper distinction to use in separating excluded ditches from ditches that may be jurisdictional under section (b)(3).[17] Given the agencies' stated goal of providing clarity to the regulated community, perennial flow is the proper distinction. The presence or absence of perennial flow is easily-verifiable. Using perennial flow as the distinction allows the regulated community to be confident in their own assessment of ditches, which encourages the normal course of business and reduces unexpected enforcement actions. It also checks the agencies' administrative burden, since the presence or absence of perennial flow would also be easier for the agencies to verify than intermittent flow.

Exemptions for Agricultural Activities

The preamble indicates that the proposed rule does not affect existing regulatory exemptions for agricultural activities.[18] There is nothing in the proposed rule that calls this assertion into question. Some of these exemptions are referenced in the Interpretive Rule Regarding Applicability of the Exemption from Permitting under section 404(f)(1)(A) of the Clean Water Act to Certain Agricultural Conservation Practices" (Interpretive Rule), which was published on the same day as the proposed rule.[19] The Interpretive Rule states the list of exempted practices is illustrative rather than exhaustive

[15] *Id.* at 22219.
[16] *Id.* at 22203.
[17] *Id.* at 22219.
[18] *Id.* at 22218.
[19] http://www2.epa.gov/sites/production/files/2014-03/documents/cwa_section404f_interpretive_rule.pdf

and the CWA exempts those, like other activities conducted in the normal course of agriculture production, including conservation activities, are also exempted from CWA permitting requirements. In order to provide the regulated community with increased certainty, the agencies should consider codifying the Interpretive Rule and adding language explicitly stating that engaging in these exempted activities does not invoke any reporting requirement or other obligation to the agencies, including when these activities take place on land newly brought into farming. The agencies should also explicitly note that conservation activities do not need to follow specific National Resource Conservation Service guidelines for cost-share or technical assistance eligibility when engaging in these activities in order for their actions to remain exempt from permitting requirements.

The proposed rule also specifically continues the exclusion of prior converted cropland from the definition of "waters of the United States" at section (b)(2). The proposed rule and preamble's direct confirmation of these matters provides clarity for the regulated community. The agencies should provide further clarity for the regulated community on this point by stating in the final rule, "This rule does not require a permit for any plowing and planting activity that was legally conducted without a permit before this rule was issued." This language captures the intent of the agencies and provides the regulated community with the certainty it needs to continue farming its existing planted acreage without threat of new interference.

III. Miscellaneous Matters

Shallow Subsurface Hydrologic Connections

The existing regulatory framework defining "waters of the United States" and the proposed rule assume that a shallow subsurface hydrologic connection is sufficient for finding that waters with this connection to a jurisdictional water are "neighboring" and so jurisdictional themselves as "adjacent waters." Hydrologic science does not support such a uniform determination. Shallow subsurface hydrologic connections should be carefully studied to assess their impacts on jurisdictional waters, and the perennial nature of many of these connections should be taken into account. Further research must be conducted before the agencies determine which, if any, subsurface hydrologic connections can be considered sufficient grounds for finding such waters "adjacent" to jurisdictional waters. Until more scientific evidence is provided, groundwater connections alone should not be used to find non-navigable waters jurisdictional.

Pesticide Applications

The proposed rule does not address pesticide applications other than applications directly to a jurisdictional water. Similarly, it is clear that the proposed rule does not specifically address fertilizer

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applications. This is not the proper venue for discussing these applications. Future opportunities will arise to work with EPA on these topics, especially the problem of redundant CWA and Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) regulations governing pesticide applications.

Army Corps' Engagement

Given the importance of this rule to the regulated community, the Corps' lack of participation in discussion of this proposed rule is frustrating. The Corps is ultimately tasked with jurisdictional determinations under the final rule. The Corps' refusal to provide any insight on how it plans to interpret and implement the proposed rule undermines the regulated community's confidence that our good faith involvement in the rulemaking process will result in adequate consideration of our help when jurisdictional determinations will actually be made. The Corps must join this discussion immediately.

IV. Conclusion

NFU understands the agencies' stated goal of enhancing protections for our nation's water resources while providing increased certainty to the regulated community. The comments above reflect NFU's understanding of the proposed rule and explain ways the proposed rule could be improved to more effectively accomplish the agencies' stated goal in the final rule while maintaining conformity with NFU's policy. NFU stands ready to offer further assistance in this regard as the agencies may find helpful. Thank you for your consideration of these comments.

Sincerely,

Roger Johnson
President

20 F Street NW Suite 300 Washington, DC 20001 P: 202.554.1600 F: 202.554.1654 www.nfu.org

CITY OF BALTIMORE
COUNCIL BILL 14-0185R
(Resolution)

Introduced by: Councilmembers Kraft, Scott, Henry, Middleton, Mosby, Holton, Welch, Reisinger, Stokes, Branch, Clarke, Curran, President Young
Introduced and adopted: September 8, 2014

A COUNCIL RESOLUTION CONCERNING

In Support of the Definition of "Waters of the United States" Under the Clean Water Act Proposed by the Environmental Protection Agency and the Army Corps of Engineers.

FOR the purpose of supporting the Environmental Protection Agency's ("EPA") and the Army Corps of Engineers' (the "Corps") proposed definition of "Waters of the United States" under the Clean Water Act; helping to enhance the protection of our nation's public health and aquatic resources, and increasing the Clean Water Act's program predictability and consistency by clarifying the scope of the "Waters of the United States" protected under the Act.

Recitals

The waters of the United States are a treasured resource. In Maryland, the clean water that they provide protects public health, recreational resources, and economic livelihood.

The Clean Water Act is the fundamental federal law protecting the waters of the United States from pollution, degradation, and destruction. Strong federal standards are needed to provide these protections because water does not respect political boundaries. More than one thousand peer-reviewed, scientific studies have confirmed that headwater intermittent and ephemeral streams and wetlands affect the quantity and quality of water in larger bodies of water downstream.

Critical streams and wetlands which supply drinking water, protect against floods, and filter pollutants were once protected under the Clean Water Act. Federal policy changes over the last decade, however, have left these streams and wetlands vulnerable to degradation and destruction. These vulnerable waters of the United States, now unprotected and vulnerable, directly impact sources of drinking water for over 117 million Americans, including 3,990,016 residents here in Maryland.

Both the EPA and the Corps have proposed a clarification of the definition so that there is no misunderstanding all tributary streams, regardless of size or frequency of flow are covered under the Clean Water Act. Of particular importance is the fact that an additional proposal not only leaves in place all of the existing agricultural exemptions but also creates new exemptions for agricultural practices related to conservation.

According to Clean Water Action, this will restore protections to 2,210 miles of streams in Maryland that 77% of its residents depend upon for drinking water. In the greater Baltimore area that constitutes roughly 1.6 million people, including every one of our City residents.

EXPLANATION: Underlining indicates matter added by amendment.
~~Strike out~~ indicates matter deleted by amendment.

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NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF BALTIMORE, that the Council supports the proposed definition of "*Waters of the United States*" under the Clean Water Act and urges the Environmental Protection Agency and the Army Corps of Engineers to take whatever actions deemed necessary to finalize these important protections for our nation's resources.

AND BE IT FURTHER RESOLVED, That a copy of this Resolution be sent to the Mayor; the Administrator of the U.S. Environmental Protection Agency; the Assistant Secretary of the Army, Department of the Army, Civil Works; The Maryland House and Senate Delegations to the 113th Congress; and the Mayor's Legislative Liaison to the City Council.

Statement for the Committee Hearing Record
The Honorable Richard M. Nolan
Minnesota 8th Congressional District

Mr. Chairman and Members of the Committee:

Without objection I would like to enter into the record of this hearing a statement prepared by the 52 organizational members of the Alliance For the Great Lakes, in support of the federal rulemaking and the features of the proposed rule.

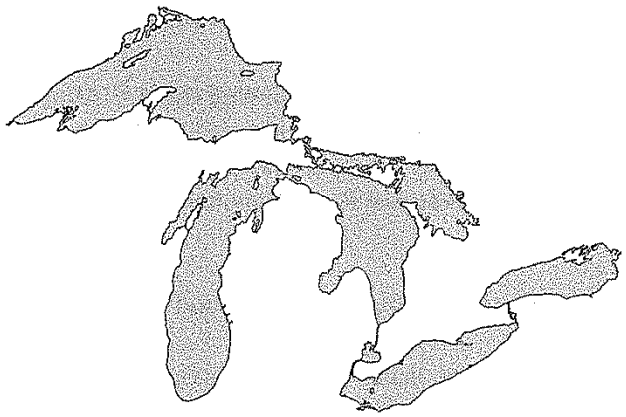
Thank you.

ALLIANCE FOR THE GREAT LAKES

ENSURING A LIVING RESOURCE FOR ALL GENERATIONS

Legislative Priorities for the 114th Congress

The Great Lakes hold more than 80 percent of the surface freshwater in North America and span eight states with 10,900 miles of shoreline. The lakes touch the lives of the more than 40 million people who live near them — from providing drinking water to supporting a regional economy that rivals nations.



With the support of Congress, our region has made major progress to restore and protect the Great Lakes for current and future generations. But, much more remains to be done. To that end, we have identified several key priorities for the 114th U.S. Congress that can have an immediate positive impact on the Great Lakes.

Support Existing Invasive Species Regulations

Aquatic invasive species, such as the zebra and quagga mussels, round goby, and spiny water flea, have caused irreparable harm to the Great Lakes. These species cause more than $200 million in economic damage annually to our region and threaten to undermine progress made by programs such as the Great Lakes Restoration Initiative.

The single largest source of invasions over the last 30 years is the ballast water of oceangoing ships that enter the Great Lakes. For the last four years, the U.S. Coast Guard (USCG) and U.S. Environmental Protection Agency (EPA) have worked in partnership to develop standards for on-board treatment technologies designed to reduce the risk of invasion. Short of halting the movement of ocean ships into the Great Lakes, the rapid advancement of these regulations is the best short-term defense the Great Lakes have to prevent future aquatic invasive species introductions.

At this time, we do not see a need for legislative action by Congress. EPA should remain in charge of establishing water quality standards and ensuring the achievement of the goals of the Clean Water Act. USCG should continue focusing on certification of technologies for safe and efficient operation, as well as be on the front lines of inspection of vessels. Oceangoing vessels should continue to be required to flush their ballast tanks with ocean water before entering the Great Lakes. The agencies should work in structured collaboration under their existing authorities, with each agency bringing its unique strengths to the task.

Prevent Asian Carp From Reaching the Great Lakes

Invasive Asian carp populations were first detected in the Illinois River in the 1990s. The "environmental DNA" of Asian carp was detected in the Chicago Area Waterway System (CAWS) in 2009 and has been every year since. The establishment of Asian carp and other new aquatic invasive species (AIS) in the Great Lakes would be a catastrophic loss for our region. A collaboration of federal, state and local agencies must implement a comprehensive permanent solution that stops all AIS from moving between the Great Lakes and Mississippi River. The most effective solution to achieve this goal is the restoration of the natural divide between the two waters, but this will take time. In the short term, the Brandon Road Lock and Dam at Joliet, Ill. is a potentially effective location for construction of measures that reduce the risk of movement of Asian carp species towards the Great Lakes.

We support Congress funding the U.S. Army Corps of Engineers at $8 million in FY 2016 for actions related to construction of risk-reduction measures at Brandon Road Lock and Dam. The corps should also describe how such actions will lead to a long-term solution that prevents the movement of all AIS between the Great Lakes and Mississippi River, as directed by Congress in the Water Resources Development Act of 2007.

Invest to Improve Outdated and Failing Wastewater Infrastructure

Clean water in many Great Lakes communities continues to be compromised by sewage and stormwater pollution that results from outdated and failing wastewater infrastructure. More than 70 percent of all combined sewers in the United States are located in the Great Lakes region. Combined sewer overflows result in poorly treated sewage dumped into the lakes during heavy rain events. This foul cocktail closes beaches, directly impacts communities near sewage treatment plants, and adds to the load of pollutants — like phosphorus — that are impacting Lake Erie's drinking water. The American Society of Civil Engineers' 2013 Report Card for America's Infrastructure gave the nation's aging wastewater system a grade of D-plus. A $100.6 billion national investment in wastewater infrastructure is needed during the next 20 years to achieve a basic level of functionality. Congress can improve the federal mandate for public notification of sewage overflows and ensure that communities have access to a sustained source of low-interest loan funding for wastewater infrastructure.

We support at least $1.5 billion in appropriations for the Clean Water State Revolving Fund for FY 2016. We supported the Great Lakes Water Protection Act (S. 571, H.R. 1185) during the 113th Congress and urge reintroduction of similar legislation to establish consistent public notification procedures for sewage overflows, and to set a date certain for the elimination of overflow activity in the Great Lakes.

Fund a Comprehensive Great Lakes Youth Education Program

The NOAA Bay Watershed Education and Training (B-WET) program offers competitive grants for education programs that engage teachers and students in sustained hands-on activities that address academic learning standards. Experiential opportunities like these enrich the traditional formal learning environment, improve student and educator performance, and lead to improved stewardship for the Great Lakes. Unlike other regions in the U.S., the NOAA B-WET program was not able to secure funding for an FY 2015 competition in the Great Lakes region.

Congress should restore funding for a comprehensive Great Lakes hands-on education initiative for FY 2016 and sustain the program for future years.

Fund the Great Lakes Restoration Initiative at $300 million and Pass a Congressional Authorization for the Program

For the past five years, bipartisan support for the federal Great Lakes Restoration Initiative (GLRI) has resulted in unprecedented on-the-ground results in all eight Great Lakes states. The GLRI supports efforts to clean up toxic pollution, restore fish and wildlife habitat, combat invasive species like Asian carp, and prevent polluted runoff from farms and cities.

A Brookings Institution report shows that every $1 invested in Great Lakes restoration brings a $2 return in the form of increased fishing, tourism and home values. A study by Grand Valley State University economists found that a Muskegon Lake restoration project is expected to generate a 6-to-1 return on investment. With a proven track record of success, Great Lakes restoration is one of the best returns on the federal dollar in the budget.

As a member of the governance board of the Healing Our Waters-Great Lakes Coalition, we support the coalition's agenda to fully fund the GLRI in FY 2016 and authorize the GLRI with new legislation during the 114th Congress. To this end, we support the Great Lakes Restoration Initiative Act of 2015 (H.R. 223), introduced with bi-partisan support by Rep. David Joyce (R-OH), which authorizes the Great Lakes Restoration Initiative at $300 million annually over the next five years.

Issues to Watch

Nutrient Pollution: Unsafe Drinking Water, Closed Beaches and Dead Zones

Nutrient pollution, which fuels massive harmful algal blooms (HABs), is a critical threat to our drinking water, our region's quality of life and our economic well-being. In August 2014 nearly a half-million people in communities around western Lake Erie experienced drinking water bans ranging from two days to more than a week as a result of toxins in algal blooms. This problem is also entrenched elsewhere in the Great Lakes, such as in Green Bay, Wis. and Saginaw Bay, Mich. Our region is focused on developing an innovative "blue economy" and attracting new talent to the Midwest — but this vision is incompatible with national headlines declaring Great Lakes water unsafe to drink.

In the coming year:

The governors of the western Lake Erie states and the premier of the province of Ontario must commit to creating a Lake Erie free from the unnatural algal blooms that create toxic water and closed beaches.

The Great Lakes states and/or U.S. EPA must adopt clear and measurable targets and standards for phosphorus and nitrogen pollution.

All relevant sources of pollution should contribute to measurable immediate and long-term phosphorus reductions on a level playing field. We must recognize that agricultural runoff is the largest source of phosphorus pollution that causes HABs and reduce that pollution source accordingly.

Crude Oil Transportation

The Great Lakes are a global hub of oil refining. Growing crude oil production in Canada and North Dakota means greater volumes of crude entering the Great Lakes from pipelines at Superior, Wis. To get this crude oil to market, companies are seeking new modes of moving it via rail, pipeline and even by ships on the Great Lakes. The increase in crude oil supply is outpacing our ability to safely move oil around the Great Lakes. Of greatest concern is heavy crude oil that sinks, rather than floats, shortly after exposure to cold freshwater. In late 2013, a company applied for a permit to build a dock in Superior that would have allowed the loading of heavy crude oil onto vessels for shipment through the Great Lakes. The state of Wisconsin wisely denied that permit and required a complete environmental assessment should the company wish to reapply. The U.S. Coast Guard acknowledges that there is currently no realistic way to fully clean up an open-water spill of heavy crude oil on the lakes. We thus do not believe it is currently possible to ship this product safely by vessel on the Great Lakes.

Great Lakes members of Congress should undertake a full review of the federal permits, environmental assessments and USCG certifications that would be required prior to the shipment of heavy crude oil by vessel on the Great Lakes.

For more information, contact Joel Brammeier, President and CEO of the Alliance for the Great Lakes, at jbrammeier@greatlakes.org or (312) 445-9727.

From pursuing protective policies to taking action on-the-ground to educating our communities, the Alliance for the Great Lakes works to protect our unique heritage: the Great Lakes. The Alliance is headquartered in Chicago with offices in Buffalo, Cleveland, Detroit, Grand Haven and Milwaukee.



Healing Our Waters-Great Lakes Coalition

November 14, 2014

Water Docket, Environmental Protection Agency
Mail Code 2822T, 1200 Pennsylvania Avenue NW
Washington, D.C. 20460

Attention: Docket ID No. EPA-HQ-OW-2011-0880

To whom it may concern:

On behalf of the Healing Our Waters-Great Lakes Coalition and our 51 nonprofit conservation organizations representing millions of concerned citizens in the Great Lakes region, we submit these comments in support of the proposed rule defining the scope of waters protected under the Clean Water Act.

The HOW Coalition believes that the proposed Clean Water Protection Rule is one of the many important steps to protect and restore our Great Lakes. We understand that the agencies have undertaken the authority granted to them by Congress under the Clean Water Act to legally clarify the statute's jurisdiction. Our coalition supports this rulemaking and this rule and urges the Environmental Protection Agency and the U.S. Army Corps of Engineers to finalize the rule quickly.

Clean Water Protections at Risk

For years the Clean Water Act protected all wetlands and streams, which was Congress' intent. Congress recognized the interconnectedness of U.S. waters when it passed the act in 1972. It clearly articulated its intent that the tributaries of navigable waters be protected when it stated in a January 1973 report: "Water moves in hydrologic cycles and it is essential that discharge of pollutants be controlled at the source."[1]

Now many of the waters on which the Great Lakes depend are at increased risk and have been for nearly a decade-and-a-half. Supreme Court decisions in 2001 (SWANCC vs. Army Corps of Engineers) and 2006 (Rapanos vs. United States) and subsequent agency actions have created a confusing, time-consuming, and frustrating process for determining what waters are protected under the Clean Water Act and state laws. This threat in particular leaves intermittent and headwater streams vulnerable to pollution and adjacent wetlands open to be filled and destroyed. Half of the streams in Great Lakes states do not flow all year, putting them, and adjacent wetlands, at risk of increased pollution and destruction. Over 117 million Americans get their drinking water from surface waters, including nearly 37 million people in Minnesota, Wisconsin, Illinois, Indiana, Michigan, Ohio, Pennsylvania, and New York. More importantly, 83 percent of the population in Great Lakes states are dependent on public drinking water systems that rely in intermittent, ephemeral, and headwater streams (See Table 1).[2] In addition, according to the U.S. Fish and Wildlife Service, the rate of wetlands loss accelerated nationally by 140 percent from

[1] Congressional Research Service. 1973. "A Legislative History of the Water Pollution Control Act Amendments of 1972." Library of Congress, Washington, D.C. Volume 2, P. 77.
[2] U.S. Environmental Protection Agency. 2009. "Analysis of the Surface Drinking Water Provided By Intermittent, Ephemeral, and Headwater Streams in the U.S."

2004 to 2009, the years immediately after the Supreme Court rulings.[3] The Great Lakes region has already lost 66 percent of their historic wetlands (See Figure 1).[4]

Table 1: Analysis of the Surface Drinking Water Provided By Intermittent, Ephemeral, and Headwater Streams in the U.S. Completed by U.S. EPA in July 2009

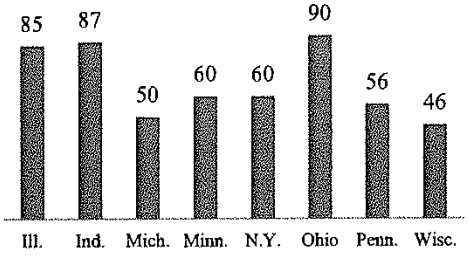
State	Population Served by Public Drinking Water Systems using surface water[5]	Population Dependent on Public Drinking Water Systems relying on I/E/H	% Population on Public Drinking Water Systems relying on I/E/H	Total Stream Miles in Source Protection Areas	Miles of I/E/H in SPAs	% of streams in SPAs that are I/E/H
Ill.	4,872,325	1,680,948	34%	9,894	5,688	57%
Ind.	1,951,112	1,703,230	87%	2,330	1,158	50%
Mich.	1,977,536	1,400,633	71%	1,342	551	41%
Minn.	1,068,598	978,928	92%	1,736	627	36%
N.Y.	11,471,432	11,146,815	97%	10,436	5,728	55%
Ohio	5,894,716	5,285,318	90%	11,605	6,978	60%
Penn.	8,215,216	8,035,216	98%	18,604	10,720	58%
Wisc.	1,392,700	391,531	28%	504	254	50%
Total	36,843,635	30,622,619	83%	56,453	31,703	56%

Our Great Lakes are Connected and Important

Protecting and restoring wetlands and streams is critical to the restoration and protection of the Great Lakes. According to a draft review of more than a thousand publications from peer-reviewed scientific literature conducted by an EPA Science Advisory Board, streams, tributaries (e.g., headwater, intermittent, ephemeral), and wetlands are clearly connected to downstream waters. The overwhelming science concludes that upstream waters in tributaries (intermittent, ephemeral, etc.) exert strong influence on the physical, biological, and chemical integrity of downstream waters. Common sense also tells us this is true. Pollution in a tributary is carried downriver into bigger and bigger waterways. Upstream waters also feed water to rivers and lakes, like the Great Lakes.

Additionally, other water features connected to rivers and lakes also play important roles. Healthy wetlands improve water quality by filtering polluted runoff from farm fields and city streets that otherwise would flow into rivers, streams, and water bodies across the country, including the Great Lakes. Wetlands and tributaries provide vital habitat to wildlife, waterfowl, and fish, reduce flooding, and replenish groundwater supplies. According to the SAB, all of this science provides an adequate basis for the key components of the proposed rule.

Figure 1: Percentage of Total Historic Wetlands Lost



A good example of how pollution upstream impacts bigger waters downstream is the recent drinking water crisis in Toledo, Ohio. Excess phosphorus and other pollutants washing off the land and impervious urban surfaces during heavy rains flow into the Maumee River, which empties into Lake Erie. Excess phosphorus mixes with a complicated brew of threats in the lake (like zebra and quagga mussels) driving the re-emergence of harmful algal blooms.[6] The

[3] Dahl, T.E. 2011. "Status and trends of wetlands in the conterminous United States 2004 to 2009." U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. P. 45.
[4] Dahl, T.E. 1990. "Wetlands Losses in the United States 1780's to 1980's." U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. P. 6.
[5] All data found at:
http://water.epa.gov/lawsregs/guidance/wetlands/upload/2009_12_28_wetlands_science_surface_drinking_water_surface_drinking_water_results_state.pdf
[6] According to the Ohio Lake Erie Phosphorus Task Force, "...there are multiple contributors to phosphorus into Lake Erie, but agriculture is the leading source [of phosphorus] due to the majority of land use in agriculture in the Maumee River...." See: Ohio Department of Agriculture,

blooms that shut off Toledo's drinking water produced deadly toxins harmful to human health requiring city officials to issue 'do not drink' orders. To protect drinking water systems like Toledo's, it is vital to protect the source of drinking water upstream, which the proposed rule does by covering streams and tributaries that play a vital role in keeping our waters clean and ensuring access to safe drinking water.

Clean Water Rule Supports Great Lakes Restoration Investments

Recognizing the important role wetlands and streams play in the overall health of the Great Lakes, the region's business, environmental and government leaders endorsed a plan that calls for the restoration of more than 1 million acres of wetlands.[7] Over the last five years, the U.S. Congress and Obama Administration have invested more than $1.6 billion to restore the Great Lakes. These efforts are producing results in communities around the region—including the restoration of more than 115,000 acres of wetlands and other habitat.[8] The Clean Water Protection Rule will support Great Lakes restoration efforts and ensure that restoration gains are protected so that as we take one step forward we aren't also taking two steps back.

The clean water and restoration investments protected by the rule also support good-paying jobs and lay the foundation for long-term prosperity. Investments in Great Lakes restoration are creating jobs and leading to long-term economic benefits for the Great Lakes states and the country. A Brookings Institution report shows that every $1 invested in Great Lakes restoration generates at least $2 in return.[9] Research from Grand Valley State University shows that the return for certain projects is closer to 6-to-1.[10] The University of Michigan has also demonstrated that over 1.5 million jobs are connected to the Great Lakes, accounting for more than $60 billion in wages annually.[11] Great Lakes businesses and individuals account for about 33 percent of the U.S. gross domestic product, according to a profile of Bureau of Economic Analysis data presented by World Business Chicago.[12]

The Clean Water Protection Rule helps protect our investment in restoring and protecting our Great Lakes by safeguarding vital wetlands and other waterways from pollution and/or destruction.

What the Proposed Rule Does and Does Not Do

In particular, the proposal provides clear and predictable protections for many streams, wetlands, and other waters that are currently vulnerable. The effect of this is to give greater certainty to the regulated community by providing better guidance from federal and state regulators. This helps streamline the permitting process. It does this in part by providing a clearer, scientifically supported definition of tributaries than in the past, saying that streams must have a defined bed, bank, and ordinary high water mark and flow to water already covered by the Act. The proposal reiterates existing exemptions for farming, forestry, mining and other land use activities, and very explicitly for the first time excludes many ditches, ponds, and other upland water features important for farming and forestry.

While the proposal covers waters that have historically been covered by the Clean Water Act, it does not extend this coverage to new types of waters that have not historically been under the Act's jurisdiction, such as groundwater. This means that the rule does not expand coverage to any new ditches. In fact, upland drainage ditches with less than perennial water flow are explicitly excluded. The rule also does

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et.al. 2013. "Ohio Lake Erie Phosphorus Task Force II Final Report." P. 1. Members of this Task Force included the Ohio Department of Agriculture, Ohio Farm Bureau Federation, and Ohio Environmental Council, among others.

[7] Great Lakes Regional Collaboration. 2005. "Strategy to Restore and Protect the Great Lakes." Found at: http://www.glrc.us/documents/strategy/GLRC_Strategy.pdf

[8] U.S. Environmental Protection Agency. 2014. "Fiscal Year 15: Justification of Appropriation Estimates for the Committee on Appropriations." Washington, D.C. P. 267.

[9] Austin, et.al. 2007. "Healthy Waters, Strong Economy: The Benefits of Restoring the Great Lakes Ecosystem." Metropolitan Policy Program, The Brookings Institution. Washington, D.C. 16 pp.

[10] Isely, et.al. 2011. "Muskegon Lake Area of Concern Habitat Restoration Project: Socio-Economic Assessment." Grand Valley State University, Grand Rapids, Michigan. P. 23

[11] Michigan Sea Grant. 2011. "The Great Lakes: Vital to our Nation's Economy and Environment." University of Michigan. 2 pp.

[12] Found at: https://www.worldbusinesschicago.com/files/data/GLSL_Economy_2013%20%282011%20data%29.pdf

not cover any artificial lakes, ponds, and artificial ornamental waters in upland areas or water-filled depressions created as a result of construction activity. These areas are explicitly exempted by the rule. For the sake of clarity, the rule also restates that agricultural practices are exempt under current law. The most common farming and ranching practices, including plowing, cultivating, seeding, minor drainage, harvesting for the production of food, fiber and forest products, are exempt under the CWA and that exemption is reiterated in the proposal.

Conclusion

The HOW Coalition strongly supports this rulemaking and the proposed rule. The Great Lakes region cannot protect the Great Lakes alone. They need the help from the Clean Water Act to ensure all Great Lakes rivers, streams, and wetlands can provide clean drinking water, habitat for wildlife, and safe opportunities for fishing, paddling, and swimming. The proposed clarifications will provide just that support.

Please do not hesitate to contact Chad Lord, our coalition's policy director, at (202) 454-3385 or clord@npca.org with questions.

Sincerely,

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Water Quality Director
Alliance for the Great Lakes

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February 4, 2015

The Honorable Jim Inhofe
Chairman
Senate Committee on Environment and Public Works
205 Russell Senate Office Building
Washington, DC 20510

The Honorable Bill Shuster
Chairman
House Committee on Transportation and Infrastructure
2268 Rayburn House Office Building
Washington, DC 20515

Dear Chairmen Inhofe and Shuster:

On behalf of America's farmers and ranchers, we thank you for holding today's joint hearing on the proposed Waters of the United States rule. The American Farm Bureau Federation is pleased that you are standing up for farmers and ranchers to shed light on this unprecedented expansion of the federal government's regulation of farm and ranch lands.

It has been nearly a year since EPA and the Corps first proposed this rule, yet the farm and ranch community still lacks the clarity and certainty that was promised. We have asked the questions and submitted our comments, yet the agricultural community still needs clear and straight answers from Administration officials over the intent and actual meaning of this proposed rule. We strongly believe that the EPA and Corps of Engineers have proposed a rule that expands federal jurisdiction over land and related land use activities far beyond what Congress authorized in the Clean Water Act. At the same time, the proposed rule ignores the Supreme Court's efforts to set limits to the federal government's regulatory reach into our nation's heartland.

The EPA and its supporters have fought a fierce battle to obscure the full impact of this rule. Undeterred, you have each labored to uncover the truth behind their obfuscation. We look forward to working with you to stop this regulatory overreach once and for all.

Sincerely,



Bob Stallman
President

Impacts of the Proposed Waters of the United States Rule on State and Local Governments

Statement of the American Road and Transportation Builders Association

Submitted to the United States House of Representatives Transportation & Infrastructure Committee and United States Senate Committee on Environment and Public Works

February 4, 2015

On behalf of the American Road and Transportation Builders Association (ARTBA) and its more than 6,000 member firms and public agencies nationwide, the association would like to thank Chairman Shuster, Chairman Inhofe, Ranking Member DeFazio and Ranking Member Boxer for holding today's joint hearing on, "Potential Impacts of the Proposed Water of the United States Rule on State and Local Governments."

ARTBA's membership includes public agencies and private firms and organizations that own, plan, design, supply and construct transportation projects throughout the country. Transportation construction is directly tied to the economic health and development of this country. According to Federal Highway Administration data, every $1 billion spent on highway and bridge improvements supports almost 28,000 jobs, many of which are in small businesses. Given these broad direct and indirect economic contributions, the impact on transportation development should be taken into account when analyzing new federal regulations.

ARTBA members are directly involved with the federal wetlands permitting program and undertake a variety of construction-related activities under the Clean Water Act (CWA). ARTBA actively works to combine the complementary interests of improving our nation's transportation infrastructure with protecting essential water resources.

Overview

One of the main reasons for the success of the CWA is the Act's clear recognition of a partnership between the federal and state levels of government in the area of protecting water resources. The lines of federal and state responsibility are set forth in Section 101(b) of the CWA:

> "It is the policy of Congress to recognize, preserve, and protect the primary responsibilities of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation and enhancement) of land and water resources…"

This structure of shared responsibility between federal and state governments allows states the essential flexibility they need to protect truly ecologically important and environmentally sensitive areas within their borders while, at the same time, making necessary improvements to their transportation infrastructure. The success of the federal-state partnership is backed by dramatic results. Prior to the inception of the CWA, from the 1950s to the 1970s, an average of 458,000 acres
of wetlands were lost each year. Subsequent to the CWA's passage, from 1986-1997, the loss rate declined to 58,600 acres per year and between 1998-2004 overall wetland areas increased at a rate of 32,000 acres per year.[1]

ARTBA supports the reasonable protection of environmentally sensitive wetlands with policies balancing preservation, economic realities, and public mobility requirements. Much of the current debate over federal jurisdiction, however, involves overly broad and ambiguous definitions of "wetlands."[2] This ambiguity is frequently used by anti-growth groups to stop desperately needed transportation improvements. For this reason, ARTBA has, and continues to, work towards a definition of "wetlands" that would be easily recognizable to both landowners and transportation planners and is consistent with the original scope of the CWA's jurisdiction. As an example of this, official ARTBA policy recommends defining a "wetland" as follows: "If a land area is saturated with water at the surface during the normal growing season, has hydric soil and supports aquatic-type vegetation, it is a functioning wetland."

The Proposed Rule Runs Counter to Supreme Court Precedent.

ARTBA has been also actively involved in CWA litigation concerning federal jurisdiction over the nation's waters and wetlands for the better part of the past two decades. Most

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[1] *Draft 2007 Report on the Environment: Science*, USEPA, May 2007, available at http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=140917

[2] Many states define wetlands as well other types of water resources and prescribe regulatory regimes that are appropriate to each. The federal government tries a one-size fits all approach essentially requiring water resources viewed by states as not being wetlands to be regulated as if they were wetlands under federal law.

recently, the Supreme Court's decision in *Rapanos v. United States*[3] benefited the transportation project delivery process by setting limits on Corps' jurisdiction.

At issue in *Rapanos* were two separate wetlands cases which were consolidated for the Court's review. The Court was asked to decide whether the Clean Water Act allows Corps regulation of "isolated wetlands" that have no connection with "navigable waters." The Court was also asked to decide whether or not a tenuous connection between a wetland and "navigable water" is enough to allow regulation by the Corps, or if there is a minimal standard that should be applied. Once again, ARTBA explained the CWA's legislative scheme of state and federal shared responsibility to the Court:

> "By federalizing any wet area, no matter how remote from navigable waters, [this Court would adopt] an unprecedentedly broad jurisdiction of the geographic scope of CWA jurisdiction. As this Court held in *SWANCC*, the courts should be hesitant to intrude upon the delicate balance between federal and state regulation of land and water resources…In enacting the CWA, Congress did not seek to impinge upon the States' traditional and primary power over land and water use when setting out the scope of jurisdiction under the CWA."[4]

The Court's split decision in *Rapanos* preserved the CWA's essential jurisdictional balance by preventing sweeping federal authority over isolated wetlands and man-made ditches or remote wetlands with finite connections to navigable waters. However, because the Court's decision was not issued by a majority of the justices, these issues are currently being examined by lower courts on a case-by-case basis. While ARTBA applauds the fact the decision prevented an expansion of already inefficient federal wetlands regulation, we also recognize the need for clarity in *Rapanos'* wake in order to preserve the necessary balance between federal and state jurisdictions that is essential to the continuation of the CWA's success.

In decisions such as *Rapanos* where four justices agree in both the plurality opinion (authored by Justice Scalia) and the dissenting opinion (authored by Justice Stevens) and one Justice (Justice Kennedy) writes a concurrence, the effects of the opinion should be taken from the areas where the plurality and the concurrence agree. The Supreme Court has spoken to this point specifically, stating:

> "[w]hen a fragmented Court decides a case and no single rationale explaining the result enjoys the assent of five Justices, 'the holding of the Court may be viewed as that position taken by the members who concurred in the judgments on the narrowest grounds.'"[5]

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3 547 U.S. 715 (2006).

4 *Rapanos v. United States*, 547 U.S. 715 (2006), Amicus Curiae Brief of the American Road and Transportation Builders Association, p. 25.

5 *Marks v. United States*, 430 U.S. 188, 193 (1977).

In *Rapanos*, the five justices who agreed in the final judgment of the case were Justices Scalia, Thomas, Alito, Roberts and Kennedy. Thus, in responding to the *Rapanos* decision, the focus should be on those areas where agreement can be found among these five justices.

The Scalia plurality and the Kennedy concurrence agree on several points which should guide any regulatory or legislative response to the *Rapanos* decision. Most importantly, both Scalia and Kennedy disagreed with the existing Corps theory of jurisdiction that a wetland with tenuous and questionable connections to navigable water can be subject to federal jurisdiction if one molecule of water flows between both points. This has been termed by some as the "migratory molecule" theory of jurisdiction. Justice Kennedy specifically rejects the idea of the "migratory molecule" by noting that a "central requirement" of the Clean Water Act is "the requirement that the word 'navigable' in 'navigable waters' be given some importance."[6]

Justice Kennedy also explains the CWA's establishment of certain basic recognizable limits to the Corps' excluding man-made ditches and drains by refuting portions of Justice Stevens' dissent:

> "[t]he dissent would permit federal regulation whenever wetlands lie alongside a ditch or a drain, however remote and insubstantial, that eventually flow into traditional navigable waters. The deference owed to the Corps' interpretation of the statute does not extend so far."[7]

Further, Justice Kennedy notes such an over-expansive view of the Corps' authority is incompatible with the CWA:

> "Yet the breadth of this standard—which seems to leave wide room for regulation of drains, ditches, and streams remote from any navigable-in-fact-water and carrying only minor water-volumes towards it—precludes its adoption as the determinative measure of whether adjacent wetlands are likely to play an important role in the integrity of an aquatic system comprising navigable waters as traditionally understood. Indeed, in many cases wetlands adjacent to tributaries covered by this standard might appear little more related to navigable-in-fact waters that the isolated ponds held to fall beyond the Act's scope in SWANCC."[8]

This leads to a central point of *Rapanos* echoed by members of the plurality, dissent and Justice Kennedy—there needs to be some sort of regulatory response from the Corps reflecting these limits on its jurisdiction. In his concurrence, Justice Kennedy states:

> "Absent more specific regulations, however, the Corps must establish a specific nexus on a case-by-case basis when it

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6 *Rapanos v. United States*, 547 U.S. 715 (2006) (Kennedy, J. concurring).

7 *Id*.

8 *Id*., referring to the holding in SWANCC

> seeks to regulate wetlands based on adjacency to navigable tributaries. Given the potential overbreadth of the Corps regulations, this showing is necessary to avoid unreasonable applications of the statute."[9]

Chief Justice Roberts was more direct with his wording, noting a regulatory response from the Corps has been long overdue, and should have been promulgated after the Supreme Court's decision in *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*[10] (*SWANCC*) decision first recognized the jurisdiction of the Corps needed to be limited:

> "Rather than refining its view of its authority in light of [the Court's] decision in *SWANCC*, and providing guidance meriting deference under [the Court's] generous standards, the Corps chose to adhere to its essentially boundless view of the scope of its power. The upshot today is another defeat for the agency."[11]

Finally, Justice Breyer's dissent warns a refusal from the Corps to issue a regulatory response to *Rapanos* will only result in more litigation:

> "If one thing is clear, it is that Congress intended the Army Corps of Engineers to make the complex technical judgments that lie at the heart of the present cases (subject to deferential judicial review). In the absence of updated regulations, courts will have to make ad hoc determinations that run the risk of transforming scientific questions into matters of law. This is not the system Congress intended. Hence, I believe that today's opinions, taken together, call for the Army Corps of Engineers to write new regulations, and speedily so."[12]

Thus, the lesson of the *Rapanos* decision is the need for a response recognizing the limits of Corps jurisdiction and clarifying existing wetlands regulations. It is essential for any administrative clarification of federal wetlands jurisdiction to preserve the federal-state partnership embodied in the CWA. As both *Rapanos* and *SWANCC* stressed, a scheme of shared jurisdiction is necessary to carry out the original intent of the CWA. States need to be allowed to maintain full control over intrastate water bodies in order to allow them the flexibility to balance their own environmental needs with unique infrastructure challenges.

Roadside Ditches Should Not Be Covered by the Proposed Rule.

ARTBA is particularly concerned with the treatment of roadside ditches under the proposed rule. Current federal regulations say nothing about ditches, but the proposed rule expands

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9 *Id*.

10 *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*, 531 U.S. 159, 174 (2001)

11 *Id*. (Roberts, C.J., concurring).

12 *Id*. (Breyer, J., dissenting).

EPA and Corps jurisdiction to the point where virtually any ditch with standing water could be covered. Federal environmental regulation should be applied when a clear need is demonstrated and regulating all roadside ditches under the theory of interconnectedness fails to meet this threshold. A ditch's primary purpose is safety and they only have water present during and after rainfall. In contrast, traditional wetlands are not typically man-made nor do they fulfill a specific safety function. As such, roadside ditches are not, and should not be regulated as, traditional jurisdictional wetlands because the only time they contain water is when they are fulfilling their intended purpose.

The unacceptable length of the environmental review and approval process for federal-aid highway projects has been routinely documented and acknowledged by the Obama Administration. Adding more layers of review—for unproven benefits—will only lengthen this process. Further, requiring wetland permits for ditch construction and maintenance would force project sponsors and the private sector to incur new administrative and legal costs. The potential delays and increased costs that would result from EPA's proposal would divert resources from timely ditch maintenance activities and potentially threaten the role ditches play in promoting roadway safety.

In addition, the proposed rule creates a completely new concept of allowing for "aggregation" of the contributions of all similar waters "*within an entire watershed*." This concept results in a blanket jurisdictional determination—meaning the EPA and Corps could regulate the complete watershed. Such a broadening of jurisdiction would literally leave no transportation project untouched regardless of its location, as there is no area in the United States not linked to at least one watershed. While there are certainly instances where a permit is appropriate for the impacts of transportation construction, these situations should be evaluated on a case-by-case basis where specific environmental benefits can be evaluated.

EPA's Proposed Rule Could Jeopardize Progress on Project Streamlining.

It should also be noted that there has been recent bipartisan progress in the area of streamlining the project review and approval process for transportation projects. Members of both parties agree that transportation improvements can be built more quickly without sacrificing necessary environmental protections. The current surface transportation reauthorization law, the "Moving Ahead for Progress in the 21st Century" (MAP-21) Act contained significant reforms to the project delivery process aimed at reducing delay. Recently, the Obama Administration released the ""Generating Renewal, Opportunity, and Work with Accelerated Mobility, Efficiency, and Rebuilding of Infrastructure and Communities throughout America" (GROW AMERICA) reauthorization proposal which continues MAP-21's efforts at improving project delivery.

If EPA's rule is finalized, the progress of MAP-21 and the potential progress of the project delivery reforms in GROW AMERICA would be jeopardized. Any reduction in delay gained from improvements to the project delivery process would likely be negated by the increased permitting requirements and opportunities for litigation caused by the rule's expansion of federal jurisdiction.

Alternative Solutions are Available.

One method of establishing clarity would be to develop a classification system for wetlands based on their ecological value. This would allow increased protection for the most valuable wetlands while also creating flexibility for projects impacting wetlands that are considered to have little or no value. Also, there should be a "de minimis" level of impacts defined which would not require any permitting process to encompass instances where impacts to wetlands are so minor that they do not have any ecological effect. A "de-minimis" standard for impacts would be particularly helpful for transportation projects and allow projects to avoid being delayed by minimal impacts to areas which are non-environmentally sensitive areas.

Furthermore the proposed rule does not recognize one of the biggest factors creating the confusion in defining federal jurisdiction—multiple agencies being involved in the jurisdictional determination process. ARTBA has repeatedly stated the involvement of multiple agencies in wetlands regulation hinders the overall efforts of the federal permitting program. One of the principal problems plaguing the 404 program is indecision and inaction, with no benefit for the environment. Justice Breyer reiterated this in his aforementioned *Rapanos* dissent, stating "If one thing is clear, it is that Congress intended the Army Corps of Engineers to make the complex technical judgments that lie at the heart of [federal wetlands jurisdiction]."[13]

Congress reiterated this point in the National Defense Authorization Act for Fiscal Year 2004 by authorizing only one agency, the Corps, to issue 404 permitting program regulations. This direction should be continued. Thus, it should be the sole responsibility of the Corps, not the EPA, to take the lead and build a stronger, more predictable permitting program to both enhance environmental protection and provide a measure of certainty to regulatory staff and permit applicants. ARTBA continues to believe the Corps should be the principal agency administering the 404 wetlands regulatory program as its staff has the technical expertise and practical knowledge to ensure fair implementation of federal wetlands policy. The proposed rule should be amended to acknowledge the Corps' status as the sole intended decision-making agency in jurisdictional determinations and the EPA should be removed from the permitting process entirely.

Conclusion.

The committees should also note that there have been multiple legislative attempts in recent years to expand the jurisdiction of the CWA to include all "waters of the United States." Each of these efforts have met with broad bipartisan opposition and none have resulted in new law or even a successful committee mark-up. It is clear that a consensus among policymakers and affected stakeholders has not yet been reached regarding appropriate federal wetlands jurisdiction. Congress should direct EPA to take note of these developments and instead of seeking to "connect" all waters, work with the regulated community to identify those specific types of water bodies which are currently not being covered and craft more appropriate, targeted measures to protect them.

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[13] *Rapanos v. United States*, 547 U.S. 715 (2006).

ARTBA looks forward to continuing to work with the committees in order to continue to protect, sustain and improve our nation's infrastructure while addressing the future challenges of the CWA.

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HEARING BEFORE THE

U.S. HOUSE OF REPRESENTATIVES TRANSPORTATION AND INFRASTRUCTURE COMMITTEE AND SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE

ON

IMPACTS OF THE PROPOSED WATERS OF THE UNITED STATES RULE ON STATE AND LOCAL GOVERNMENTS

TESTIMONY OF

HONORABLE DONALD ROSIER, CHAIR, JEFFERSON COUNTY COMMISSIONER
HONORABLE ROGER PARTRIDGE, VICE-CHAIR, DOUGLAS COUNTY COMMISSIONER

COLORADO CLEAN WATER COALITION

February 4, 2015

Chairman Inhofe, Ranking Member Boxer, Chairman Shuster, Ranking Member DeFazio, and members of both committees, my name is Donald Rosier and I am a Commissioner with Jefferson County, Colorado, but also serve as Chairman of the Colorado Clean Water Coalition. On behalf of the Coalition partners, our constituents and businesses, I want to submit the following comments for the record.

The Colorado Clean Water Coalition (COALITION) is a bipartisan coalition which represents over four million Colorado residents comprised of Municipal, County, Business and Special District stakeholders who strongly support the goals of the Clean Water Act (CWA) and have demonstrated a strong and unwavering commitment to water quality and environmental stewardship in Colorado. The members of the COALITION have invested tremendous amounts of resources into stormwater quality programs, many of which we believe are successful models of multi-jurisdictional collaboration that result in the development of appropriate and cost-effective approaches to help solve regionally-specific stormwater concerns. The COALITION has taken an active role with stormwater programs and proposals presented by regulatory agencies. This testimony for the U.S. House Transportation and Infrastructure Committee and Senate Environment and Public Works Committee is our comments available on the most recent proposed ruling of Definitions of "Waters of the United States" Under the Clean Water Act (CWA) (USEPA-HQ-OW-2011-0880), referred herein as the Proposed Rule. The Proposed Rule, as written, will interfere with current CWA regulatory innovations being practiced in our state. We have been active in the ruling process and submitted comments to USEPA on November 4, 2014.

The COALITION is concerned with the Proposed Rule as written and the potential impact the rule will have on other CWA programs that affect stormwater, such as the National Pollutant Discharge Elimination System (NPDES), Spill Prevention Control and Countermeasures (SPCC) and Total Maximum Daily Loads (TMDL). Due to the complexity of the Proposed Rule, the unexplored impacts on CWA programs, and the incomplete scientific study and economic analysis, the COALITION is asking for the USEPA to rescind the Proposed Rule. If that is not possible, the COALITION is asking that our comments be considered in redrafting the Proposed Rule through a formal negotiated rulemaking process with stakeholders like our COALITION.

We have many questions and considerations for the Proposed Rule and we ask the U.S. House Transportation and Infrastructure Committee and Senate Environment and Public Works Committee to assist the COALITION with communicating the local impacts related to the Proposed Rule.

The testimony presented herein is focused on areas that are most relevant to local government impacts of the Proposed Rule in Colorado and should not be construed to be a comprehensive assessment of the Proposed Rule.

Colorado is a headwaters state, and members in our state are dedicated to protecting the state's water resources through the implementation of thoroughly vetted, flexible, cost effective, and regionally appropriate stormwater regulations and programs. However, while waters of the U.S.

could be better defined, the recently Proposed Rule definition creates uncertainty, and it potentially changes other Clean Water Act (CWA) programs which demonstrate current innovative solutions to protect our waters within Colorado's semi-arid geographic areas. As like our neighboring jurisdiction, Douglas County, local governments have expended many fiscal resources to comment on the Proposed Rule.

The process EPA developed removed local innovation by not conducting a formal negotiated stakeholder process after the Science Advisory Board peer review of the scientific analysis used to develop the Proposed Rule outlined in the Douglas County comments. To our understanding, the peer review of the scientific basis was not finalized before the Proposed Rule was released for public comment and prevented stakeholders from reviewing a Proposed Rule based on the revised scientific basis. The formal negotiated stakeholder process would have been very beneficial in developing an innovative draft rule and saved local budgets in preparing such detailed onerous comment submittals. A solution for this is for EPA to conduct the formal Negotiated Rulemaking Process, which encourages local innovation currently being implemented in our drainage basins to protect water supply.

Under the rulemaking process used by EPA under the Administrative Procedures Act, agencies wrote the rule, published the rule, accepted comments from the public, and then will adopted the rule as they see fit. Rules produced in this way often lack the support of concerned parties, which can hamper their effectiveness. The negotiated rulemaking process is a realistic alternative to this adversarial administrative process. The negotiated rulemaking process allows affected interests to have greater control over the content of agency rules while ensuring fairness and balanced participation to all involved. The negotiated process also permits agencies to obtain a more accurate understanding of the impacts to interested parties, costs and benefits of rule, and alternatives than if the agencies are left to digest voluminous records of testimonial and documentary evidence presented in adversarial hearings.

Finally, the economic study relative to programs that protect our waters like the Municipal Separate Storm Sewer System Permit (MS4's) and the fact that these current regulations exercising innovations today that protect waters were not accounted for in the Proposed Rule. Executive Order 13563 (EO 13563) includes several key instructions to Federal Agencies, including requirements that they should propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs and should tailor regulation to impose the least burden on society. In doing so, EO 13563 requires that the Agencies use the best available techniques to quantify costs and benefits as accurately as possible. We appreciate the willingness of the EPA offices to participate in teleconference calls to discuss the Proposed Rule, we must stress that information sharing does not equate to meaningful consultation. The Agencies should pursue an authentic partnership with the states representatives and local communities.

Clean water is accounted for many residential and commercial projects with existing innovative CWA programs. An example business impact from the Proposed Rule permitting requirements for counties with strong economic growth such as Douglas County can be highlighted in the following example.

From the Douglas County evaluation, the Proposed Rule will likely expand jurisdictional waters of the U.S. and create an onerous amount of permitting work for local businesses, EPA, and US Army Corp of Engineer offices. This influx of permitting will likely increase the permitting time and cause planning and construction delays. These permitting delays may impact business decisions, if the Proposed Rule is implemented without consideration of regional development. The increase in time will delay the ability for the infrastructure to be installed or designed to account for the Proposed Rule and the increased jurisdiction. Assuming the Proposed Rule is promulgated in April 2015, and a single family housing development with 100 units is planned to start construction in the same year under Current Guidance, what would the economic impact be to that development? Based on the Douglas County Waters Evaluation, potential expansions of jurisdiction will result in additional 404 permitting. The delay resulting from the requirement to obtain a federal permit could result in missing a construction season, resulting in a possible loss of business revenue. In an example of 100 single family housing units finally designed after the Proposed Rule is promulgated, implementation of the Rule could result in a 404 permitting issuance delay transferring the delay to delay of construction of approximately one year. Assuming current growth in Douglas County remains at $23,298 per unit for 2015 but is reduced in 2016 by possible economic change could result in a loss for this 100 unit development of approximately $2.4 million. This example can also be demonstrated using inflationary cost of construction materials in any infrastructure project requiring typical construction of bridge replacements, waterlines, reservoir water supply, water treatment, and other transportation infrastructure needs.

Thank you for the opportunity to submit these comments for the record and should you or any member of the Subcommittee have any comments I would be happy to meet in person or talk via phone with you or them to discuss these issues and other economic impacts in greater detail. Colorado is proud of its environmental record and programs it has in place and believes Congress should look at Colorado as a model of what can be done to protect the environment if our hands aren't tied by burdensome regulations forced upon us as a one size fits all approach. I can be reached at 303-660-7365.

Sincerely,

Donald Rosier, 2014 CCWC Chair
Jefferson County Commissioner

Roger A. Partridge, 2014 CCWC Vice-Chair
Douglas County Commissioner

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The attached testimony reflects the COALITIONS position on the submitted comments of Water Docket ID No. EPA-HQ-OW-2011-0880. Our members supporting the comments as one Colorado Clean Water Coalition voice for those comments are as follows:

Business and Industry
Castle Rock Economic Development Council
Colorado Apartment Association
Colorado Association of Commerce & Industry
Colorado Contractors Association
Associated General Contractors of Colorado
Douglas County Business Alliance

Counties
Adams County
Arapahoe County
Cheyenne County
Douglas County
Elbert County
El Paso County
Jefferson County
Mesa County
Weld County

Municipalities
City of Arvada
City of Aurora
City of Commerce City
City and County of Denver
City of Englewood
City of Greenwood Village
City of Littleton
City of Lakewood
City of Loveland
City of Lone Tree
City of Thornton
City of Wheat Ridge
Town of Castle Rock
Town of Parker

Special District
Highlands Ranch Metropolitan District
Southeast Metro Stormwater Authority

HEARING BEFORE THE

U.S. HOUSE OF REPRESENTATIVES TRANSPORTATION AND INFRASTRUCTURE COMMITTEE AND SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE

ON

IMPACTS OF THE PROPOSED WATERS OF THE UNITED STATES RULE ON STATE AND LOCAL GOVERNMENTS

TESTIMONY OF

BOARD OF DOUGLAS COUNTY COMMISSIONERS

HONORABLE DAVID A. WEAVER DOUGLAS COUNTY COMMISSIONER DISTRICT I
HONORABLE ROGER PARTRIDGE, DOUGLAS COUNTY COMMISSIONER DISTRICT II
HONORABLE JILL E. REPELLA, CHAIR DOUGLAS COUNTY COMMISSIONER DISTRICT III

February 4, 2015

Chairman Inhofe, Ranking Member Boxer, Chairman Shuster, Ranking Member DeFazio, and members of both committees, on behalf of Douglas County, we want to submit the following comments for the record.

Douglas County supports the goals of the US Environmental Protection Agency (EPA) and the US Army Corps of Engineers (USACE) regarding the requirements of the Clean Water Act (CWA). We also support regionally appropriate, flexible, and cost effective environmental regulations that are implementable. This testimony for the U.S. House Transportation and Infrastructure Committee and Senate Environment and Public Works Committee is our comments available on the most recent proposed ruling of Definitions of "Waters of the United States" Under the CWA (USEPA-HQ-OW-2011-0880), referred herein as the Proposed Rule. The Proposed Rule, as written, will interfere with current CWA regulatory innovations being practiced in our County and state. We have been active in the ruling process and submitted comments to USEPA on November 4, 2014.

Douglas County is concerned with the Proposed Rule as written and the potential impact the rule will have on other CWA programs that affect stormwater, such as the National Pollutant Discharge Elimination System (NPDES), Spill Prevention Control and Countermeasures (SPCC) and Total Maximum Daily Loads (TMDL). Due to the complexity of the Proposed Rule, the unexplored impacts on CWA programs, and the incomplete scientific study and economic analysis, we are asking for the USEPA to rescind the Proposed Rule. If that is not possible, we are asking that our comments be considered in redrafting the Proposed Rule through a formal negotiated rulemaking process with stakeholders like our County.

We have many questions and considerations for the Proposed Rule and we ask the U.S. House Transportation and Infrastructure Committee and Senate Environment and Public Works Committee to assist our County with communicating the local impacts related to the Proposed Rule.

The testimony presented herein is focused on areas that are most relevant to impacts of the Proposed Rule in Douglas County, Colorado and should not be construed to be a comprehensive assessment of

the Proposed Rule.

Douglas County is the headwaters of two major drainage basins in Colorado, and we are dedicated to protecting the state's water resources through the implementation of thoroughly vetted, flexible, cost effective, and regionally appropriate stormwater regulations and programs. However, while waters of the U.S. could be better defined, the recently Proposed Rule definition creates uncertainty, and it potentially changes other CWA programs which demonstrate current innovative solutions to protect our waters within Colorado's semi-arid geographic areas. Douglas County has expended many fiscal resources to develop comprehensive comments on the Proposed Rule.

The process EPA developed removed local innovation by not conducting a formal negotiated stakeholder process after the Science Advisory Board peer review of the scientific analysis used to develop the Proposed Rule. To our understanding, the peer review of the scientific basis was not finalized before the Proposed Rule was released for public comment and prevented stakeholders from reviewing a Proposed Rule based on the revised scientific basis. The formal negotiated stakeholder process would have been very beneficial in developing an innovative draft rule and saved local budgets in preparing such detailed onerous comment submittals. A solution for this is for EPA to conduct the formal Negotiated Rulemaking Process, which encourages local innovation currently being implemented in our drainage basins to protect water supply.

Under the rulemaking process used by EPA under the Administrative Procedures Act, agencies wrote the rule, published the rule, accepted comments from the public, and then will adopted the rule as they see fit. Rules produced in this way often lack the support of concerned parties, which can hamper their effectiveness. The negotiated rulemaking process is a realistic alternative to this adversarial administrative process. The negotiated rulemaking process allows affected interests to have greater control over the content of agency rules while ensuring fairness and balanced participation to all involved. The negotiated process also permits agencies to obtain a more accurate understanding of the impacts to interested parties, costs and benefits of rule, and alternatives than if the agencies are left to digest voluminous records of testimonial and documentary evidence presented in adversarial hearings.

Finally, the economic study relative to programs that protect our waters like the Municipal Separate

Storm Sewer System Permit (MS4's) and the fact that these current regulations exercising innovations today that protect waters were not accounted for in the Proposed Rule. Executive Order 13563 (EO 13563) includes several key instructions to Federal Agencies, including requirements that they should propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs and should tailor regulation to impose the least burden on society. In doing so, EO 13563 requires that the Agencies use the best available techniques to quantify costs and benefits as accurately as possible. We appreciate the willingness of the EPA offices to participate in teleconference calls to discuss the Proposed Rule, we must stress that information sharing does not equate to meaningful consultation. The Agencies should pursue an authentic partnership with the states representatives and local communities.

To demonstrate the economic impact the Proposed Rule would have on Douglas County roadway bridge projects, we offer the following specific illustration. In 2014, Douglas County underwent a 404 permit process to design and construct a federally funded bridge replacement at Airport Road crossing Plum Creek. The bridge replacement was warranted due to the current bridge being structurally deficient and functionally obsolete. The permitting process began in January with local agencies priming federal agencies, which resulted in a submittal in April and awarded permit in June. This two month turnaround is considered the best case scenario. The Federal Highway Administration's (FHA) current estimated timeline for obtaining a required individual 404 permit for activities that occur in jurisdiction determined Waters of the US is approximately 3 to 6 months.

Taking into consideration the County's current staff, resources, and project load, the County can expect that under the Proposed Rule, the time to secure the 404 permit for the Airport Road Bridge Project would have been doubled. The permitting delay and increase in cost will also affect public infrastructure economically in the following ways:

New public roadway infrastructure - Typically in Colorado, bridge projects are constructed during low precipitous periods and timing is critical during the permit process. For example, the $3 million Airport Road Bridge Project may be delayed as much as one year if the Proposed Rule is promulgated in its current form. As outlined in the Colorado Construction Cost Index Report, the average

inflationary increases for labor and materials of this type of construction averaged 8.6 percent from 1987 to 2011, which would result in an additional cost of $258,000 to the public. In some years like 2004 to 2005, Colorado experienced an increase in the Colorado Construction Cost index reporting of 168.0 to 255.2 resulting in a 51.9% annual increase in construction. Under the Airport Road Bridge Project example, such a delay would result in an additional $1.6 million to the cost of the Project.

Existing public roadway infrastructure maintenance - It is the responsibility of MS4 permittees to ensure long term operational and maintenance of permittee owned and private owned water quality/detention facilities to the maximum extent practical. MS4s at times develop manmade wetlands for water quality features and at other time, may need to remove such wetlands, along with sediment for purposes of protecting the infrastructures functional purpose, such as storage volume and controlled release for water quality and downstream stormwater conveyance in roadside ditches that outfall into tributary waters. Maintenance of water quality/detention facilities and ditches both inside the boundaries of the MS4 and within public right-of-way will require a 404 permit never before required for this type of maintenance. The additional constraint from the Proposed Rule is the time it will take a MS4 to obtain a 404 permit. The increase in time will delay the ability to conduct the required maintenance activities for the infrastructure to function as intended such as protecting public life, property, and the environment. While waiting for a 404 permit or jurisdictional determinations, the owners will be delayed in construction, resulting in penalties and fines associated with such delays. These 404 permits or jurisdictional determinations impede Douglas County and private land owners from completing their currently permitted operational and maintenance responsibilities resulting in tens of thousands of dollars in EPA and Colorado Department of Health and Environment daily accumulated fines. Nonetheless, these violations have civil and criminal imprisonment terms. If we maintained these facilities without a 404 permit, similar violations and penalties could be imposed on the owners of the facilities. This is a 100% increase in fiscal costs and unforeseen increase to public life, property, and the environment if permitting obstructs required maintenance.

Business impact – Douglas County is undergoing strong economic development and some notable economic indicators suggesting the County is poised for continued expansion as follows:
Total employment rose 6.5% from 2013, resulting in 6,370 additional jobs.

- Douglas County reported a 5.3% increase in total retail sales.
- Average sales price for a single-family detached home rose 6.3% through the first quarter of 2014 compared with 2013. The average sales price increase was $23,928 higher than the first quarter 2013.
- Douglas County workers in the prime ages of 35 to 54 make up 55.1% of the labor force compared to 44.6% for all workers in Colorado.
- Standard & Poor's Rating Services has reviewed their rating for Douglas County and has raised the County's credit rating from AA+ to AAA.

These economic indicators are often indicators for cyclical business demands of commercial and residential construction needs and the public infrastructure these business sectors provide. The Proposed Rule may impact business decisions if the Proposed Rule is implemented without consideration of regional development. The increase in time will delay the ability for the infrastructure to be installed or designed to account for the Proposed Rule and the increased jurisdiction. Assuming the Proposed Rule is promulgated in 2015, and a single family housing development with 100 units is planned to start construction in the same year under Current Guidance, what would the economic impact be to that development? Based on the Douglas County Waters Evaluation, potential expansions of jurisdiction will result in additional 404 permitting. The delay resulting from the requirement to obtain a federal permit could result in missing a construction season, resulting in a possible loss of business revenue. In the example of 100 units finally designed after the Proposed Rule is promulgated, implementation of the Rule could result in a 404 permitting issuance delay transferring the delay to delay of construction of one year. Assuming growth of $23,298 per unit is the same in 2015 but is reduced in 2016 by possible economic change could result in a loss for this 100 unit development of approximately $2.4 million.

The inclusion of this additional cost in the Economic Analysis is a necessary component for a complete review of the Proposed Rule to ensure the Proposed Rule is not impeding standard public safety operations. Moreover, more information is required in the Economic Analysis to allow local units of governments such as Douglas County to determine actual objective impacts to MS4s and public rights-of-ways. The current draft Economic Analysis does not provide enough information wherein Douglas

County can conclude that the Proposed Rule will not fiscally limit it from conducting standard operating procedures to construct and repair infrastructure to protect the public. Stakeholders cannot provide meaningful comment on the Proposed Rule without being afforded the opportunity to review and comment on a comprehensive Economic Analysis prior to the finalization of the Proposed Rule.

Thank you for the opportunity to submit these comments for the record and should you or any member of the Subcommittee have any comments, we would be happy to meet in person or talk via phone with you or them to discuss these issues and other economic impacts in greater detail. Douglas County is proud of its environmental record and programs it has in place and believes Congress should look at our County as a model of what can be done to protect the environment if our hands aren't tied by burdensome regulations forced upon us as a one size fits all approach. If you have any questions, please feel free to contact Tom Repp, P.E. with our Engineering Department (303) 660-7490, or email trepp@douglas.co.us.

Sincerely,

BOARD OF DOUGLAS COUNTY COMMISSIONERS

David A. Weaver
Commissioner District I

Roger A. Partridge
Commissioner District II

Jill E. Repella, Chair
Commissioner District III

Statement by the Environmental Council of the States (ECOS), the Association of Clean Water Administrators (ACWA), and the Association of State Wetland Managers (ASWM)
Before the Senate Committee on Environment and Public Works and the House Committee on Transportation and Infrastructure
Hearing on State and Local Government Impacts of the Waters of the U.S. Proposed Rule
February 4, 2015

This statement is submitted for the hearing record on behalf of the above signed organizations of states and territories (states) who as co-regulators with the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (Corps), deliver the nation's environmental protection system of laws, regulations, programs, research, and services. States have many laws that protect waters and wetlands, and implementing the Clean Water Act (CWA) is a fundamental responsibility of states. This statement for the hearing record does not supersede or alter the perspective or input of any individual state.

States have long supported early, meaningful, and substantial state involvement in the development and implementation of environmental statutes and related rules. The above signed organizations believe that EPA and the Corps must engage states as co-regulators as the Waters of the U.S. rulemaking process comes to its culmination. Since the states are the primary entities for carrying out the CWA, we encourage EPA and the Corps to maintain regular forums and contact with states leading to any finalization of the proposed rule.

Uncertainty about the effects of the proposed rule still exists among states, largely due to regional, geographic, and climactic distinctions. Cost impacts may differ from state to state depending on varying state laws and administrative processes. States have asked EPA and the Corps to consider variations in state implementation costs as appropriate, and to structure any final rule to provide the maximum implementation flexibility possible that is still consistent with underlying statutory objectives.

It will be important for EPA and the Corps to seek and secure federal funding for the states to cover the customary portion of costs associated with any new rule, and consider the availability of funding support in planning for new obligations. States have expressed concern that the economic analysis of the proposed rule is not accurate for all states.

States will appreciate any ″bright line″ jurisdictional exclusions that can be made in a final rule, because they will provide further clarity to regulators. Additional clarity is needed for example, regarding ditches -- how to parse out exactly where the line is

between nonjurisdictional and jurisdictional sections of ditches, as well as how to determine whether or not a ditch contributes flow to a downstream navigable water.

States recommend EPA and the Corps expand the list of clear exclusions in any final rule. States emphasize that a final rule should add such clarity that the need for implementation guidance is minimized. To the extent that guidance is needed, it should be developed with state involvement and published as concurrently as possible with any final rule.

If and when the proposed rule is finalized, it may set new standards in some regions for defining jurisdiction under the CWA Section 404 and 402 permitting programs. To the extent that an area previously found to be non-jurisdictional has the potential to be found jurisdictional under a new rule, a final rule must be clear regarding how such situations will be handled. A smooth transition between regulatory approaches is critical. In order to reduce litigation and uncertainty, the final rule should describe under what circumstances it will apply to previously made jurisdictional determinations, and also to what universe of currently pending jurisdictional determinations, if any, it will apply.

Please feel free to contact the following individuals regarding this statement:

Alexandra Dunn, ECOS, adunn@ecos.org, 202-266-4929
Julia Anastasio, ACWA, janastasio@acwa-us.org, 202-756-0600
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Family Farm ALLIANCE SM

P.O. Box 216 Klamath Falls, Oregon 97601

Protecting Water for Western Irrigated Agriculture

November 10, 2014

Water Docket
Environmental Protection Agency
Mail Code: 2822T
1200 Pennsylvania Ave. NW
Washington, DC 20460
Docket ID No. EPA-HQ-OW-2011-0880

Attention: Docket ID No. EPA-HQ-OW-2011-0880: Definition of "Waters of the United States Under the Clean Water Act"

Dear Administrator McCarthy and Lieutenant General Bostick:

The Family Farm Alliance (Alliance) appreciates the opportunity to submit our comments to the Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (Corps) on the proposed rule defining what "waters of the United States" should be considered jurisdictional under the federal Clean Water Act (CWA).

The Alliance is a grassroots organization of family farmers, ranchers, irrigation districts, and allied industries in 16 Western states. The Alliance is focused on one mission: To ensure the availability of reliable, affordable irrigation water supplies to Western farmers and ranchers. The Alliance has long worked on finding ways to streamline and improve the federal regulatory processes with past Administrations and Congresses towards that end.

Clean water is vital to farmers and ranchers in the Western U.S. and to the well-being of rural communities nationwide. While we understand the importance of clean water to the future of irrigated agriculture, we believe that the proposed rule does little to promote the goal of providing clean water and would instead create the potential for an unwarranted expansion of federal jurisdiction over newly defined "tributaries" and associated "other waters" as "waters of the U.S." Along with the additional bureaucratic red-tape associated with this jurisdictional expansion, the proposed rule would unnecessarily impede Western farm and ranch families' ability to manage the delivery and use of irrigation water to grow food and fiber for America and the world.

The proposed rule, according to the EPA and the Corps, was intended to "clarify" CWA jurisdictional interpretations. Yet the language in the proposal suggests otherwise, creating broader interpretations of what is or should be considered "waters of the U.S." and creating the uncertainty associated with the agencies performing additional "case-by-case" analyses and specific jurisdictional determinations.

In support of this proposed rule, EPA and the Corps cite statutory provisions, legislative history, and isolated language from Supreme Court decisions without recognizing the context for the cited material. The proposed rule and justification thus asserts support based on selected passages in the law but leaves out the limiting requirements. A full statement of the law limits CWA jurisdiction more narrowly than in the proposal. A key omission in the proposal is ignoring the touchstone requirement of navigability, which would better demonstrate what Congress intended when it enacted the CWA. Any change to this congressionally-imposed requirement needs to be made by Congress, not a regulatory process. Indeed, the Alliance believes a regulatory expansion of the statutory standard would be illegal and will foster litigation, thus creating the very uncertainty such regulations are supposed to eliminate.

The Alliance has significant concerns that the proposed rule, if adopted as written or expanded to any tributary with "evidence of flow" as proposed by the Science Advisory Board (SAB), could negatively impact the future of Western irrigated agriculture. The proposed rule is too broad in categorizing "tributaries" and "other waters" as "waters of the U.S." and contains no "bright line" limitations on what waters are jurisdictional and what waters are not. Essentially, in our view, under the proposed rule it will undoubtedly be asserted that CWA jurisdiction would be expanded to any place where water flows, including dry washes, small streams, ditches, artificially or naturally created ponds or wetlands, or other water features that could eventually flow into or be subjectively determined to affect the water quality of a traditionally "navigable water" which the CWA originally was intended to protect. As noted by the U.S. Supreme Court in the *SWANCC* case, "the traditional term 'navigable waters'—even though defined as 'the waters of the United States'—carries some of its original substance: '[I]t is one thing to give a word limited effect and quite another to give it no effect whatever.'" *See Rapanos v. U.S.,* 547 U. S. 715, 734_ (2006) *citing Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers,* 531 U.S. 159, 172 (U.S.S.C. 2001). Even Justice Kennedy has recognized "the need to give the term 'navigable' some meaning." *Id.* at 779.

We also believe that the underlying science of the proposed rule has not been fully vetted by the agencies with the public to allow for the rule to move forward. We would like to see the SAB report on the "*Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence"* finalized with the SAB recommendations attached prior to the close of the public comment period. Although a draft of this SAB report has been circulated, the final version should be subject to a public comment period and an opportunity for peer review, prior to the closing of the comment period on the proposed rule. We appreciate that the comment period was extended slightly after the SAB draft was issued, but that unfortunately is inadequate in our minds.

In the proposed rule, jurisdictional waters under the CWA would continue to include those waters identified in Section (a)(1) through (4), which includes traditional navigable waters; interstate waters, including interstate wetlands; the territorial seas; and all impoundments of such jurisdictional waters. These waters have traditionally come under the purview of the CWA and we agree that these waters are and should continue to be deemed jurisdictional. However, in our opinion, the unwarranted jurisdictional expansion begins in Section (a)(5), tributaries to jurisdictional waters; (a)(6), adjacent waters, including wetlands, to jurisdictional waters; and (a)(7), "other waters", including wetlands that, on a case-specific basis either alone or in combination with other similarly situated waters located in the same region, have a "significant nexus" to jurisdictional waters.

These new definitions of "tributary", "significant nexus", and "neighboring" proposed in the rule, we believe, could be read to dramatically broaden the scope and jurisdiction of the CWA in rural America as never before. Even if the EPA and the Corps, as they have suggested in recent announcements, do not intend on expanding the jurisdiction of the CWA in the proposed rule, we are concerned that the proposed rule could be interpreted broadly by the courts (through citizen lawsuits or enforcement actions). For this reason alone, the proposed rule should not broaden the agencies' or courts' discretion to make a determination of jurisdiction over whether any rural canals, ditches, drains, ponds, wetlands, or dry washes are, in their view, "waters of the U.S." and subject to federal CWA jurisdiction and permitting requirements.

Most importantly, the Alliance's concerns are centered on the proposed rule's jurisdiction over man-made irrigation ditches and drains under the CWA. While the proposal excludes ditches "excavated wholly in the uplands" and drainage ditches "draining only uplands" from being categorized as "waters of the U.S.", these exclusions may raise more questions than answers in a jurisdictional dispute. The words "wholly" and "only" may imply a "zero tolerance" for any disturbance in the past of a newly defined "tributary" or wetland under the proposal. And, there is no clear determination that artificially created wetlands (as a result of the application of irrigation water in the uplands) are excluded as "waters of the U.S." Also, the term "uplands" is not defined and could be subject to dispute when determining placement or drainage if forced into using either "wholly" or "only" as the applicable factors for exclusion (or not).

The West has been forever changed by the construction of the massive system of canals, ditches, and drains, all part of an irrigation system envied by the world. The world-class agricultural production created by irrigation of farmland in the Western U.S. is highly dependent on the continued consistent operation and maintenance of this canal and drainage system, a complex, integrated, and interrelated labyrinth of miles and miles of ditches, drains, pipes, culverts, tile drains, and other arteries that carry the precious irrigation water to family farms and ranches, many of which are operated by our membership.

We believe the proposed rule must be crystal clear in excluding much, if not all, of this important irrigation infrastructure from CWA jurisdiction. Without explicit protection from the added regulation and permitting requirements that CWA jurisdiction would bring to these features,

assertions that those features are subject to CWA jurisdiction are inevitable. At a minimum, that will spawn years of protracted and costly litigation that will create enormous uncertainty that could cripple Western agriculture; if those features are found to be jurisdictional as a result of the expansive new language proposed in the rule, we believe the entire Western irrigation and drainage system could collapse under the inherent bureaucratic red tape created by being classified as a "water of the U.S.", potentially fallowing most of Western irrigated agriculture and eliminating the Nation's and the world's most reliable and consistent source of food and fiber. This claim is not overblown as we have seen it take as long as a decade to get Section 404 permits because the Corps is already overburdened by the currently defined waters under its jurisdiction.

We have further noted our detailed concerns below along with some suggested improvements to the proposed rule that, if adopted, may help to alleviate some of these concerns.

1. The agencies have only recently reviewed the adequacy of the underlying science, but have asked for commenters to provide complex technical information or recommend specific approaches within a range of proposals that are not well defined in the proposal.

The EPA's proposed rule purports to rely on the scientific conclusions of the EPA's draft "*Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence*" (connectivity report), which was recently reviewed by the SAB. However, EPA only extended the comment period for an additional 25-days to allow for the SAB report to be incorporated into the public record, which does not allow for meaningful analysis and response to the SAB report. There are numerous places throughout the preamble to the proposed rule wherein the agencies have asked the public to provide specific information regarding the proposed rule's scientific justifications. The purpose of the SAB Panel review of the draft connectivity study was to evaluate the "evolving scientific literature on connectivity of waters[1]," and the public deserves the opportunity to comment on the conclusion of that review process before the report is finalized. Also, the SAB made several recommendations to the EPA on the proposal, and the public, including the scientific community, should have the opportunity to comment on those recommendations as well.

Moreover, this may not even be a question of science at all; it may be more of a legal question of the scope of federal jurisdiction under the U.S. Constitution, an issue that we will not attempt to address in these comments. But we are aware that others are addressing that issue, and we urge EPA and the Corps to consider those comments carefully.

There are also numerous places in the proposed rule where the agencies have requested comments from the public on the approach and scope in several areas. Many of these requests ask for new ideas and approaches relative to a specific topic because the agencies have decided not to provide a proposed approach. If the agencies receive public comments on these extremely

[1] See 79 Fed. Reg. at 22,192.

important criteria and circumstances, and finalize a rule that establishes criteria and obligations on landowners by selecting a certain approach based on a public comment, the agencies must then allow the public at large to comment on the approach the agencies have selected before it is finalized. These issues are too important for the agency to leave blank in the proposal, choose a suggestion made by one public commenter and then finalize a rule based on such selection. The public will not have had an opportunity to comment on the basis of EPA's selection of such an approach. Instead, the agencies should select an approach gathered from public commenters and then re-propose the rule to allow for meaningful public comments on such approach. EPA and the Corps must provide the public with the information they need to make meaningful comments on the proposed rule.

2. The agencies have not provided an adequate or comprehensive economic analysis, and must undertake a more complete economic analysis prior to promulgating the rule.

The EPA's Economic Analysis for the proposed "waters of the United States" rule fails to provide a reasonable assessment of the proposed rule's costs and benefits. The Economic Analysis suggests that the proposed rule will increase overall jurisdiction under the CWA by only about three percent. But the EPA arrives at this percentage using a questionable methodology that only accounts for the Section 404 program, relies on figures extrapolated from statistics from FY 2009-2010 (a period of extremely low construction activity during one of our nation's greatest economic recessions), and fails to account for the universe of waters and features for which landowners have not previously sought CWA permits. Even the agencies note that "there is uncertainty and limitations associated with the results," due to data and information gaps, as well as analytic challenges. The analysis does not quantify all possible costs and benefits, and values are meant to be illustrative, not definitive.[2] Relying on this percentage throughout the Economic Analysis, the EPA systematically and hugely underestimates the economic impact of the proposed rule's new definition of "waters of the U.S."

The EPA's calculations of incremental costs and benefits are also deficient. The EPA's cost analysis is focused on costs associated with the Section 404 program and largely ignores the cost impact of the changes to other CWA regulatory programs due to lack of data. Moreover, the benefit calculation is based on a problematic methodology that relies on studies that are largely irrelevant, do not provide accurate estimates of benefits, and were conducted between 10 and 30 years ago.

As a result of the incompleteness and inaccuracies of the EPA's Economic Report, we believe it is necessary to recalculate the economic analyses to more accurately project the impacts of the proposed rule, and identify effects that the EPA failed to consider the first time. A rule of this magnitude deserves a much more accurate and defensible analyses and accounting of future costs and benefits.

[2] Congressional Research Service (CRS), "EPA and the Army Corps' Proposed Rule to Define 'Waters of the United States'", September 10, 2014 p. 11

3. The Agencies Have Not Adequately Analyzed the Proposed Rule's Implications on the Multiple CWA Programs Affected by the Proposal.

The proposed rule will replace the definition of "navigable waters" and "waters of the U.S." in the regulations for all CWA programs, including Section 404 discharges of dredge or fill material, the Section 402 National Pollutant Discharge Elimination System (NPDES) permit program, the Section 401 state water quality certification process, and Section 303 water quality standards and total maximum daily load (TMDL) programs. We do not believe the agencies have truly considered the complex implications that this proposed rule will have for the various CWA programs.

Although the EPA's Economic Analysis purports to analyze the costs of overlaying this new "waters of the U.S." definition onto other CWA programs, the analysis largely focuses on the Section 404 program and essentially concludes that there will be no additional costs for other CWA programs. This cursory analysis is wholly inadequate. The agencies have not considered, for example, that many ditches and other water features, including intermittent or ephemeral streams, may now meet the definition of "waters of the U.S.," thereby requiring the water within these irrigation and drainage features to achieve stringent water quality standards throughout their reach. The agencies have not looked at how this type of change may create confusion over whether an NDPES permit is required for releasing water into these water features or may place an increased burden on states administering NPDES permitting programs, setting water quality standards, and identifying impaired waters needing TMDLs. The EPA and the Corps have not truly considered how the proposed rule may affect the states implementing these various CWA programs or the stakeholders regulated by these programs. Nor have the agencies analyzed how the proposed definition of "waters of the U.S." will affect their own administration of each of the CWA regulatory programs.

4. The agencies have proposed several new definitions in determining what is to be considered *per se* "waters of the U.S.", or through case-specific analyses of "other waters", that are ambiguous and will create uncertainty in implementing the CWA.

"Tributary"

The proposed rule states that all waters that are tributaries to traditionally navigable waters are considered "waters of the U.S." and are jurisdictional under the CWA. The rule would define a "tributary" as "a water physically characterized by the presence of a bed and bank and ordinary high water mark…which contributes flow, either directly or through another water, to a water identified" as a "water of the U.S." The SAB proposed to extend this definition to any area having a bed, banks, or "other evidence of flow." These definitions, if adopted, could significantly increase the jurisdictional reach of the CWA if they are applied as broadly as some will demand. These definitions will bring into play countless streams, creeks, rivulets, washes, and other features (roads, gutters, etc.) where water does, will, or could run to (eventually) navigable waters. We believe there needs to be a limit, a "bright line" set by the rule as to just

how far the CWA manifests its dominion over local, regional, and intrastate waters. The agencies continue to say the proposed rule will not expand this jurisdiction, but we believe the outcome could be otherwise.

The agencies should provide assurances in a final rule that the definition of "tributary" will be limited to those directly connected to traditional navigable waters with "bed and banks with an ordinary high water mark" that have formed over several years, and that such determinations would not include the presence of only temporary accumulations of sediment or hydraulic activity resulting from specific isolated precipitation or runoff events. Definitions must be fleshed out for the terms "ordinary high water mark", "bed and banks", and other subjective terminology used in the proposed rule that can and will cause uncertainty in the implementation of a final rule.

Jurisdictional tributaries should meet a new "bright line" test related to size of bed and banks, amount of flow, or distance from the jurisdictional navigable water in order to be considered a "water of the U.S.", establishing a limit on just how small, or dry, or how far upstream the CWA would apply from the jurisdictional navigable water. Wetlands should not be considered "tributaries" in the final rule, as they should have to meet "adjacency" and "significant nexus" tests to be considered "waters of the U.S." (see below).

"Adjacent"

The proposed rule would seemingly expand the reach of the CWA by replacing the term "adjacent wetland" with the term "adjacent waters" (including wetlands) to "waters of the U.S."

The proposed rule defines "adjacent" as "bordering, contiguous or neighboring", noting further that "Waters, including wetlands, separated from other waters of the United States by manmade dikes or barriers, natural river berms, beach dunes and the like are 'adjacent waters'." Adjacency determinations will now depend on the newly proposed definition of "neighboring," defined in the rule for the first time as "waters located within the riparian area or floodplain of a water identified in (a)(1) through (5) of this section, or waters with a shallow subsurface hydrological connection or confined surface hydrologic connection to such a jurisdictional water." Under this definition, waters in a riparian area or floodplain of jurisdictional waters already are presumed to have a "significant nexus" to navigable waters and would automatically be jurisdictional without the need to determine "adjacency." The uncertainty arises when the agencies use their judgment to decide the "adjacency" of such waters.

We believe that the term "adjacent" should be limited to the definition contained in the *Riverside Bayview* case and only apply to waters directly abutting a traditional navigable water. Mere shallow groundwater connectivity should not be used for determining adjacency of riparian areas or floodplains of jurisdictional waters without confined, scientifically-verifiable and substantial, relatively permanent surface water connections. This would exclude agency discretion over non-abutting waters, and would remove the current subjectivity of assessing shallow groundwater connections between adjacent water bodies. That approach promotes certainty and

predictability, two important goals that we believe should be achieved in the proposed rule but which are currently missing.

If maintained, the definition of "floodplain" should also be further refined. As stated, a floodplain is an area bordering inland or coastal waters that was formed by sediment deposition from such water under "present climatic conditions" and is inundated during periods of "moderate to high water flows." The terms "present climatic conditions" and "moderate to high flows" should be defined to limit the floodplain to those flood events with a more recent history (e.g. a rolling 10 or 20-year interval). And, the statement in the proposed rule that "uplands in a floodplain are never considered 'waters of the U.S.'" should be highlighted with a definition of "uplands" being included in the definitions.

"Significant Nexus"

"Other waters" not covered by Section (a)(1) through (6) currently fall into Section (a)(7) of the proposed rule. These waters would be subject to a case-specific analysis by the agencies that the water has a "significant nexus" to a jurisdictional water under (a)(1) through (3). The proposed rule defines the term "significant nexus" as a "water, including wetlands, either alone or in combination with other similarly situated waters in the region, significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section." The proposed rule also states "other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a 'water of the United States' so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (3) of this section."

We believe that use of the term "similarly situated" would be interpreted by some to allow the agencies to consider multiple waters together in making a "significant nexus" determination. The proposed rule states that the agencies should look at whether these waters "can reasonably be expected to function together in their effect on the chemical, physical, or biological integrity of downstream traditional navigable waters, interstate waters, or the territorial seas," and whether these waters are "sufficiently close" to each other or the jurisdictional water.

This analysis is fraught with uncertainty and subjective decision-making and attempts to do what was not allowed in the *SWANCC* case, namely gain jurisdiction over isolated, intrastate waters. The agencies should assess individual waters separately instead of considering groups of waters. In order to be considered "similarly situated", including possessing equivalent functions, such as those listed as examples in the proposed rule, the agencies should require a confined, verifiable surface connection to each other (and not "fill and spill" as put forth in the proposed rule) in order for waters to be considered "similarly situated", and limit the distance allowable between "similarly situated" waters. Waters not meeting these tests should not be considered "similarly situated" and thus would continue to be non-jurisdictional under the CWA. Considering CWA jurisdiction of "other waters" in a watershed on a landscape scale would create burdens on both

the regulated community and the regulating agencies without any demonstrated benefit to water quality and should not be considered as an alternative in the rule.

5. The agencies have proposed certain excluded waters and exempted activities in determining what is to be considered *per se* "waters of the U.S.", or through case-specific analyses of "other waters", that are ambiguous and will create uncertainty in implementing the CWA.

Agriculture

The CWA itself contains broad exemptions from regulation for the agricultural sector in rural America. Farmers and ranchers currently do not need CWA Section 404 dredge and fill permits for normal farming practices like plowing or constructing farm roads. [33 U.S.C. §1344(f)(1)] In addition, stormwater runoff and irrigated agricultural return flows from farm fields are not subject to federal pollution permits. [33 U.S.C. §1342(*l*)(1) and (p)(1)] The agencies have said these exemptions would be carried forward under the proposed rule and issued an "interpretive rule" to explain dredge-and-fill exemptions for normal farming, silviculture, and ranching practices, listing 56 conservation practices approved by the U.S. Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS) that would be exempt from permitting requirements under Section 404 of the CWA.

The Alliance believes that the interpretive rule would not protect farmers from requirements related to potential pollutant discharges and future permitting requirements under the CWA, and would actually narrow the exemptions for production agriculture under the CWA. The interpretive rule could also place the USDA- NRCS in a position of policing these practices under the CWA rather than their usual role of partnering with agriculture to ensure the adoption of best practices important to the balance of productive farms and ranches and clean water.

We have previously provided comments on the interpretive rule, but reiterate that the EPA should withdraw the interpretive rule and collaborate with the agricultural sector to ensure that all normal farming, silviculture, and ranching practices, including USDA-NRCS approved practices, continue to be exempt from CWA regulation. Exemption from federal regulation does not imply a complete lack of regulatory oversight. States, such as California, can and are regulating such activities under waivers or waste discharge requirements and, as needed, through stream alteration permits.

Ditches, Canals and Drains

Section (b) of the proposed rule lists several categories of waters that are explicitly excluded from the definition of "waters of the U.S.", and not jurisdictional under the CWA. Two types of ditches are excluded that, in the past, would have been exempt or potentially subject to case-by-case determinations. Sections (b)(3) and (4) exclude ditches that are constructed "wholly in the

uplands and that drain only uplands", and that do not contribute flow, directly or through other waters, to a "water of the U.S."

However, under the proposal's broadened definition of a "tributary" that is considered a "water of the U.S.", certain farm or roadside "ditches" could qualify as a tributary and be subject to CWA regulation. One of the main areas of concern for irrigated agriculture on the proposed rule is what the rule would mean for ditches that are used to drain agricultural stormwater or runoff from farm fields or to deliver irrigation water to them. EPA has said its proposal will not increase regulation of ditches that do not flow water to navigable waters or covered tributaries, but many ditches do flow water either directly or through other waters to traditionally navigable waters. These ditches should be categorically exempt even though they could be defined as "point sources" under the CWA. [33 U.S.C. §1362(14)] These ditches are currently exempted from NPDES permit requirements. [33 U.S.C. §1342(*l*)(1) and (p)(1)]

The proposed rule would also add a perennial flow requirement for a ditch to be considered jurisdictional. Under the proposal, those jurisdictional ditches would be considered to be just like any other tributary. That means they would not only be subject to the CWA's permitting requirements, but they would also be subject to other requirements of the law, including water quality standards, pollution cleanup plans and oil spill prevention measures. The proposed rule is ambiguous enough to allow for the uncomfortable possibility that the ditches and streams running through farms and ranches in lowlands could be listed as "polluted" or "impaired" under the CWA Section 303(d). This ambiguity, and the possibility, should be eliminated.

Lowland or roadside ditches common in rural agricultural areas of the country could be brought under CWA regulation if they are determined to either flow to navigable waters (tributary) or are considered "adjacent" to a "water of the U.S." or have a "significant nexus" to those waters, which would require a specific case-by-case determination by the agencies. These ditches typically do not have perennial flow and should be considered exempt from CWA jurisdiction. If they are not clearly exempted and are considered "waters of the U.S.," more of these ditches will likely fall under federal jurisdiction and certain maintenance activities may require a CWA Section 404 permit. This permitting process is very expensive and time consuming, creating legal vulnerabilities for small communities and the farms and ranches that are responsible for routinely maintaining these ditches.

We believe the agencies should specifically exempt ditches and drains constructed and maintained in association with agricultural irrigation uses, and all lowland stormwater drainage ditches from CWA jurisdiction. Section (b)(3) should be revised to strike "ditches wholly in the uplands" and replace with "upland or intermittent ditches". Also, certain drains that drain uplands do have perennial flow, mostly due to the timing of agricultural return flows in the form of groundwater, and should be excluded as well. If irrigation were to cease, these perennial flows would eventually cease as well. In the case of delayed agricultural runoff causing perennial flows in upland drains, these upland agricultural drains should be considered excluded from the definition of "waters of the U.S." as well. Finally, maintenance of agricultural drains

located in or flowing through the floodplain that essentially drain upland irrigated lands should be excluded from CWA jurisdiction, or at the very least be exempted from CWA permitting requirements provided in the Corps/EPA Regulatory Guidance Letter (RGL) 07-02. This RGL should remain in place after the rule is finalized to cover such circumstances.

Arroyos

In some parts of the Southwest, water spilled from canal delivery systems ends up in the natural arroyo system, which can link to downstream tributaries of clearly navigable rivers. For example, in Southwest Colorado, water in the Dolores Water Conservancy District can drain back to the natural arroyo system, which physically links to a tributary to the San Juan River (an interstate river which meets the definition of "navigable"). Past experience of some District managers is that the Corps would claim regulatory oversight over all dry arroyos, placing additional regulatory requirements on the local municipalities and flood control agencies tasked with keeping residents safe from flooding.

The EPA and the Corps proposal would exempt some seasonal flow paths that might provide coverage for main irrigation canal systems. However, some irrigation districts have interceptor ditches (full of cattails sustained by adjacent farming) in existing rights-of-way that sometimes lead to natural arroyos. These interceptor ditches are similar to any roadside ditch, but lie within district rights of way and may be perceived as point sources. Likewise, some canal waste-ways can overflow occasionally (during rain events or from canal operational problems) into the natural drainage system. In other areas, dam structures release water into century-old ditch systems that can very quickly become indistinguishable from natural drainage areas as they flow into larger arroyos.

Many of our member organizations who have been managing irrigation for 100 years have effectively made arroyos that once traditionally only flowed seasonally into perennial flowing streams. We are also concerned that many acres of artificially created wetlands that were established after years of irrigation now might be considered "natural" by regulators. Western water managers are fearful of how on-the-ground regulators will apply the proposed rule to areas like these in the future, long after the policy has been crafted in distant Washington, D.C. Some of our ranchers are especially concerned about the probability of requirements for Section 404 permits and the prohibitive cost of acquiring a permit. Many arroyos that run through Western ranches have fences that must be repaired or replaced after every high rainfall event. Others are equally concerned about the probability of a requirement for an EPA-approved grazing plan because of cattle grazing within a drainage area. These are but a few of the very real concerns that have arisen as a result of the lack of clarity and certainty in the proposed rule.

Waste Treatment Systems and Other Exclusions

The proposed rule, in Section (b), excludes "waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act" among other features

listed in the section. While such systems have traditionally been excluded from CWA jurisdiction, we believe that, due to the expansive nature of the proposal, the agencies should also exclude other constructed water management and treatment infrastructure with similar attributes to these waste treatment systems. These facilities could include water reuse and recycling ponds, treatment lagoons, and other appurtenances; artificially constructed wetlands designed to treat agricultural or stormwater runoff (e.g. "green infrastructure") used and managed to remove nutrients and improve water quality; and artificially constructed groundwater recharge basins designed to percolate excess surface water into groundwater basins. All of these features would revert to dry land if application of water were to cease and, even though they may contain plants and shrubs known to grow in wetlands, they should be included in the list of features identified in the proposed rule as excluded from the definition of "waters of the U.S."

6. Conclusion

The Family Farm Alliance understands the meaning and purpose of the Clean Water Act and the agencies' goal of protecting our nation's water resources while providing clarity and certainty for the regulated community. While we do not believe the proposed rule does that, we have provided some insight as to where changes to the proposal could help address our concerns. Fundamentally, we do not see a clear associated net gain to the environment resulting from the proposed CWA rule. We are clearly not opposed to clean water. We just question the costs versus the benefits of the proposed broadening of CWA regulation against any purported improvement to water quality.

We believe any approach to protecting water quality in America must be accomplished through true partnerships at the local, regional and state levels, and that the federal government must provide more clarity and certainty in defining what waters are truly federal "waters of the U.S." We believe we represent our membership of Western irrigated farmers and ranchers in saying that we stand ready to work with the EPA, the Corps, and our local, regional and state governments in protecting water quality on a common sense, practical and collaborative basis for our future and the future of our nation's water resources.

Sincerely,



Dan Keppen
Executive Director

NATIONAL ASSOCIATION of REALTORS®

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STATEMENT OF THE

NATIONAL ASSOCIATION OF REALTORS®

SUBMITTED FOR THE RECORD TO

THE UNITED STATES SENATE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
AND THE
THE UNITED STATES HOUSE OF REPRESENTATIVES
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

HEARING TITLED

IMPACTS OF THE PROPOSED WATERS OF THE UNITED STATES RULE ON STATE AND LOCAL GOVERNMENTS

FEBRUARY 4, 2014

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EQUAL HOUSING OPPORTUNITY

INTRODUCTION

On April 21, 2014, the Environmental Protection Agency (EPA) and the Army Corps of Engineers (Corps) proposed to reduce the amount of scientific analysis needed in order to declare a "water of the U.S." including wetlands on private property across the country. On behalf of 1-million members involved in all aspects of commercial and residential real estate, the National Association of REALTORS® (NAR) thanks you for holding this oversight hearing and for the opportunity to submit these written comments for the record.

Currently before declaring a water of the U.S., the agencies must first conduct a "significant nexus" analysis for each stream or wetland to determine that regulation could prevent significant pollution from reaching an ocean, lake or river that is "navigable," the focus of the Clean Water Act. Because, in the agency's view, a full-blown scientific analysis for each water or wetland is "so time consuming and costly," the agencies are proposing instead to satisfy this requirement with a more generic and less resource intensive "synthesis" of academic research showing "connectivity" between streams, wetlands and downstream water bodies. On this basis, the agencies believe that they can waive the full analysis before regulating most of streams and wetlands, and reduce the analysis for any "other water" that has more than a "speculative or insubstantial" impact. We disagree.

NAR opposes this vague and misguided "waters of the U.S." proposed regulation. While perhaps an administrative inconvenience, site-specific data and analysis forces the agencies to justify their decision to issue wetland determinations on private property and focus on significant impacts to navigable water. By removing the analytical requirement for regulation, the agencies will make it easier not only to issue more determinations but also force these property owners to go through a lengthy federal negotiation and broken permit process to make certain improvements to their land.

At the same time, the proposal does not 1) delineate which improvements require a federal permit, 2) offer any reforms or improvements to bring clarity or consistency to these permit requirements, or 3) define any kind of a process for property owners to appeal U.S. water determinations based on "insubstantial" or "speculative" impacts. The resulting lack of certainty and consistency for permits, or how to appeal "wetland determinations," will likely complicate real estate transactions such that buyers will walk away from the closing table or demand price reductions to compensate for the hassle and possible transaction costs associated with these permits. We urge Congress to stop these agencies from moving forward with this proposal until they provide a sound scientific basis for the regulatory changes and also streamline the permitting process to bring certainty to home- and small-business owners where wetlands are declared.

PROPOSED RULE ELIMINATES THE SOUND SCIENCE BASIS FOR U.S. WATER DETERMINATIONS

Today, the EPA and Army Corps may not regulate most "waters of the U.S.," including wetlands, without first showing a significant nexus to an ocean, lake or river that is navigable, the focus of the Clean Water Act. "Significant nexus" is a policy and legal determination based on a scientific site-specific investigation, data collection and analysis of factors including soil, plants, and hydrology.

The agencies point to this significant nexus analysis as the reason they are not able to enforce the Clean Water Act in more places like Arizona and Georgia.[1] On its website, EPA supplies these "representative cases" where it's currently "so time consuming and costly to prove the Clean Water Act protects these rivers." EPA also documents the "enforcement savings" from the proposal in its economic analysis.[2] None of these major-polluter examples involve home or small business owners, which typically do not own significant acreage (the typical lot size is a ¼ acre)[3], let alone disturb that amount of wetland with a typical home project.

Under this proposal, the agencies would waive the site-specific, data-based analysis before regulating land use on or near most streams and wetlands in the United States (see table 1). The proposal:

- Creates two new categories of water – i.e., "all tributaries" and "adjacent waters."
- Adds most streams, ponds, lakes, and wetlands to these categories. "Tributary" is anything with a bed, bank and "ordinary high water mark," including some "ditches." "Adjacent" means within the "floodplain" of the tributary, but the details of what constitutes a floodplain, like how large an area (e.g., the 5-year or 500 year floodplain), are left to the unspecified "best professional judgment" and discretion of agency permit writers.
- Moves both categories from column B (analysis required for regulation) to column A (regulated without site specific data and analysis).

[1] http://www2.epa.gov/uswaters --for links to the examples, click "Enforcement of the law has been challenging."
[2] http://www2.epa.gov/sites/production/files/2014-03/documents/wus_proposed_rule_economic_analysis.pdf
[3] American Housing Survey, 2009.

Table 1. Proposed changes to "Waters of the U.S." regulatory definition

Column A **(Regulated without analysis)**	**Column B** **(Analysis required for regulation)**

Navigable or Interstate
 	
• The Ocean
• Most Lakes
• Most Rivers
 	
Non-Navigable and Intrastate
 	
• **All** ~~**Some**~~ Tributaries (Streams, Lakes, Ponds)
  o Perennial
  o Seasonal
  o **Ephemeral**
• **Most** ~~**Some**~~ Wetlands
  o Adjacent to navigable water
  o **Adjacent to** ~~**Directly Abutting**~~ covered stream
	Non-Navigable and Intrastate
	
	• ~~**Rest of the Tributaries**~~
	  o ~~**Ephemeral**~~
	• Rest of Wetlands
	  o ~~**Adjacent to tributary**~~
	  o Not adjacent
	• Any other water
	  o ~~**Adjacent to navigable water**~~
	  o ~~**Adjacent to tributaries**~~
	  o Not-adjacent

For any remaining or "other water," the agencies would continue regulating case-by-case using a significant nexus analysis. However, the amount of analysis is dramatically reduced. Under this proposal, all agency staff would have to show is more than a "speculative or insubstantial" impact to navigable water. If, for instance, there were many wetlands within the watershed of a major river, no further analysis would be required to categorically regulate land use within any particular wetland with that river's watershed. Also, the data and analysis from already regulated water bodies could be used to justify jurisdiction over any other "similarly situated" water without first having to visit the site and collect some scientific data.

Contrary to agency assertions, this proposal does not narrow the current definition of "waters of U.S."

- While technically not adding "playa lakes," "prairie potholes," or "mudflats" to the definition, the proposal does remove the analytical barrier which, according to EPA, is preventing both agencies from issuing U.S. waters determinations on private property in more places including Arizona and Georgia.
- Codifying longstanding exemptions (prior converted crop land and waste treatment) does not reduce the current scope of definition; it simply writes into regulation what the agencies have already been excluding for many years.
- Giving up jurisdiction over "ornamental" (bird baths), "reflecting or swimming pools" is not a meaningful gesture, as it's doubtful that any court would have let them regulate these, anyway.
- It is not clear that many ditches would meet ALL of the following conditions – i.e., wholly excavated in uplands AND drains only uplands AND flows less than year-round -- or never ever connects to any navigable water or a tributary in order to qualify for the variance. Also, the term "uplands" is not defined in the proposal so what's "in or out" is likely to be litigated in court, which does not provide certainty to the regulated community.

LITERATURE REVIEW AND SYNTHESIS DOES NOT SUPPORT THE PROPOSED RULE

In lieu of site-specific, data-based analysis, the EPA and the Corps are proposing to satisfy the significant nexus requirement with a less resource intensive "synthesis" of academic studies. The agencies believe these studies show "connectivity" between wetlands, streams and downstream water bodies, and that's sufficient in their view to justify and waive the full analysis for land-use regulations on or within the floodplain of one of these waters.

However, this synthesis is nothing more than a glorified literature review.[4] EPA merely compiles, summarizes and categorizes other studies, and labels them a "synthesis." EPA conducts no new or original science to support or link these studies to its regulatory decisions. Three quarters of the citations included were published before the Supreme Court's decision in Rapanos v. U.S. (2006), and the rest appear to be more of the same. It breaks no new ground. The Supreme Court did not find this body of research to be a compelling basis for prior regulatory decisions, either in Rapanos or SWANCC v. the Army Corp (2001). Putting a new spin on old science does not amount to new science.

[4] For EPA's synthesis: http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=238345

In addition, scientists with GEI Consultants[5] reviewed the literature synthesis and concluded that these studies do not even attempt to measure, let alone support a significant nexus finding. According to GEI,

> "Most of the science on connectivity … has been focused on measuring the flow of resources (matter and energy) from upstream to downstream. …[T]hese studies have not focused on *quantifying the ecological significance* of the input of specific tributaries or headwaters, alone or in the aggregate, and ultimately whether such effects could be linked directly and causally to impairment of downstream waters." [6]

Knowing how many rocks downstream came from upstream won't tell you what the Supreme Court determined needs to be known, which is how many times rocks can be added before downstream water becomes "impaired" under the Clean Water Act. Asking the Science Advisory Board if the synthesis supports the first conclusion (i.e., some rocks come from upstream) doesn't answer the second (how many times can rocks be added downstream before significantly impacting the water's integrity?). EPA is asking entirely the wrong set of policy questions. As GEI puts it,

> "The Science Advisory Board (SAB) charge questions were of such limited scope that they will do little to direct the Synthesis Report toward a more useful exploration of the science needed to inform policy … The questions will not provide the SAB panel with needed directive to require substantive revisions to the report such that it … inform(s) policy with regard to Clean Water Act jurisdiction."[7]

THERE IS NO SUBSTITUTE FOR SITE-SPECIFIC DATA & ANALYSIS TO DETERMINE U.S. WATERS

Here's how EPA's synthesis of generic studies stacks up against a more targeted study specific to and based on data for each stream or wetland.

[5] For GEI's credentials, see: http://www.geiconsultants.com/about-gei-1
[6] For NAR's summary and link to GEI's comments: http://www.realtor.org/articles/nar-submits-comments-on-draft-water-report
[7] For NAR's summary and link to GEI's comments: http://www.realtor.org/articles/nar-submits-comments-on-draft-water-report

Table 2. EPA synthesis of research versus significant nexus analysis

Significant Nexus	Synthesis of Research
Proves that regulation of a stream or wetland will prevent pollution to an ocean, lake or river	Shows *presence* of a connection between streams, wetlands, and downstream, and not *significance*
Shows how much matter/energy can be added to a tributary or wetland before the Act applies	Shows how much of the matter/energy moved from upstream to downstream
Based on site specific data and analysis of soil, plants, hydrology, and other relevant factors	Dependent upon whatever data and analysis academics have used for their connectivity study
Requires an original scientific investigation, data and analysis for each water body to be regulated	Includes no new or original science by agencies; it's a literature review
Relies on timely and water-body-specific facts, data and analysis	Relies on substantially the same body of research which the Supreme Court didn't find compelling

The EPA may not want to "walk the nexus" and collect data on soil, plants and hydrology, but it's forced the Agency to justify their regulatory decisions, according to the staffs' own interviews with the Inspector General:[8]

- "Rapanos has raised the bar on establishing jurisdiction."
- "…lost one case … because no one walked the property…"
- "…have to assemble a considerable amount of data to prove significant nexus."
- "…many streams have no U.S. Geological Survey gauging data."
- "…need several years of biotic observations…."
- "…there is currently no standard stream flow assessment methodology."

[8] Congressionally Requested Report on Comments Related to Effects of Jurisdictional Uncertainty on Clean Water Act Implementation, Report No. 09-N-0149 (April 30, 2009). For a link: http://www.epa.gov/oig/reports/reportsByTopic/Enforcement_Reports.html

- "…biggest impact is out in the arid West, where it is comparably difficult to prove significant nexus."

As a result, many U.S. water determinations (which would not previously have been questioned) are now being reviewed and are not holding up to either EPA or Justice Department scrutiny. Again, from the EPA interviews:

- "Of the 654 jurisdictional determinations [in EPA region 5] … 449 were found to be non-jurisdictional."
- "An estimated total of 489 enforcement cases … [were] not pursued … case priority was lowered … or lack of jurisdiction was asserted as an affirmative defense…"
- "In the past, everyone *just assumed* that these areas are jurisdictional" (emphasis added).

"Walking the nexus" may be an administrative inconvenience, but the data don't support an approach based on 'just assuming.' The main reason for the site-specific, data-based analysis is that it provides a sound scientific basis for agency regulatory decisions. Analysis also raises the cost of unjustified U.S. water determinations. It forces the agencies to do what Congress intended, which is to focus on waters which are either a) in fact navigable or b) significantly impact navigable water. It also prevents agencies from regulating small businesses or homeowners that are not major contributors to navigable water quality impairment.

PROPOSED RULE WILL OVERCOMPLICATE ALREADY COMPLEX REAL ESTATE TRANSACTIONS

Small-business and homeowners are not the problem. Few own enough property to be able to disturb a 1/2-acre of wetland, which is how the Nationwide 404 Permit Program defines *de minimis* impact to the environment. The typical lot size is a ¼ acre with three-quarters having less than an acre.[9] None of the big polluter examples EPA presents involves a homeowner or small business. Yet, by removing the analytical barrier to regulation, agencies will be able to issue more U.S. water determinations on private properties in more places like Arizona, Georgia or wherever else it's now "too time consuming and costly to prove the Clean Water Act protect these rivers," according to the EPA.[10]

The home buying process[11] will not work unless there is sufficient property information to make informed decisions. This is why buyers are provided with good faith estimates and disclosures about

[9] American Housing Survey, 2009.
[10] http://www2.epa.gov/uswaters -- for the examples, click on "Enforcement of the law has been challenging"
[11] In previous comments, the International Council of Shopping Centers, National Association of Homebuilders, NAR and others have thoroughly documented the commercial and homebuilding impacts of the U.S. waters proposed rule. In this statement, NAR focuses on the impact to existing homeowners which have not been documented.

material defects and environmental hazards. It is why they are entitled to request a home inspection by a professional before making decisions. It is also why there's such a thing as owner's title insurance. Contracts and legal documents have to be signed to ensure that buyers receive full information and understand it. Later, you can sue if the property isn't as advertised or there are misrepresentations.

The "waters of the U.S." proposal introduces yet another variable – letters declaring wetlands on private property – into an already complicated home buying process. By removing the analytical requirement before issuing one of these letters, the agencies will make it easier to issue more of them and in more places. The problem is each letter requires the property owner to get a federal permit in order to make certain improvements to their land. But they don't know which improvements require a permit. Those aren't delineated anywhere in the proposal. If on the other hand, they take their chances and don't initiate a potentially lengthy federal negotiation as part of a broken permit process, they could face civil fines amounting to tens of thousands of dollars each day and possibly even criminal penalties.

Also, what's required can vary widely across permits – even within the same district of the Corps. No one will inform you where the goal posts are; just that it's up to you and they'll let you know when you get there. Often, applicants will go through this year-long negotiation only to submit the permit application, find that staff has turned over and they have to start over with a new staffer who has completely different ideas about how to rewrite the permit.

While more U.S. waters letters could be issued under this proposal, the agencies do not provide the detailed information needed for citizens to make informed decisions about these letters. The letter could state for instance: "the parcel is a matrix of streams, wetlands, and uplands" and "when you plan to develop the lot, a more comprehensive delineation would be recommended." Real estate agents will work with sellers to disclose this information, but buyers won't know which portion of the lot can be developed, what types of developments are regulated, or how to obtain the permit. They may consult an attorney about this but will most likely be advised to hire an engineer to "delineate" the wetlands without being told what that means. And even if this step is taken, there is no assurance that this analysis will be accepted by the agency or that a permit will ever be issued.

The potential for land-use restrictions and the need for costly permits will increase the cost of home ownership and make regulated properties less attractive to buyers. Of two homes, all else equal (lot size, number of rooms, etc.), the one with fewer restrictions should have higher property value.[12]

[12] There is strong empirical data to support this proposition, although economists may disagree. For instance:

- E.L. Glaeser, and B.A. Ward, The Causes and Consequences of Land Use Regulation: Evidence from Greater Boston. Journal of Urban Economics 65 (2009) 265-278.

However, before buying, the buyer will want to know in exactly which ways the property could be restricted as well as how much those restrictions could cost (time, effort, money). They will need this information when weighing whether to come to the closing table and deciding how much to ask in reducing listing price in order to compensate for the hassle of a potential federal negotiation for each unspecified improvement on the property they're considering purchasing.

To illustrate the point, after Congress revised the flood insurance law, many buyers refused to consider floodplain properties not due to the actual insurance cost but because they read in a newspaper about $30,000 flood insurance premiums. Others negotiated reduced sales prices because they feared the property was "grandfathered", and they could potentially see their rates skyrocket, even when, in fact, the home was not grandfathered and the provision of concern had not taken effect and would not for several years. While it may be entirely true that the proposed rule will not cover all homes in a floodplain (only those where a U.S. water is filled) nor regulate such normal home projects as mowing grass and planting flower beds, the takeaway from the flood insurance experience is that buyers make decisions based on fear and uncertainty, both real and *imagined*.

In the case of wetlands, buyers have legitimate reason for concern. Many will have heard the horror story of the Sacketts in Priest Lake, Idaho, who were denied their day in court when they questioned a wetlands determination.[13] Others just south of here in Hampton Roads, Virginia, will read the cautionary tales of buyers suing sellers over lack of wetlands disclosures[14] or neighbor-on-neighbor water wars for mowing grass or planting seedlings.[15] Some might even have a neighbor to two who've been sued over the years for tree removals or grading (e.g., Catchpole v Wagner[16]). This all reinforces the need for the EPA and the Corps to provide more information rather than less about the rule, what it does and does not do, and provide as much detail as possible all upfront.

So far the agencies have responded by breaking up the rulemaking process into two parts, and putting forward only the first. This proposal, which clarifies "waters of the U.S.," determines "who is regulated." The issue here is whether site-specific data and analysis is required before a wetlands letter is issued. "What is regulated" is not a part of this proposal. Nor does the proposal lay out the full range of home projects that trigger a permit. The wetland permitting process itself is an entirely separate rulemaking. The issue there is what exactly I must do when I get one of these letters and how to appeal it.

- K.R. Ihlanfeldt, The Effect of Land Use Regulation on Housing and Land Prices. Journal of Urban Economics 61 (2007) 420-435.

[13] For the chilling facts of case, see: http://www.pacificlegal.org/Sackett

[14] http://hamptonroads.com/2010/05/cautionary-tale-wetlands-violations-will-cost-you

[15] http://hamptonroads.com/2012/05/newport-news-gets-swamped-wetlands-dispute

[16] 210 US Dist LEXIS 53729, at *1 (W.D. Wash. 2010)

Based on a report by the Environmental Law Institute (ELI),[17] that permitting process is broken and needs reform and streamlining to provide some consistency, timeliness, and predictability. But any comments or suggestions about this have been deemed non-germane and will not be considered by the agencies in the context of a "waters of the US" proposal. Because the agencies have decided to play a regulatory shell game with the "who" vs. the "what," property owners have been put in an untenable position of commenting on a regulation without knowing its full impact. Those who own a small business will be denied the opportunity under another law to offer significant alternatives that could clarify or minimize the proposed "waters of U.S." impact while still achieving the Clean Water Act's objectives.[18]

These are some property buyer questions which are not answered by the immediate proposed rule:

- What is the full range of projects that will require a federal permit?
- What can I do on my property without first having to get a permit?
- What do I have to do to get one of these permits?
- What's involved in the federal application process?
- What information do I have to provide and when?
- How long will the permit application take?
- How will my project and application be evaluated?
- What are the yardsticks for avoiding or minimizing wetlands loss?
- What are the full set of permit requirements and conditions?
- Are there changes I can make in advance to my project and increase my chances of approval?
- Can I be forced to redesign my home project?
- What kinds of redesigns could be considered?
- What if I disagree with the agency's decision, can I appeal?
- What exactly is involved in that appeal?
- What do I have to prove in order to win?
- Will I need an attorney? An engineer? Who do I consult?
- And how much will all this cost me (time, efforts, money)?

The "Waters of the U.S." proposal creates these uncertainties into the property buying process.

Uncertainty #1: The "waters of the U.S." proposal does not tell me what I can and cannot do on my own property without a federal permit.

[17] http://www.eli.org/research-report/wetland-avoidance-and-minimization-action-perspectives-experience
[18] For EPA's justification against conducting a small business review panel under the Regulatory Flexibility Act, see: 79 Fed. Reg. 22220 (April 21, 2014).

Not all property owners in the floodplain will be regulated, only those who conduct regulated activities. Again, that information is not found in the "waters of U.S." proposal, and there is not much more in the decision documents from the previous regulation for the "nationwide" (general) permit program (2012). The general permit for commercial real estate (#39) is separate from residential (#29), but both include a similarly vague and uber-general statement about what's regulated:

> "Discharges of dredged or fill material into non-tidal waters of the United States for the construction or expansion of a single residence, a multiple unit residential development, or a residential subdivision. This NWP authorizes the construction of building foundations and building pads and attendant features that are necessary for the use of the residence or residential development. Attendant features may include but are not limited to roads, parking lots, garages, yards, utility lines, storm water management facilities, septic fields, and recreation facilities such as playgrounds, playing fields, and golf courses (provided the golf course is an integral part of the residential development)."[19]

However, construction projects are not the only ones that may require a permit. For example, home owners have been sued for not obtaining one to perform these activities:

- Landscaping a backyard (Remington v. Matheson [neighbor on neighbor])
- Use of an "outdated" septic system (Grine v. Coombs)
- Grooming a private beach (U.S. v. Marion L. Kincaid Trust)
- Building a dam in a creek (U.S. v. Brink)
- Cleaning up debris and tires (U.S. v. Fabian)
- Building a fruit stand (U.S. v. Donovan)[20]
- Stabilizing a river bank (U.S. v. Lambert)
- Removing small saplings and grading the deeded access easement (Catchpole v. Wagner)[21]

Also, the proposal includes exemptions for specific activities performed by farmers and ranchers, but not homeowners or small businesses. The agencies would not have exempted these activities from permits unless they believed these activities could trigger them. Yet, none of these "normal

[19] http://www.usace.army.mil/Portals/2/docs/civilworks/nwp/2012/NWP_29_2012.pdf

[20] Note: The defendant lost because he couldn't finance an expert witness to refute the Corps' wetlands determination; under this proposed rule, the Corps would no longer have to provide any data and analysis at all to support its future determinations; the burden would be entirely on the property owner to come up with that data and analysis on their own.

[21] There is an extended history between Catchpole and Wagner over activity on this easement, and the Corps has been repeatedly drawn into the dispute. In one instance the Sheriff was called, and the Corps had to step in and referee that "normal mowing activity" was not a violation that the Corps would pursue under the Clean Water Act. NAR would expect more of these kinds of disputes to arise, should the proposed rule be finalized.

farming" practices appear to be uniquely agricultural, opening up the non-farmers to regulation. Here are a couple of the listed exemptions but the full set can be found on EPA's website.[22]

- Fencing (USDA practice #383)
- Brush removal (#314)
- Weed removal (#315)
- Stream crossing (#578)
- Mulching (#484)
- Tree/Shrub Planting (#422)
- Tree Pruning (#666)

While the proposal could open up more properties to wetlands letters, permits and lawsuits, it does not in any way limit who can sue over which kinds of activities for lack of permits. It does, on the other hand, reduce the amount of data and analysis the Corps or EPA need in order to declare U.S. waters on these properties, and shifts the entire burden to the property owner to prove one these waters do not exist on their property before they can win or get a frivolous case dismissed.

Uncertainty #2: The proposal doesn't tell me how to get a permit, what's required and how long it will take.

Again, the permitting process is not a part of the 'waters of the U.S.' proposal, denying home owners and small businesses an opportunity to comment on the proposed rule's full impact or offer reasonable alternatives that could minimize the impact while protecting navigable and significant nexus waters. EPA's economic analysis on page 16 does provide an estimate of the average cost for a general permit ($13,000 each).

Costs go up from there. The estimate of $13,000 is only for a general permit and for the application alone; it doesn't include re-designing a project to obtain permit approval or the conditions and requirements which can vary widely across permits. While not providing an estimate of the time it takes to get one of these permit, U.C. Berkeley Professor David Sunding found based on a survey that the "[general] permits in our sample took an average of 313 days to obtain."[23] Individual permits can take even longer and be significantly more expensive.

The reason that general permits have the lowest price tag is because they are intended to reduce the amount of paper work and time to start minor home construction projects that "result in minimal adverse environmental effects, individually or cumulatively." One of the conditions for the permit is

[22] http://www2.epa.gov/sites/production/files/2014-03/documents/cwa_404_exempt.pdf
[23] http://areweb.berkeley.edu/~sunding/Economcs%20of%20Environmental%20Regulation.pdf

a project may not disturb more than a ½ -acre of wetlands or 300 linear feet of streambed, the Corp's definition of *de minimis*. However, transaction costs and requirements may vary.

The Environmental Law Institute studied the process, and found very little consistency, predictability or timeliness across permits.[24] The process begins with a letter from the agency declaring U.S. water on the property. Home owners may be given a copy of the law, told to submit any "plans to develop the lot", and be reminded that the burden of proof is entirely on them. No examples of how to comply are offered. There might be a check list (which is widely frowned upon) but there is no single definition or yard stick or practical guidance of any sort for the key compliance terms "avoidance," "minimization" and "practicable."

If you ask "which part of my property can I develop?", the answer is "hire an engineer and delineate it." "What if I make these changes to my project before applying?", the answer may be "I'll know it when we see it." There is no standard approach that the Corps follows to evaluate the project. According to the ELI's interviews, it is common for applicants to go through an entire negotiation and upon submitting an application, find staff turned over and the new individual has a completely different concept of what's most important to avoid and the best way to minimize.

The following are more actual quotes by regulators documented in the ELI report:

- "The question is, how much is enough? It's all judgment. It depends on the person's mood and is extremely variable."
- "We ask them to document plans and show how they get to where they are. If I think you can do more, I'm going to show you. The burden is on the applicant to show me where they've been in the journey."
- "I like to be a rule maker with regard to work I've done, but the more I standardize, the more I restrict myself with regard to find possible solutions."
- "[B]ecause judgments on which impacts are more avoidable or more important exists in a grey area, a lot of the decision making within the Corps depends on professional judgment, causing a lot of variability."
- "There are times when the agency will pressure the applicant to do more avoidance or minimization during the permitting process."
- "There are times when they won't sign off because they want a certain thing. That's the subjective aspect and I think that is the way it ought to work."

[24] For ELI's report, http://www.eli.org/research-report/wetland-avoidance-and-minimization-action-perspectives-experience

Permit decisions appear completely subjective, iterative and not uniform across individual applicants. It seems that whatever the agency assumes is necessary to avoid or minimize wetlands loss, goes. If you refuse to provide a single piece of information or don't go along 100% with a proposed design modification, your permit is summarily denied. In at least one example (Schmidt v. the Corps), the agency denied the permit to build a single family home on a lot in part because the Corps identified other lots the land owner owned and his neighbors didn't seem to be objecting to construction on those lots (yet).

For these reasons, the ELI recommended several reforms to the wetlands permit process, including developing guidelines identifying common approaches and quantifiable standards. But at this time, the agencies don't appear interested in sensible recommendations like these, even if it brings some consistency, certainty or reduces the burden on small business or homeowners while still protecting the environment. "Nationwide permits do not assert jurisdiction over waters and wetlands …. Likewise, identifying navigable waters … is a different process than the NWP authorization process," according to the Corps.[25]

Uncertainty #3: The proposal doesn't tell me what to do if I disagree with an agency decision, or how to prove the Clean Water Act does not apply to my property.

The proposal asserts jurisdiction over any U.S. water or wetland with more than a "speculative or insubstantial" impact on navigable water. Yet, nowhere does this proposal define those terms or a process for how a homeowner may appeal a U.S. water determination based on "insubstantial or speculative" impacts.

The proposal will eliminate the need for agencies to collect data and perform analysis to justify regulation for most water bodies. Before, it was up to the agencies to prove the Clean Water Act applies, but under this proposal, the burden would shift 100% to the property owners to prove the reverse. And the cost will be higher for property owners because (1) they don't have the expertise needed, (2) there is no guidance for delineating "insubstantial/speculative" impacts, and (3) they have not been learning-by-doing these analyses as the agencies have for decades.

Ironically, the rationale for the proposed rule is these agencies cannot justify the taxpayer expense of site specific data and analysis, yet the proposal is forcing individual taxpayers to hire an engineer and pay for the very same analysis themselves or else go through a broken permit process.

[25] 77 Fed. Reg. 10190 (Feb. 21, 2012)

Administrative inconvenience is not a good excuse. If it's too hard for the federal government to do some site visits, data collection and analysis in order to justify their regulations, then perhaps it's simply not worth doing.

Conclusion

Based on the forgoing, NAR respectfully requests that Congress step in and stop these agencies from moving forward with a proposed rule that removes the scientific basis for "waters of U.S." regulatory decisions. It does not provide certainty to taxpayers who own the impacted properties and will complicate property and home sales upon which the economy depends.

Thank you for the opportunity to submit these comments. NAR looks forward to working with committee members and the rest of Congress to find workable solutions that protect navigable water quality while minimizing unnecessary cost and uncertainty for the Nation's property owners and buyers.

February 4, 2015

Joint Hearing
on
Impacts of the Proposed Waters of the United States Rule on Local and State Governments

United States House of Representatives
Committee on Transportation and Infrastructure
&
United States Senate
Committee on Environment and Public Works

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Chairman Shuster, Chairman Inhofe, and honorable committee members, as an attorney with the Pacific Legal Foundation, a nonprofit, public interest organization dedicated to the protection of individual liberties and private property rights, I wish to thank you for this opportunity to provide my analysis of the Army Corps and EPA's proposed rule redefining "waters of the United States" under the Clean Water Act. I had the privilege to represent John Rapanos in the U.S. Supreme Court, in *Rapanos v. United States,* 547 U.S. 715 (2006), that is the impetus for the proposed rule. Unfortunately, the proposed rule is inconsistent with that decision. Contrary to that decision, and others, that have sought to impose limits on federal jurisdiction under the Clean Water Act, The proposed rule is undoubtedly the largest expansion of power ever proposed by a federal agency. It would far exceed any prior statutory interpretation, usurp the power of the States to manage local land and water resources, and nullify constitutional limits on federal authority.

Among other things, the proposed rule misrepresents the judicial standard for "traditional navigable waters" asserting that transport by boat alone is sufficient to establish federal jurisdiction. This standard is incorrect and conflicts with the agencies' prior practice and the case law on which they rely. The proposed rule also asserts jurisdiction over all interstate waters without legal precedent. In addition, the proposed rule distorts the jurisdictional tests under *Rapanos* and *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001)*(SWANCC)*,expanding federal authority over land and water use throughout the Nation. Contrary to explicit Supreme Court directives, and established constitutional limitations, the proposed rule asserts federal control over virtually all waters in the Country as "tributaries," "adjacent" or "other waters." So broad is the putative reach of the government under this proposed rule that the agencies expressly exclude only a handful of water features like ornamental ponds and swimming pools from federal regulation.

On its face, the proposed rule covers virtually every water in the Nation. Under this rule, a prudent legal practitioner would have to advise his client that the only waters not covered are those few that are expressly exempt. If a water body isn't a "traditional navigable water," it is a "tributary." If it isn't a "tributary," it is an "adjacent water." If it isn't an "adjacent water," it is an "other water." All of which are subject to onerous federal regulation. If it isn't a water at all, it is still covered by the fine print in Footnote 3 of the proposed rule that states the terms "waters" and "water bodies" "do not refer solely to the water contained in these aquatic systems, but to the system as a whole including associated chemical, physical and biological features." This seemingly innocuous language is troubling because it can be interpreted to include runoff, dry land, man-made structures, and flora and fauna. What isn't a chemical, physical or biological feature of the aquatic system? Nothing!

Because of the extreme land use restrictions that apply to property that contains "waters of the United States," and the enormous, even punitive, costs for a permit under the Clean Water Act–averaging more than $270,000 for an individual permit and $28,000 for a nationwide permit[1]–this new rule will grossly expand federal authority over everyday activities at a monumental cost to the national economy. According to the U.S. Supreme Court, sudden and expansive interpretations of long-standing laws are unreasonable and should be met with skepticism.

On June 23, 2014, the Supreme Court decided the case of *Utility Air Regulatory Group v. Environmental Protection Agency,* 573 U. S. ____ (2014) . In that case, the petitioners challenged EPA's interpretation of the Clean Air Act, to regulate certain greenhouse gas emissions, as over broad. In determining the level of deference due EPA's new rule, the Court held:

> EPA's interpretation is [] unreasonable because it would bring about an enormous and transformative expansion in EPA's regulatory authority without clear congressional authorization. When an agency claims to discover in a long-extant statute an unheralded power to regulate "a significant portion of the American economy," *Brown & Williamson*, 529 U. S., at 159, we typically greet its announcement with a measure of skepticism. We expect Congress to speak clearly if it wishes to assign to an agency decisions of vast "economic and political significance." *Id.,* at 160; see also *MCI Telecommunications Corp.* v. *American Telephone & Telegraph Co.*, 512 U. S. 218, 231 (1994); *Industrial Union Dept., AFL–CIO* v. *American Petroleum Institute*, 448 U. S. 607, 645–646 (1980) (plurality opinion). The power to require permits for the construction and modification of tens of thousands, and the operation of millions, of small sources nationwide falls comfortably within the class of authorizations that we have been reluctant to read into ambiguous statutory text

Slip opinion at 19-20.

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[1] *See Rapanos*, 547 U.S. at 721.

The proposed rule redefining "waters of the United States" is equally transformative. The Corps and EPA claim to have found authority under the Clean Water Act to regulate virtually all waters in the Country. With absurdly few exceptions, any wet spot may now be subject to federal control requiring tens of thousands of permits and millions of sources. This is contrary to the intent of Congress clearly expressed in the Clean Water Act itself "to recognize, preserve, and protect the primary responsibilities and rights of States" to control local and water use. 33 U.S.C. §1251(b).

Moreover, the Corps and EPA have a history of abusing their power under the Clean Water Act. On more than one occasion, the Supreme Court has chastised these agencies for overreaching. *See SWANCC*, 531 U.S. 159, (holding that regulation of remote ponds exceeds statutory authority and raises constitutional questions.); *Rapanos*, 547 U.S. 715, (plurality holding that the agency's expansive interpretation of the Clean Water Act is over broad and creates federalism problems.); and *Sackett v. Environmental Protection Agency*, 132 S. Ct. 1367, 1375 (2012) (J. Alito concurrence opining that the "reach of the Clean Water Act is notoriously unclear" and that "any piece of land that is wet at least part of the year" may be covered by the Act, putting property owners "at the agency's mercy.").

This proposed rule is patently unreasonable and should be amended or withdrawn.

Traditional Navigable Waters

The proposed rule purports to retain its existing definition of "traditional navigable waters" as those waters that "are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce or could be used for commercial navigation." *See* 79 Fed. Reg. 22200. This emphasis on the use of such channels for commerce is consistent with the long-standing definition of "traditional" or "navigable-in-fact" waters as described by the Supreme Court in *The Daniel Ball*, 77 U.S. 557 (1870), and reiterated by the court in *SWANCC* ,531 U.S. 159, wherein the High Court held that the Corps could not regulate isolated water bodies and that, through the Clean Water Act, Congress intended to exert nothing "more than its commerce power over navigation." *See id.* fn 3.

However, the proposed rule brazenly declares that "traditional navigable waters" under the Clean Water Act will include any water for which a "Federal Court has determined that the water body is navigable-in-fact under Federal Law." 79 Fed. Reg. 22200. This would include navigability determinations that have nothing to do with interstate commerce or commercial navigation, as the definition expressly requires. For example, the agencies intend to rely on navigability determinations under the equal footing doctrine designed to determine title in waterways at the time of statehood, even though those determinations do not require a connection to interstate commerce. *See* id. at 22253. The Corps and EPA seem unconcerned that this interpretation of federal jurisdiction under the Clean Water Act directly conflicts with their own regulatory definition of "traditional navigable waters" and Supreme Court precedent. In fact, the proposed rule fails to cite a single case in support of the agencies' novel interpretation that "navigable waters" under the Clean Water Act are the same as "navigable waters" under any other federal law. There is no law to support this interpretation.

Moreover, the proposed rule states that the "likelihood of future commercial navigation, including commercial waterborne recreation, can be demonstrated by current boating or canoe trips for recreation or other purposes." 79 Fed. Reg. 22200. In support of this proposition, the proposed rule relies in large part on *FPL Energy Marine Hydro LLC v. FERC*, 287 F.3d 1151, 1157 (D.C. Cir. 2002) (emphasis added). *See* 79 Fed. Reg. 22253. But that case undercuts the proposed rule.

In *FPL*, the D.C. Circuit upheld a FERC determination that a stream was a "traditional navigable water" based, in part, on the fact that the stream had minimal rapids and had been traversed by canoe and therefore could be used for simple forms of transportation. *Id.* at 1158. However the court acknowledged FERC had also determined that streams traversed only by expert kayakers, "or specialized sporting craft designed for river running," were not "traditional navigable waters." *Id.* Therefore, the implication in the proposed rule that navigability can be demonstrated by any type of current boating is not supported by this authority..

The agencies' reliance on *FPL* is misplaced for other reasons as well. The court was clear that, under U.S. Supreme Court precedent, future navigability cannot be based solely on transport by canoe, but must be supported by other factors: '"capacity [of a waterway to meet the needs of commerce] may be shown by physical characteristics **and** experimentation as well as by uses to which the streams have been put."' *Id.* at 1157 (citing *United States v. Utah*, 283 U.S. 64, 83 (1931) (emphasis added). Transport by canoe can satisfy the experimentation part of the Supreme Court's navigability standard, but it does not satisfy the physical characteristics part of the Supreme Court standard. As in *FPL*, so in other cases, the agency must show that the stream is suitable for commercial navigation by its physical characteristics, such as by flow, depth, gradient, and capacity. *See id.* at 1159. But the proposed rule dismisses this requirement.

Also, the proposed rule (p.22200) states that the future navigability of a stream should "be supported by **evidence**," and implies such evidence may be limited to boating, whereas the court in *FPL* held that both the experimentation and physical characteristics parts of the navigability determination must be supported by **substantial evidence**. *Id*. at 1159-1160.

For these reasons, the proposed rule overstates federal jurisdiction under the Clean Water Act and should be amended or withdrawn. A determination of navigability under some other law is not sufficient to satisfy the Commerce Clause requirements of the Clean Water Act and transport by boat alone is insufficient to establish a "traditional navigable water."

Interstate Waters

The proposed rule asserts that the Corps and EPA have authority under the Clean Water Act to categorically regulate all interstate waters as if they were "traditional navigable waters," even if they are not navigable-in-fact and have no connection to interstate commerce. *See* 79 Fed. Reg. 22254-22259. But these agencies conveniently overlook the obvious; the Clean Water Act is not a general mandate to regulate all waters. Congress does not have that power. The Act is based on Congress' constitutional power to regulate interstate commerce. *See SWANCC* and *Rapanos*. The

Supreme Court has limited that power to the regulation of channels of interstate commerce (such as navigable-in-fact waters), things in interstate commerce (such as commodities that are bought and sold), and activities that substantially affect interstate commerce. *See United States v. Lopez*, 514 U.S. 549 (1995), and *United States v. Morrison*, 529 U.S. 598 (2000). By definition, anything regulated under the Clean Water Act must have a substantial connection to interstate commerce. That's why the Act prohibits certain discharges to "navigable waters" and not to all waters. Therefore, the proposed regulation of all interstate waters exceeds both statutory and constitutional authority.

Nevertheless, the proposed rule also asserts (79 Fed. Reg. 22254-22259) that the precursor statutes to the Clean Water Act always subjected interstate waters and their tributaries to federal jurisdiction. But this is not so. As the plurality observed in *Rapanos*, "[f]or a century prior to the [Clean Water Act], we had interpreted the phrase 'navigable waters of the United States' in the Act's predecessor statutes to refer to interstate waters that are 'navigable in fact' or readily susceptible to being rendered so." *Rapanos,* 547 U.S. at 723 (emphasis added). In fact, "[a]fter the passage of the [Clean Water Act], the Corps initially adopted this traditional judicial definition of the Act's term 'navigable waters.'" *Id.*

Based on this understanding, the Supreme Court set out the contours of the Clean Water Act in *United States v. Riverside Bayview Homes, Inc.*, 474 U.S. 121 (1985); *SWANCC*; and, *Rapanos*. *Riverside Bayview* authorized federal regulation of wetlands "adjacent" to (i.e., physically abutting) "traditional navigable waters." The court did not, however, equate interstate waters with "traditional navigable waters." *SWANCC* prohibited federal regulation of "isolated water bodies" but did not carve out an exception for interstate waters. Likewise, in *Rapanos*, the plurality authorized federal regulation of relatively permanent rivers, lakes and streams (and certain "adjacent" wetlands) connected to "traditional navigable waters." But the plurality did not equate interstate waters with "traditional navigable waters." Nor did Justice Kennedy. In *Rapanos*, Justice Kennedy authorized federal regulation of wetlands that have a "significant nexus" with "traditional navigable waters." But, like the plurality, Justice Kennedy did not equate interstate waters with "traditional navigable waters."

Both the plurality and Justice Kennedy were quite explicit in defining jurisdictional waters under the Clean Water Act. In all cases, the covered water must be or have a connection or nexus to a "traditional navigable water." According to the plurality, "on its only plausible interpretation, the phrase 'the waters of the United States' includes only those relatively permanent, standing or continuously flowing bodies of water 'forming geographics features' that are described in ordinary parlance as 'streams[,] ...oceans, rivers [and] lakes.'" *Rapanos*, 547 U.S. at 739. These, in turn, must be "connected to traditional interstate navigable waters." *Id.* at 742.(emphasis added). Under the plurality opinion, therefore, nonnavigable interstate waters may not be deemed "traditional navigable waters." And, according to Justice Kennedy: "In [SWANCC], the Court held, under the circumstances presented there, that to constitute 'navigable waters' under the Act, a water or wetland must possess a 'significant nexus' to waters that are or were navigable-in-fact or that could reasonable be so made." *Id.* at 759 (emphasis added). Thus, Supreme Court precedent precludes

categorical regulation of all interstate waters and the treatment of nonnavigable interstate waters as "traditional navigable waters."

Tributaries

The Corps and EPA's claim that all tributaries are subject to the Clean Water Act–no matter how remote or inconsequential--defies comprehension. This claim is based on the so-called Connectivity Report that suggests virtually all waters are interconnected and therefore subject to federal regulation under the Clean Water Act. But this is the same argument the agencies made in the *Rapanos* case which was expressly rejected by both the plurality and Justice Kennedy. All five justices concluded that the agencies' "any hydrological connection" approach could not be sustained.

But rather than narrow the agencies' definition of tributaries, as *Rapanos* requires, the proposed rule defines tributaries to include not only any water with a bank and ordinary high water mark, somewhere along the line, but any other water that contributes flow to a covered water, directly or indirectly. See 79 Fed. Reg. 22269. Which is to say, the proposed rule authorizes federal regulation of any discrete water that flows downstream. But this goes too far. The plurality limited federal jurisdiction to a limited subset of nonnavigable tributaries and Justice Kennedy did not apply his "significant nexus" test to tributaries, only wetlands. Of equal importance, both the plurality and Justice Kennedy rejected the categorical regulation of drainage ditches and the like. And, the federal regulation of virtually all tributaries with a hydrological connection to downstream navigable waters, authorized by the proposed rule, raises constitutional conflicts that the Supreme Court has cited as a basis for limiting the scope of the Clean Water Act. *See Rapanos* and *SWANCC*.

Under the *Rapanos* plurality opinion, a jurisdictional water "includes only those relatively permanent, standing or continuously flowing bodies of water 'forming geographic features' that are described in ordinary parlance as 'streams[,] ... oceans, rivers, [and] lakes.' *Rapanos*, 547 U.S. at 739. The emphasis is on "ordinary parlance," not on "relatively permanent." Clearly a ditch or a drain is not a stream. In fact, most man-made conduits would not be characterized, in "ordinary parlance," as "streams[,] ... oceans, rivers, [and] lakes." *Id.*

According to the plurality, "Following our decision in *Riverside Bayview*, the Corps adopted increasingly broad interpretations of its own regulations under the Act." *Rapanos*, 547 U.S. at 725. So broad were these interpretations that they "included 'ephemeral streams' and 'drainage ditches' as 'tributaries' to 'waters of the United States.'" *Id.* (see also 33 CFR. § 328.3 (a)(5)). And, "[t]his interpretation extended 'the waters of the United States' to any land feature over which rainwater or drainage passes and leaves a visible mark--'even if only the presence of litter or debris'" *Id.* (see also 33 CFR. § 328.3 (e)). Moreover, "[f]ollowing our decision in *SWANCC*, the Corps did not significantly revise its theory of federal jurisdiction under § 1344(a)," including its "sweeping assertions of jurisdiction over ephemeral channels and drains as 'tributaries.'" *Id.* at 726.

Unfortunately, nothing has changed.

In response to the Corps' assertion that it has jurisdiction over drains and ditches, the plurality stated that the natural definition of "waters," the Court's own prior interpretations, the provisions of the statute, and judicial cannons of construction, "all confirm that 'the waters of the United States' in § 1362(7) cannot bear the expansive meaning the Corps would give it." *Id.* at 731-732.

Moreover, similarly to *SWANCC*, the plurality stated that the Corps' regulation of "ditches, channels and conduits" was inconsistent with the congressional objective expressed in the Act to "recognize, preserve and protect the primary responsibilities and rights of States . . . to plan the development and use ... of land and water resources ..." and that such regulation impinged on fundamental States powers and raised significant constitutional questions. *Id.* at 737-738. The plurality concluded, therefore:

> In sum, on its only plausible interpretation, the phrase the "waters of the United States" ... does not include channels through which water flows intermittently or ephemerally, or channels that periodically provide drainage for rainfall. The Corps' expansive interpretation of "the waters of the United States" is thus not "based on a permissible construction of the statute." [Citing *Chevron*, 467 U.S. at 843].
>
> *Id*. at 739.

The proposed rule directly conflicts, therefore, with the *Rapanos* plurality. But that is not all. It also conflicts with Justice Kennedy 's opinion.

Although Justice Kennedy presented his "significant nexus" test for determining jurisdictional wetlands, he did not suggest that the same test could or should be applied to determine jurisdictional tributaries. More to the point, Justice Kennedy expressly rejected the agencies' approach to regulating tributaries described in the proposed rule. According to Justice Kennedy, the Corps in *Rapanos* "deems a water a tributary if it feeds into a traditional navigable water (or a tributary thereof) and possesses an ordinary high-water mark..." *Id.* at 781. This is the same definition found in the proposed rule. But Justice Kennedy observed that the Corps was incapable of consistent identification of the ordinary high water mark, citing a GAO audit, and concluded that "the breadth of this standard--which seems to leave wide room for the regulation of drains, ditches, and streams remote from any navigable-in-fact water and carrying only minor water volumes toward it--precludes its adoption" as a standard for determining jurisdictional waters. *Id.* Inexplicably, the proposed rule adopts the very definition of tributaries Justice Kennedy determined the Act precludes.

The simple fact is that the agencies' unrestrained definition of covered tributaries has already been rejected by a majority on the Supreme Court in *Rapanos*. The proposed rule should, therefore, be amended to reflect this fact. The *Rapanos* plurality has even suggested such an amendment:

> Most significant of all, the CWA itself categorizes the channels and conduits that typically carry intermittent flows of water separately from "navigable waters," by

> including them in the definition of " 'point source.' " The Act defines " 'point source' " as "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged." 33 U.S.C. § 1362(14). It also defines " 'discharge of a pollutant' " as "any addition of any pollutant *to* navigable waters *from* any point source." § 1362(12)(A) (emphasis added). The definitions thus conceive of "point sources" and "navigable waters" as separate and distinct categories. The definition of "discharge" would make little sense if the two categories were significantly overlapping. The separate classification of "ditch[es], channel[s], and conduit[s]" —which are terms ordinarily used to describe the watercourses through which *intermittent* waters typically flow—shows that these are, by and large, *not* "waters of the United States.

Id. at 735-736.

Adjacent Waters

Here too, the agencies propose an unprecedented expansion of federal authority under the Clean Water Act. The proposed rule would replace the limited term "adjacent wetlands" with the unlimited term "adjacent waters" and authorize federal regulation of "adjacent waters" by rule. 79 Fed. Reg.at 22207. According to the proposed rule, the Corps and EPA would regulate not only wetlands abutting traditional navigable waters, as the Supreme Court authorized in *Riverside Bayview*, but any water that is "adjacent" to any other covered water, which the Supreme Court has not authorized. In further disregard for judicial precedent, the proposed rule defines the term "adjacent" to mean "neighboring" which in turn covers "riparian areas,""floodplains," and other areas such as water bodies connected by "confined surface" waters or a "shallow subsurface hydrological connection" to other covered waters. *Id*. Even "man-made dikes or barriers, natural river berms, beach dunes and the like" do not cut off federal jurisdiction. *Id*. Therefore, for the first time, the Corps and EPA expressly assert jurisdiction over dry land and shallow groundwater. No court has ever authorized such broad federal jurisdiction under the Clean Water Act and no provision of the Act itself supports such a broad interpretation of agency authority.

The reference to floodplains is particularly odious. The proposed rule leaves it to the agency to decide the requisite frequency of flooding, whether it be 10, 20 or 100 years. And since the floodplain may only contain water during an actual flood, it appears the agencies will assert regulatory authority over the floodplain even when dry, much as they regulate "wetland" areas that are dry but for a few days a year. This alone is the largest land grab in the history of the Nation, encompassing tens of thousands of miles of usually dry land and extending from the lower Mississippi Delta to the smallest streams. The Corps and EPA have already excised the word "navigable" from the term "navigable waters." They now propose excising the word "waters" from the term as well. This flies in the face of federal law. *See SWANCC*, 531 U.S. at 172 (holding the

word "navigable" has to mean something); and, *Rapanos*, 547 U.S. at 716 (holding the Clean Water Act "authorizes federal jurisdiction only over 'waters.'").

Additionally, the term "neighboring" is ambiguous and so broad as to eliminate any certainty as to the scope of jurisdictional waters under the adjacency standard. Although the Corps and EPA claim the term "neighboring" has always been subject to "an element of reasonable proximity," *id*. at 2207, the obvious purpose of such ambiguity is to afford public officials the greatest discretion in determining "waters of the United States" so as to avoid any facial challenge to federal authority. The proposed rule itself witnesses a total disregard for reasonable limits on federal power. The term "neighboring" cannot be seen, therefore, as providing any meaningful constraint on federal enforcement so much as providing free reign to overzealous bureaucrats to regulate what they see fit to regulate.

But this goes too far. Redefining adjacency in this way is a gross distortion of the term's plain meaning and has no legal basis. In fact, it directly conflicts with the Supreme Court's decision in *SWANCC*. In that case, the Court held that isolated, nonnavigable, intrastate water bodies were not adjacent and could not be regulated. That decision was based on the observation that such water bodies had no hydrological connection with any "traditional navigable water" and that the regulation of such water bodies would impinge on state powers and raise constitutional questions.

> Permitting respondents to claim federal jurisdiction over ponds and mudflats falling within the "Migratory Bird Rule" would result in a significant impingement of the States' traditional and primary power over land and water use. See, *e.g.*, Hess v. Port Authority Trans-Hudson Corporation, 513 U.S. 30, 44, 130 L.Ed.2d 245, 115 S. Ct. 394 (1994) ("Regulation of land use [is] a function traditionally performed by local governments"). Rather than expressing a desire to readjust the federal-state balance in this manner, Congress chose to "recognize, preserve, and protect the primary responsibilities and rights of States . . . to plan the development and use . . . of land and water resources . . . ." 33 U.S.C. §1251(b). We thus read the [Clean Water Act] as written to avoid the significant constitutional and federalism questions raised by respondents' interpretation, and therefore reject the request for administrative deference.

SWANCC, 531 U.S. at 174.

The term "adjacent" is over broad and should be limited to its ordinary meaning (i.e. abutting).

Other Waters

In addition to the virtually unlimited scope of tributaries, impoundments, ditches, wetlands and adjacent waters, regulated by rule, the Corps and EPA propose to regulate "other waters." 79 Fed. Reg. 22211- 22217. This is a catch-all provision that purports to include only such waters as have a "significant nexus" with waters that are categorically regulated. But the analysis proposed

for determining such waters makes a mockery of the term "significant" and effectively nullifies Supreme Court precedent.

Under the proposed rule, "similarly situated" waters in the region are aggregated to determine their effects on downstream navigable-in-fact waters. Obviously, the larger the region the more likely one is to find a "significant effect." Therefore, to ensure such an effect is found, the proposed rule aggregates waters over an entire "ecoregion," covering thousands of square miles, such as the entire California Central Valley and the Central Great Plains. There are over 100 of these ecoregions. The problem with this approach is that when aggregated over such a large area, all waters have a "significant effect" on downstream navigable waters, including isolated water bodies that the Supreme Court determined cannot be regulated without raising serious constitutional conflicts.

On any fair reading of *SWANCC*, isolated water bodies are not subject to federal regulation. *Rapanos* reinforced this conclusion as all nine Justices acknowledged that *SWANCC* limited federal control over "other waters." According to the plurality, in *SWANCC*, "we held that 'nonnavigable, isolated, intrastate waters' . . . were not included as 'waters of the United States.'" *Rapanos*, 547 U.S. at 726. Justice Kennedy was even clearer:

> Asserting jurisdiction pursuant to a regulation called the "Migratory Bird Rule," the Corps argued that these isolated ponds were "waters of the United States" (and thus "navigable waters" under the Act) because they were used as habitat by migratory birds. The Court rejected this theory. "It was the significant nexus between wetlands and 'navigable waters,'" the Court held, "that informed our reading of the [Act] in *Riverside Bayview Homes.*" Because such a nexus was lacking with respect to isolated ponds, the Court held that the plain text of the statute did not permit the Corps' action.
>
> *Id*. at 766-767.

Even the dissent agreed with this assessment of *SWANCC*:

> The Corps had asserted jurisdiction over the gravel pit under its 1986 Migratory Bird Rule, which treated isolated waters as within its jurisdiction if migratory birds depended upon these waters. The Court rejected this jurisdictional basis since these isolated pools, unlike the wetlands at issue in *Riverside Bayview*, had no "significant nexus" to traditionally navigable waters.
>
> *Id.* at 795.

The proposed rule's inclusion of isolated water bodies is therefore at odds with these decisions. Also, this category is not really a case-by-case analysis at all. It is another per se rule. It is not practical for the Corps and EPA to physically assess any particular water body's aggregate

affect on navigable waters over thousands, or even millions, of square miles. That is why the agencies have selected such large areas to aggregate. The agencies must assume that the aggregate effect of any similar waters are significant because the area is so big. And, of course, no one can refute the assumption because actual effects over an entire ecoregion can't be assessed.

The Corps and EPA simply ignore the fact that federal authority under the Clean Water Act is defined by the Commerce Clause, not by hydrology. *See SWANCC* fn 3, (finding that Congress did not intend to exercise "anything more than its commerce power over navigation."). The Supreme Court has expressly rejected this broad approach to aggregating effects because it fails to recognize constitutional limits on agency jurisdiction.

In *Lopez*, 514 U.S. 549, the Supreme Court had to determine whether the federal government could regulate possession of a gun in a school zone. The government argued that it could regulate such activity based on substantial (or significant) effects on interstate commerce because possession of a gun in a school zone may result in violent crime and violent crime interferes with the national economy in two respects: (1) violent crime increases the cost of insurance throughout the nation; and, (2) violent crime deters people from traveling to unsafe areas. The government also argued that guns in school undermine the learning environment producing less productive citizens which hurts the national economy.

The government acknowledged that under its "costs of crime" argument that Congress could regulate any activity that might lead to violent crime no matter how remote the connection to interstate commerce. Likewise, the Court found that under the government's "national productivity" argument, Congress could regulate anything related to individual economic productivity. If these arguments were accepted, the Court concluded, it would be "hard pressed" to find any individual activity that Congress could not regulate under the commerce power. "Depending on the level of generality," the Court observed, "any activity can be looked upon as commercial." *Id*. at 565 This then was the fallacy in the government's arguments; they provided no logical stopping point to congressional authority and converted the commerce power into a general police power like that enjoyed by the states. Accordingly, the Supreme Court invalidated the Gun Free School Zones Act as an unauthorized Commerce Clause enactment.

Likewise, in *Morrison*, 529 U.S. 598, the High Court invalidated the Violence Against Women Act on the same grounds. That Act made it a federal crime to commit violence against a person motivated by gender but it was based on the same broad aggregation standard the Court rejected in *Lopez*.

Writing for the majority, Chief Justice Rehnquist affirmed that all laws passed by Congress must find authority in the Constitution and that the powers of Congress are limited. As *Lopez* emphasized, Justice Rehnquist stated, "even under our modern, expansive interpretation of the Commerce Clause, Congress' regulatory authority is not without effective bounds." *Id.* at 608.

Unlike the situation in *Lopez*, however, the Court did find that the Violence Against Women Act was supported by congressional findings that gender-motivated violence affects interstate commerce. Among others, those effects included deterring victims from traveling interstate or engaging in interstate business. Diminishing national productivity, increased medical costs and a decrease in the supply and demand of interstate goods were also cited. However, the Court did not believe these findings were sufficient to uphold the Act under the Commerce Clause. Simply because Congress may conclude that a particular activity substantially affects interstate commerce does not make it so.

Since Congress followed the but-for causal chain from the original violent act to every remote effect upon interstate commerce, the Supreme Court decided that Congress' findings were faulty and relied on a "method of reasoning" that obliterates the distinction between what is national and what is local and which the Court had already rejected in *Lopez*. *Id*. at 615. The Court was unwilling to allow Congress, therefore, to regulate noneconomic activity, such as gender-motivated acts of violence, based only on that activity's attenuated effects on interstate commerce. Therefore, the Court held that Congress did not have authority to enact such a law.

But the same could be said of the proposed rule. It relies on an overly broad category of "other waters" aggregated within immense areas that allow federal regulation of virtually any water in the Country, obliterating any distinction between federal authority and local authority in direct conflict with Supreme Court case law and the limited reach of the commerce power.

And if that were not enough, the proposed rule suggests that in the unlikely event any waters escape federal jurisdiction under this standard they may still be regulated as point sources. The proposed rule goes too far.

Significant Nexus Analysis[2]

The proposed rule misrepresents the "significant nexus" analysis in a number of ways. First, it misstates the standard. Throughout, the rule states waters have the requisite significant nexus if they, either alone or in combination with similarly situated waters in the region, significantly affect

[2] In determining jurisdictional waters, most of the lower courts allow the Corps and EPA to rely on either the *Rapanos* four-justice plurality standard or Justice Kennedy's lone "significant nexus" test. However, this is based on a misreading of Supreme Court case law. In *Marks v. United States*, 430 U.S. 188, 193 (1977), the Supreme Court stated that "[w]hen a fragmented Court decides a case and no single rationale explaining the result enjoys the assent of five Justices, the holding of the Court may be viewed as that position taken by those Members who concurred in the judgments on the narrowest grounds." In *Rapanos*, the Scalia plurality gives the CWA the most limited reading and appears the most narrowly drawn because all nine Justice would agree with the plurality that traditional navigable waters, ordinary rivers, lakes and streams, as well as abutting wetlands would be covered by the Act. *See Rapanos* dissent at n.14. Therefore, the plurality should be viewed as the controlling opinion.

the chemical, physical, **or** biological integrity of waters that drain into traditional navigable waters, interstates waters, or territorial seas. But Justice Kennedy's jurisdictional test expressly requires the covered water to have a "significant nexus" to traditional navigable waters themselves, and not just to waters that drain into traditional navigable waters. See *Rapanos*, 547 U.S. at 779 ("Consistent with *SWANCC* and *Riverside Bayview* and the need to give the term 'navigable' some meaning, the Corps' jurisdiction over wetlands depends upon the existence of a significant nexus between the wetlands in question and navigable waters in the traditional sense.")(Kennedy, J., concurring). The test does not apply to nonnavigable intrastate waters as the rule asserts.

Second, Justice Kennedy did not use the disjunctive "or" in describing the effects that must be shown to establish a "significant nexus." According to Justice Kennedy:

> Wetlands possess the requisite nexus, and thus come within the statutory phrase "navigable waters," if the wetlands, either alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, **and** biological integrity of other covered waters more readily understood as "navigable."
>
> *Id.* at 780

.

This test is written in the conjunctive with the word "and." On its face, the test calls for a demonstration that the subject water have a significant chemical effect, **and** a significant physical effect, **and** a significant biological effect on a traditional navigable water. By its plain terms, all three effects must be shown. A single significant effect is insufficient to establish federal jurisdiction. The proposed rule does not require this and is therefore inconsistent with the Kennedy opinion.

Third, the propose rule misconstrues the level of significance required to satisfy the Kennedy test. The proposed rule states a "significant nexus" will be found if a chemical, physical, or biological effect is more than "speculative or insubstantial." This is incorrect. There is a huge gap between a "speculative or insubstantial" effect and the "significant" effect required by the plain terms of the "significant nexus" test. While Justice Kennedy observed that a "speculative or insubstantial" effect was clearly insufficient to establish federal jurisdiction, a fair reading of the Kennedy opinion reveals that the Justice requires a substantial effect to demonstrate the requisite nexus, and not merely anything more than a speculative or insubstantial effect. A substantial effect on traditional navigable waters, like a substantial effect on interstate commerce, is also required by *Lopez* and *Morrison*, as discussed above. "Absent some measure of the significance of the connection for downstream water quality, [the mere presence of a hydrological connection] standard [is] too uncertain." *Rapanos*.at 784 (J. Kennedy, concurring). Therefore, if the rule is to be true to the Kennedy opinion, it must require a demonstration of a **substantial** chemical, physical **and** biological effect.

And finally, by encouraging reliance on literature, as opposed to onsite analysis, and broad ecosystem impacts, as well as the extrapolation of effects from one water to the next within an ever

increasing area of a watershed, the proposed rule virtually enures that a "significant nexus" will be found. In other words, the rule is so broad it preordains the outcome. As proposed, the "significant nexus" test is too broad.

Waters That Are Not Jurisdictional

The reach of the proposed rule cannot be overstated.. Even under the more limited jurisdictional interpretation the Corps and EPA gave the Act in *Rapanos*, the scope of the Act was breathtaking and encompassed storm drains, roadside ditches and ordinarily dry land:

> The enforcement proceedings against Mr. Rapanos are a small part of the immense expansion of federal regulation of land use that has occurred under the Clean Water Act—without any change in the governing statute—during the past five Presidential administrations. In the last three decades, the Corps and the Environmental Protection Agency (EPA) have interpreted their jurisdiction over "the waters of the United States" to cover 270–to–300 million acres of swampy lands in the United States—including half of Alaska and an area the size of California in the lower 48 States. And that was just the beginning. The Corps has also asserted jurisdiction over virtually any parcel of land containing a channel or conduit—whether man-made or natural, broad or narrow, permanent or ephemeral—through which rainwater or drainage may occasionally or intermittently flow. On this view, the federally regulated "waters of the United States" **include storm drains, roadside ditches, ripples of sand in the desert that may contain water once a year, and lands that are covered by floodwaters once every 100 years**. Because they include the land containing storm sewers and desert washes, the statutory "waters of the United States" engulf entire cities and immense arid wastelands. In fact, the entire land area of the United States lies in some drainage basin, and an endless network of visible channels furrows the entire surface, containing water ephemerally wherever the rain falls. Any plot of land containing such a channel may potentially be regulated as a "water of the United States."

Rapanos v. United States, 547 U.S. 715, 722 (emphasis added).

But the proposed rule is even broader as evidenced by the absurdly narrow list of excluded waters. Storm drains, roadside ditches and 100 year flood plains are conspicuously lacking from this list.

Those waters not included as "waters of the United States" are limited to "ditches that are excavated wholly in uplands, drain only in uplands, and have less than perennial flow." 79 Fed. Reg. 22218. And, "ditches that do not contribute flow, either directly or through another water, to a traditional navigable water, interstate water, the territorial seas, or impoundment." *Id*. The problem with this exclusion, is that such ditches probably do not exist. It is a meaningless exclusion. Morever, the exclusion is made confusing by the caveat that excluded ditches may nevertheless serve

as conduits for other jurisdictional waters, such as wetlands, under the adjacency standard. *See Id.*

Aside from this improbable ditch exclusion, the rule proposes excluding certain artificially irrigated uplands, ponds, pools and ornamental waters so long as they were excavated or diked on dry land. *Id*. This is hardly a concession because it implies that virtually all other waters are covered by the Act.

Finally, the proposed rule would exclude "water-filled depressions created incidental to construction activity" and "groundwater, including groundwater drained through subsurface drainage systems" and "gullies and rills and non-wetland swales." *Id*. But here again, the message is mixed, even schizophrenic, because the Corps and EPA would regulate "adjacent waters" with "shallow subsurface connections" to other covered waters. *See* 79 Fed. Reg. 22207.

Strangely, the Corps and EPA could not bring themselves to expressly exclude "puddles" claiming the term is too ambiguous. But that didn't stop the agencies from relying on even more ambiguous terms such as "adjacent," "wetland," "riparian," "floodplain," "significant nexus," "neighboring," "perennial," "ephemeral," "impoundment," "non-wetland swale," "high water mark," etc. The exclusions are, therefore, too narrow or too uncertain to provide any meaningful limitation on federal authority.

It is also difficult for the public to rely on these exclusions given the agencies' hostility towards the other exemptions under the Act. For example, the Corps and EPA have routinely limited the section 4(f) farm exemption to those ordinary farming practices employed on a particular farm rather than those farming practices common to the industry, as a plain reading of the Act requires. And, the agencies have attempted to limit the "prior converted cropland" exemption (which covers approximately 53 million acres)[3] through "internal policy changes," like the so-called Stockton Rules, that the courts have invalidated. *See New Hope Power Company v. Corps of Engineers*, 746 F.Supp. 2d. 1272 (SD Florida, 2010)(Holding change in policy constituted new legislative and substantive rules but are improper because they were not subject to notice and comment). Limiting exemptions and exclusions is standard practice for these agencies, making the exclusions contained in the proposed rule of little value.

Documentation

The proposed rule sates that "In the normal course of making jurisdictional determinations, information derived from field observations is not always required in cases where a 'desktop' analysis furnishes sufficient information to make the requisite findings." 79 Fed. Reg. 22195. This is an extraordinary admission because it invites, even encourages, "boilerplate" analysis and "cookie-cutter" decision making in violation of the Administrative Procedure Act and the case-by-case, site specific information called for in Justice Kennedy's "significant nexus" test. This is the primary

[3] U.S. Department of Agriculture, Natural Resources Conservation Service, RCA Issue Brief #8, "Wetlands Programs and Partnerships" (Jan. 1996).

failure of the Connectivity Report–it is a "desktop" analysis that identifies hydrological connections without demonstrating the significance of those connections. A "significant nexus" is presumed, not proved.

The statement should be deleted. On site field observations should be required in all cases. Additionally, because of the errors likely to follow from a "desktop" analysis, the Corps and EPA should support judicial review of formal Jurisdictional Determinations in court.

CONCLUSION

The arrogation of authority occasioned by this proposed rule extends federal authority over local land and water use to an extreme never seen in the history of this Nation. It is contrary to existing federal law and judicial precedent and should be amended or abandoned.

Sincerely,
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RURAL COUNTY REPRESENTATIVES OF CALIFORNIA

January 27, 2015

The Honorable James Inhofe
Chair, Senate Committee on
Environment and Public Works
410 Dirksen Senate Office Building
Washington, DC 20510

The Honorable Bill Shuster
Chair, House Committee on
Transportation and Infrastructure
2165 Rayburn House Office Building
Washington, DC 20515

The Honorable Barbara Boxer
Ranking Member, Senate Committee on
Environment and Public Works
456 Dirksen Senate Office Building
Washington, DC 20510

The Honorable Peter DeFazio
Ranking Member, House Committee on
Transportation and Infrastructure
2163 Rayburn House Office Building
Washington, DC 20515

RE: Definition of "Waters of the United States" Under the Clean Water Act

Dear Chairs Inhofe and Shuster, and Ranking Members Boxer and DeFazio:

The Rural County Representatives of California (RCRC) is an association of thirty-four rural California counties and the RCRC Board of Directors is comprised of elected supervisors from those member counties. Our counties undertake a variety of activities related to water, including permitting and decision-making responsibilities related to water conveyance, land use, and development in rural California communities. In light of those responsibilities, RCRC is pleased that the House Committee on Transportation and Infrastructure and the Senate Committee on Environment and Public Works are holding a joint hearing on February 4 to discuss the impacts the proposed Waters of the United States (WOTUS) rule will have on local governments.

RCRC has been opposed to the concept of changing the definition of "Waters of the United States" under the Clean Water Act (CWA) since the Environmental Protection Agency (EPA) proposed the "*Guidance to Identify Waters Protected by the Clean Water Act*" (Guidance) in 2011. We remain opposed to the current joint rulemaking by EPA and the U.S. Army Corps of Engineers that would alter the definition of WOTUS and inappropriately expand federal jurisdiction over waters without a significant nexus to federal waters.

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MERCED MODOC MONO NAPA NEVADA PLACER PLUMAS SAN BENITO SHASTA SIERRA SISKIYOU SUTTER TEHAMA TRINITY TULARE TUOLUMNE YOLO YUBA

In advance of the joint hearing on the WOTUS rulemaking, we are submitting with this letter a copy of our formal comments on the rule as filed with the EPA on August 29, 2014. In our comments, we have outlined the many impacts the proposal will have on local governments, as well as requesting that EPA withdraw the rule. While a rule to clarify jurisdiction and administration of the CWA may prove helpful following recent U.S. Supreme Court decisions, the current rule was not drafted with adequate consideration of economic impacts nor adequate input from state and local governments who are critical partners in achieving the objectives of the CWA. The result is a rule that would be overly broad in its application, ambiguous in its interpretation, costly in its administration, and subject to protracted litigation.

We are hopeful that these comments and concerns will inform the discussion related to the proposed rule's impact on local governments. Please contact us if you would like to discuss our comments or need additional resources.

Sincerely,



Staci Heaton
Regulatory Affairs Advocate

cc: Members of the RCRC Congressional Delegation

Attachment: August 29, 2014 Letter

RURAL COUNTY REPRESENTATIVES OF CALIFORNIA

August 29, 2014

Ms. Donna Downing
Jurisdiction Team Leader
U.S. Environmental Protection Agency
1200 Pennsylvania Ave. NW
Washington, DC 20460

Ms. Stacey Jensen
Regulatory Program Manager
U.S. Army Corps of Engineers
441 G St. NW
Washington, DC 20314

RE: Definition of "Waters of the United States" Under the Clean Water Act (Docket Nos. EPA-HQ-OW-2011-0880; FRL-9901-47-OW)

Dear Ms. Downing and Ms. Jensen:

The Rural County Representatives of California (RCRC) represents thirty-four rural counties across California. Our Board of Directors is comprised of one elected Supervisor from each member county, and our counties are tasked with a variety of permitting, maintenance, and decision-making responsibilities related to water conveyance, land use, and development in rural California communities. County Boards of Supervisors are vital in the stewardship of our state's water resources. They take the role very seriously and are committed to carrying out provisions of the Clean Water Act (CWA) to aid in better protection of our water systems. RCRC opposes the proposed rulemaking changing the definition of "Waters of the United States" under the CWA and asks that your agencies withdraw the rule immediately.

RCRC has been engaged in this issue through its various iterations, and filed extensive comments on the proposed "*Guidance to Identify Waters Protected by the Clean Water Act*" (Guidance) released in 2011. At that time, the proposed Guidance was highly controversial, with many stakeholders, including RCRC, believed it to be a drastic de facto jurisdictional expansion by your agencies. We are disappointed that you have decided to essentially repackage the Guidance into a proposed rule before

issuing the draft science report without extensive nationwide outreach to counties, farmers, landowners, and the other myriad stakeholders that this rule will impact should it be adopted. We are also frustrated that your agencies have attempted in the media to marginalize the valid concerns of stakeholders rather than conducting meaningful outreach to address the glaring problems with the proposed rule.

In light of our concerns, we would like to offer the following comments in opposition to the proposed rule:

The changes to the definition of "Waters of the U.S." triggers new unfunded mandates on local governments by expanding federal jurisdiction

The term "navigable water" has a distinct meaning in the CWA and requires state and local government administrative and regulatory actions that can increase the scope and cost of permitting. Changes to the definition of tributary, as well as the inclusion of the vague and relatively undefined "adjacent waters," will likely alter the way many water bodies are regulated.

For example, a tributary defined as a Water of the U.S. under this rule would have to be added to the list of impaired waters in the state. Such a listing will trigger a number of cost-prohibitive requirements on local governments, including but not limited to: the development of a use attainability study; the identification of designated beneficial uses; the adoption of site specific water quality objectives; the application of and compliance with numeric effluent limits, and the potential for a Total Maximum Daily Load allocation. These additional requirements will make counties subject to additional enforcement actions - including civil and criminal penalties - and place local governments at great risk of third-party litigation.

In addition, water supply systems could be defined as Waters of the U.S. under the new definition of a tributary as they convey flow to downstream water. These could include not only large federal and state water delivery systems, such as the California Aqueduct and the Colorado River Aqueduct, but also reservoirs and other water supply features constructed and managed by local and private interests.

Furthermore, even though your agencies have maintained that there is no intent to impact water reuse facilities, the rule does not clearly address reuse facilities associated with wastewater treatment systems. Reuse facilities were constructed to augment water supply for irrigation and sometimes drinking water, and were not designed with the objective to meet the parameters of the CWA. The rule needs to clearly state your agencies' intent for water reuse facilities.

The proposed rule will hinder the ability of counties to manage public infrastructure ditch systems and impact public safety

The expansion of the definition of Waters of the U.S., as drafted, will also force counties to seek Section 404 permits for the now-routine maintenance of such "waterways" as roadside ditches and storm water drains. Public infrastructure ditch systems can stretch for hundreds of miles across local jurisdictions, and it is unclear how these systems will be classified under the rule. This is particularly onerous for rural counties as many are already struggling with tough budgeting decisions in the face of diminishing funding from the state and decreased public appetite for approving new taxes to cover such costs. It also could dramatically interfere with the ability of counties to properly maintain roadways to keep them safe and accessible to rural residents, particularly since the U.S. Army Corps of Engineers (Corps) is already significantly backlogged in evaluating and processing of 404 permits.

Moreover, water conveyance systems for flood control purposes may also fall under the new definitions, which could ultimately hinder counties from ensuring public safety in extreme storm events. In the face of possible climate adaptation issues from sea level rise, the need to seek permits for maintenance of such systems would be a nearly insurmountable obstacle to developing effective adaptation strategies in emergency situations, and runs counter to the Administration's recent climate adaptation policies and calls to action.

The rule must clarify the impacts on MS4 permits to avoid double regulation of permitted entities

As it stands, the proposed rule provides no clarification on ditches used as conveyance for runoff in municipal storm water activities. Ditches are commonly used by municipalities for storm water discharge under the Municipal Separate Stormwater Sewer Systems (MS4) program, and such activities are already regulated as waste treatment systems under Section 402(p) of the CWA. The proposed rule would reclassify those ditches as Waters of the U.S., whereby the applicable control standard would no longer be maximum extent practicable under Section 402(p), but the attainment of water quality standards thereby requiring the imposition of numeric effluent limits.

California has imposed stricter standards on all storm water permittees, including MS4 permit holders, and the proposed rule as it stands would only serve to exacerbate the already difficult task of compliance for rural counties in our State by causing jurisdictional confusion and dramatically increased compliance costs. Many rural California counties have either recently been required to comply with the MS4 permit, or will be required to comply within the next permit cycle. The implementation costs for new permittees would increase exponentially if the proposed rule is not modified to include clarification and exemptions for MS4 permit holders.

RCRC recommends that, should you choose to proceed with the rulemaking, you specifically include ditches and other conveyance methods used to comply with MS4 permits under the exemption for waste water treatment systems.

The rulemaking should not have been initiated before the issuance of the draft science report

Your agencies have stated that the draft science report, "Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence" is informing the proposed rule. However, you are moving forward with the rulemaking before the report has been finalized and released, making it impossible to truly use the conclusions from the report to inform this proposal. Moving forward with the proposed rule before the science report is finalized is bad public policy and premature at best, particularly when the proposal has the far-reaching impact that this one does. RCRC recommends that your agencies withdraw the rule so that a thorough review of the draft science report can be conducted before finalizing such a far-reaching regulatory proposal.

The rule was developed without proper engagement of local and state governmental partners

The CWA identifies state and local governments as partners in enforcing and implementing the Act, yet your agencies have proposed a rule that imposes all costs and responsibilities on these other partners. In Congressional testimony, the U.S. Environmental Protection Agency (EPA) representatives have been unable to name any public interests your agencies engaged with during development of the rule, which not only violates the spirit of the CWA, but also underscores the inadequate analysis of local impacts that will result from this rule. If your agencies decide to move forward with a change to the definition of "Waters of the U.S.," we strongly urge you to redraft the proposed rule and fully engage local and state governments in a meaningful process to draft the new rule.

In light of our comments, RCRC respectfully recommends that EPA and the Corps withdraw the proposed rule. Thank you for considering our comments, and encourage you to contact us if you have any questions.

Sincerely,



Staci Heaton
Regulatory Affairs Advocate

cc: Members of the California State Congressional Delegation
RCRC Board of Directors