

**AMERICA'S WATERFRONTS:
ADDRESSING ECONOMIC, RECREATIONAL,
AND ENVIRONMENTAL CHALLENGES**

HEARING
BEFORE THE
SUBCOMMITTEE ON SCIENCE, OCEANS, FISHERIES,
AND WEATHER
OF THE
COMMITTEE ON COMMERCE,
SCIENCE, AND TRANSPORTATION
UNITED STATES SENATE
ONE HUNDRED SIXTEENTH CONGRESS
FIRST SESSION

JULY 23, 2019

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED SIXTEENTH CONGRESS

FIRST SESSION

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TUESDAY, JULY 23, 2019

U.S. SENATE,
SUBCOMMITTEE ON SCIENCE, OCEANS, FISHERIES, AND WEATHER,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The Subcommittee met, pursuant to notice, at 2:16 p.m. in room SD-562, Dirksen Senate Office Building, Hon. Cory Gardner, Chairman of the Subcommittee, presiding.

Present: Senators Gardner [presiding], Sullivan, Johnson, Scott, Baldwin, and Blumenthal.

**OPENING STATEMENT OF HON. CORY GARDNER,
U.S. SENATOR FROM COLORADO**

Senator GARDNER. I would like to call this hearing to order.

Thank you so much to Ranking Member Baldwin for your partnership on this hearing today and to the witnesses for appearing today.

This hearing will focus on the current state of our working waterfronts, how we can balance stakeholder needs and maximize the benefits from our water and coastal resources. Witnesses will also discuss the current challenges, highlight management and development successes, and provide suggestions on how our waterfronts could be further improved, including inland waterfronts.

I have to apologize that due to a floor vote on the 9/11 First Responders legislation that I am co-leading with Senator Gillibrand, I will need to step away from the chair to deliver remarks on that bill and some other work that we are doing as we approach the Senate vote and some amendments. But you will be in good hands with Senator Baldwin, as she takes the gavel and takes over the hearing, obviously a wealth of knowledge on waterfront issues, waterfront community issues. And I will do my best to get back for questions. But thank you very much, Senator Baldwin, for that and apologies to the rest of the witnesses.

I want to introduce our first witness today. I am especially excited to welcome a Colorado witness who comes to us from the Home of Heroes, Pueblo, Colorado, where she has played an instrumental role in rebuilding Pueblo's waterfront and revitalizing the special Colorado community with a history in steel and steel production. Ms. Lynn Clark is currently the Executive Director of the Historic Arkansas Riverwalk of Pueblo, or HARP. She previously

served HARP as the Director of Development and Public Relations and as the Assistant Director. Ms. Clark has led the grant-writing efforts, researching and writing successful government grant applications such as EDA and DOLA, private foundation grants and corporate gifts to support the planning, design, construction, and capital improvements for HARP. She graduated from Ramapo College of New Jersey with a bachelor's of science in business administration.

Mr. Mike Friis—I think I am doing this out of order. We are going to go from left to right, but I am doing the introductions out of order. So leaving my Colorado witnesses, going over to Mr. Genrich, Mr. Genrich is the Mayor of Green Bay, Wisconsin. Let us just say we know Green Bay well in Colorado, dating all the way back to Super Bowl XXXII in 1998.

[Laughter.]

Senator GARDNER. Thank you very much for being here.

Dr. Monty Graham joins us from the University of Southern Mississippi where he serves as Associate Vice President for Research of Coastal Operations.

I just introduced Ms. Clark.

And finally, Mr. Mike Friis is an Executive Committee Member at the National Working Waterfront Network.

So we are going to go from my left to the right. Mayor Genrich, if you would like to begin your testimony. I am sorry. I apologize. I am going to turn it over to Senator Baldwin for her opening comments. I am sorry.

**STATEMENT OF HON. TAMMY BALDWIN,
U.S. SENATOR FROM WISCONSIN**

Senator BALDWIN. No problem at all.

So, Mr. Chairman. I really appreciate your willingness to hold this hearing on an issue that is of great importance to Wisconsin and, frankly, communities across this country, the resiliency and economic importance of our waterfronts.

In Wisconsin, we are blessed with many, many waterfronts. We are home to 15,000 inland lakes, many rivers that connect them. Our two Great Lake coastlines—Lake Michigan is our east coast, and the south shore of Lake Superior is our north coast. And to our west, life in our state is also defined by our third coast, the mighty Mississippi River. It carries agricultural goods to market, brings fertilizer and other inputs up the river from the Gulf, and acts as one of the largest global migration pathways for waterfowl and provides incredible recreation assets to our river towns.

These bodies have long played a critical role in the economy of our state. A century ago, industry built up along the banks of our rivers, making use of the hydropower that was readily available and using the rivers to move their goods to market. Now, many of these legacy industries have changed locations or technologies and many old waterfront industrial sites are sitting under-utilized, often blocking community access to the waterfront.

For Wisconsin communities, from our small towns to our cities, waterfronts hold the potential for new economic opportunities, improved quality of life, and local revitalization. Across the country, each state and region has its own unique dynamics related to its

waterfronts, from the challenges New England towns face to make sure that fishermen continue to have access to working waterfronts, to the challenges that drought-prone States face to conserve water resources while balancing economic needs with the health of local ecosystems.

What ties all of these challenges together is that our communities, from rural towns to our largest cities, and every place in between, our communities are facing extreme challenges to their resiliency. We are seeing storm water systems that are overwhelmed during heavy rain events. Elsewhere, we are seeing stream banks that are destabilized by severe drought that is followed by flash floods, and these impacts come on top of aging infrastructure that was designed to face challenges our communities knew about years, in fact, decades ago. Increasingly these storm water systems, embankments, bridges, berms, and other structures are failing to meet the stresses that they face from severe storms sustained by rainfall and flooding and other localized challenges.

There are a lot of things that need to be done to support the economic revitalization of our waterfront communities and also support their resiliency.

I am convinced that we must start by working directly with local leaders and supporting them in their work to address the challenges of the communities they represent. And that is why I am particularly pleased to welcome our panel of witnesses, each of whom has substantial experience with the challenges facing their local communities and regions. I want to extend a special welcome to our two Wisconsinites here today: Green Bay Mayor Eric Genrich, for whom resiliency and revitalization issues are a practical and pressing reality because of the significant storm and flooding events this city faces; and Mike Friis, a national leader in coastal management who has dedicated his career to supporting local communities to manage their coastlines and make the most of their waterfronts. Wisconsin is fortunate to have each of these leaders focused on the many challenges and opportunities that waterfront resiliency and revitalization pose.

In support of their work and in the face of the many challenges that waterfront communities confront across the country, I am preparing to reintroduce my Waterfront Community Revitalization and Resiliency Act. This bill has previously passed the Commerce Committee and passed the Senate by unanimous consent. And, Mr. Chairman, I am hopeful that we can work together to update this legislation following the input from our witnesses today so that communities can have access to the technical assistance and funding they need to address the substantial challenges that they face in improving their resiliency and ensuring that coastal and waterfront towns continue to be wonderful places to live, do business, and recreate.

Thank you, Mr. Chairman.

Senator GARDNER. Thank you, Senator Baldwin.

Mayor Genrich.

**STATEMENT OF ERIC GENRICH,
MAYOR OF GREEN BAY, WISCONSIN**

Mr. GENRICH. Chairman Gardner, Ranking Member Baldwin, thank you so much for inviting me here today to testify before your subcommittee. Being in the first 100 days of my administration as the 42nd Mayor of Green Bay, I still have a lot to learn, but one thing I know for sure is that we are incredibly lucky to live on the Great Lakes, the largest source of fresh water in the world.

Like many waterfront communities, we are rediscovering the recreational and environmental value of our waterways. Ten years ago, city leaders determined to bring life back to the Fox River with the construction of our CityDeck in downtown Green Bay. The city is also nearing the completion of a multiyear effort to restore a swimming beach at Bay Beach Amusement Park, which has been closed to swimmers for nearly 80 years. Finally, I have been working closely with our county's administration and harbor commission to develop a plan to relocate coal piles from our waterfront in downtown Green Bay to the site of a decommissioned coal-fired power plant. We hope to make room for multiple public and private uses of varying types in this location while constructing a 21st century commercial port at the mouth of the bay on the site of the former power plant.

Like many waterfront communities, we have recognized and made strides to rectify our historically dysfunctional relationship with our greatest natural resource. We are actively seeking to develop our waterfronts in environmentally appropriate and economically productive ways. Significant challenges remain, however. Lake Michigan and the Bay of Green Bay are plagued with invasive species. There is a dead zone in the bay that is a result of something phosphorous runoff and is threatening one of the greatest fisheries in the world, and our waterfront areas have suffered from coastal erosion and from flooding.

With regard to flooding 13 percent of the city's parcels are located within the boundaries of our 100-year floodplain. This spring, our East River topped its banks and flooded scores of residents in the floodplain on the east and west sides of the East River, and late last summer, an extreme rain event caused significant flooding on our city's east side. Just this past weekend, we experienced more flooding in low-lying areas of Green Bay caused by torrential downpours.

Great Lakes levels remain historically high in most lakes, and Lakes Michigan and Huron were just 1 inch shy of our June record. These high water levels have caused us to lift and fix our docks at the metro boat launch and led to the cancellation of our full marathon this spring because of flooding on our Fox River Trail. In the context of what other communities have faced, our problems might seem small, but it is clear that they are not going away. If it is not high water levels, it will be extreme weather events that impact cities like Green Bay all across the country. Heavy rainfall, in particular, has been a major problem for Wisconsin communities in recent times. On August 28, 2018, we experienced 2.6 inches of rain in just two and a half hours, with 6 and a half inches of rain falling in some parts of Green Bay in a 24-hour period.

To recap our recent history, we have experienced multiple localized flooding events and a sizable riverine flooding event in the past year, and we have no reason to expect these events to become less likely. President Trump's Environmental Protection Agency tells us the opposite, in fact. From the EPA website, quote, heavy downpours have increased in frequency and intensity worldwide in the last 50 years. They are expected to become more frequent and intense as global temperatures continue to rise. As a result, the risk of flooding is likely to increase dramatically across the United States. The average 100-year floodplain is projected to increase 45 percent by the year 2100.

Green Bay is a coastal community and it is an old city. So as a result, there are many areas that are low-lying and were once wetlands. Over the years, springs and swamps have been filled and creeks have been forced underground. During periods of high water or significant rain events, nature finds a way into the homes and businesses of area residents. This is detrimental to the lives and livelihoods of our citizens, and it is costly for taxpayers. And we as elected officials must be committed to finding a long-term solution to this national and global problem that empowers local communities to act.

Since being elected in April, I have convened two meetings of significance on this topic: one with affected area residents and one with flood management experts. We are also engaged in the process of applying for a grant to perform an audit of the city's codes and ordinances to make sure it is conducive to the development of necessary green infrastructure elements. And we are reviewing our county's FEMA-required hazard mitigation plan to ensure it recognizes and prioritizes all available strategies for flood mitigation.

Moving forward, we will be thoroughly assessing our flood risks, evaluating traditional and green infrastructure options, constructing physical solutions, and potentially relocating residents from vulnerable areas. And when I say "we," I mean the City of Green Bay, our government, and our residents, but I hope it soon means all the governments and residents of the lower Fox and lower East River watersheds. Water, like other things, rolls downhill, and we are at the bottom. Although we are the largest municipality in the region, we do not have the resources or the tools to solve these issues on our own. Floodwaters do not care about municipal boundaries and neither can we.

So what am I asking of you? Help, of course. Money, undoubtedly. But more than specific requests, I am asking for you to muster the political will to do what is called for in response to an obvious and growing threat to communities all across this country.

Just last week, our Nation celebrated the 50th anniversary of our Moon landing. I am not the first and I know I will not be the last to urge you to recapture the political imagination that allowed us to think big and act boldly at that time. And I am begging you to take that charge seriously. Temperatures and water levels are rising, and our weather is becoming identifiably more extreme. Whatever the cause, we have no alternative but to commit ourselves to investing in infrastructure and enacting the policies to build resilient communities across this country.

Green Bay is an exceptional city in a great state in an indispensable nation. And with apologies to Senator Cruz, who is a member of this Committee, we are home to America's team. Green Bay is by far the smallest NFL city and the only one with a franchise that is community-owned. We are the little community that could in the past and that will into the future. My bosses, Green Bay's citizens, know that we are capable of great things as a city, and they are ready to meet the challenges we face head on. So please lead. Lead us boldly. Lead us optimistically. Lead us scientifically. And we will follow.

So thanks so much for having me here today, Chairman Gardner, Ranking Member Baldwin. I am happy to answer questions.

[The prepared statement of Mr. Genrich follows:]

PREPARED STATEMENT OF ERIC GENRICH, MAYOR OF GREEN BAY, WISCONSIN

Chairman Gardner, Ranking Member Baldwin, and Members: thank you so much for inviting me here today to testify before your subcommittee. Being in the first 100 days of my administration as the 42nd mayor of Green Bay, WI, I still have a lot to learn, but one thing I know for sure: we are incredibly lucky to live on the Great Lakes, the largest source of freshwater in the world. We are situated at the confluence of the Fox River, its major tributary, the East River, and the bay of Green Bay. Our drinking water comes from off the western shore of Lake Michigan, and many of our historic industries related to logistics, bulk commodities, and paper-making would not exist if not for our waterways. Finally, and importantly, the Menominee people have called Wisconsin and the Bay Area home for thousands of years and have relied on coastal wild rice beds, which are currently being restored because of their environmental and cultural value. In short, we are grateful to be a coastal community. We are proud of our heritage and we are hopeful for our future.

Like many waterfront communities, we are rediscovering the recreational and environmental value of our waterways. Ten years ago, city leaders determined to bring life back to the Fox River with the construction of our CityDeck in downtown Green Bay. Now, it's hard to imagine what our downtown would look like without this vibrant public space in the heart of our community. The city is also nearing the completion of a multi-year effort to restore a swimming beach at Bay Beach Amusement Park, which has been closed to swimmers for nearly eighty years. Based on the analysis of Wisconsin's Department of Natural Resources, water quality at our beach will be in line with what is observed at other Great Lakes beaches in the state, but it's also true that we will have to close it periodically because of green-blue algal blooms. Finally, I have been working closely with our county's administration and harbor commission to develop a plan to relocate coal piles from our waterfront in downtown Green Bay to the site of a decommissioned coal-fired power plant. We hope to make room for multiple public and private uses of varying types in this location, while constructing a 21st century commercial port at the mouth of the bay on the site of the former power plant.

That is all to say that we, like many waterfront communities, have recognized and made strides to rectify our historically dysfunctional relationship with our greatest natural resource. We are actively seeking to develop our waterfronts in environmentally appropriate and economically productive ways. Significant challenges remain, however. Lake Michigan and the Bay of Green Bay are plagued with invasive species; there is a dead zone in the bay that is the result of significant phosphorus runoff and is threatening one of the greatest fisheries in the world; and our waterfront areas have suffered from coastal erosion and flooding.

With regard to flooding, 13 percent of the city's parcels are located within the boundaries of our 100-year floodplain. This spring our East River topped its banks and flooded scores of residents in the floodplain on the east and west sides of the East River. Late last summer an extreme rain event caused significant flooding on our city's east side. And just this past weekend we experienced more flooding in low-lying areas of Green Bay caused by torrential downpours.

Great Lakes levels remain historically high in the case of most lakes, and Lakes Michigan and Huron were just one inch shy of the June record. These high water levels have caused us to lift and fix our docks at the metro boat launch and led to the cancellation of our full marathon this spring because of flooding on our Fox

River Trail. In the context of what other communities have faced, our problems might seem small, but it is clear that they are not going away. If it's not high water levels, it will be extreme weather events that impact cities like Green Bay all across the country. Heavy rainfall, in particular, has been a major problem for Wisconsin communities in recent times, and according to the research of Dr. David Liebl of UW-Madison, the number of rainfalls producing more than 5" of rain almost doubled in frequency between the years 2001–2014 compared to 1950–1975, occurring 3.1 times per year during the more recent period. On August 28, 2018, we experienced 2.6" of rain in just two and a half hours with 6.5" of rain falling in some parts of Green Bay in a twenty-four hour period.¹

To recap our recent history, we have experienced multiple localized flooding events and a sizable riverine flooding event in the past year, and we have no reason to expect these events to become less likely. President Trump's Environmental Protection Agency tells us the opposite, in fact. From the EPA website:

Heavy downpours have increased in frequency and intensity worldwide in the last 50 years. They are expected to become more frequent and intense as global temperatures continue to rise. As a result, the risk of flooding is likely to increase dramatically across the United States. The average 100-year floodplain is projected to increase 45 percent by the year 2100. . .²

Looking back a bit further, our two largest floods in the last fifty years occurred in 1973 and 1990. On April 9, 1973 the City of Green Bay experienced a 500-year event when extremely high lake levels and winds out of the northeast caused massive flooding throughout much of the city with 4 feet of water in our downtown and millions of dollars in property damage.³ A June 1990 flood also caused over \$11 million dollars in damages to area properties, having impacted over 200 homes and businesses when the East River topped its banks because of a 4.9 inch rain event.⁴

Green Bay is a coastal community, and it is an old city. As a result, there are many areas that are low-lying and were once wetlands. Over the years, springs and swamps have been filled and creeks have been forced underground. During periods of high water or significant rain events, nature finds a way into the homes and businesses of area residents. This is detrimental to the lives and livelihoods of our citizens, and it is costly for taxpayers, and we as elected officials must be committed to finding a long-term solution to this national and global problem that empowers local communities to act. Since being elected in April I have convened two meetings of significance on this topic: one with affected area residents and one with flood management experts. We are also engaged in the process of applying for a grant to perform an audit of the city's codes and ordinances to make sure it is conducive to the development of necessary green infrastructure elements. And we are reviewing our county's FEMA-required Hazard Mitigation Plan to ensure it recognizes and prioritizes all available strategies for flood mitigation.

Moving forward, we will be thoroughly assessing our flood risks, evaluating traditional and green infrastructure options, constructing physical solutions, and potentially relocating residents from vulnerable areas. And when I say "we" I mean the City of Green Bay, our government and our residents, but I hope it soon means all the governments and residents of the lower Fox and lower East River watersheds. Water, like other things, rolls downhill, and we are at the bottom. Although we are the largest municipality in the region, we don't have the resources or the tools to solve these issues on our own. Floodwaters don't care about municipal boundaries, and neither can we. As Julia Noordyk from the University of Wisconsin Sea Grant has stated, "Our outdated and aging infrastructure was not designed for the quantity of runoff that our city is now experiencing due to more frequent and intense storm events and loss of water storage capacity in the upper reaches of the watershed. A large-scale regional approach is needed if we are to address these issues."

So what am I asking of you? Help, of course. Money, undoubtedly. The Great Lakes Restoration Initiative has been incredibly successful and popular. I ask for your continued support of this program. The identified GLRI goals of making Great Lakes water safe for recreation, delisting all Areas of Concern, and eliminating nuisance algal blooms all overlap with our needs and the needs of many coastal com-

¹ Bachhuber, Jim. 2018. "Managing the (not so) rare rainstorms". *The Municipality*. 113 (12).

² "Green Infrastructure: Manage Flood Risk". EPA.gov. <https://www.epa.gov/green-infrastructure/manage-flood-risk>. (Accessed July 16, 2019).

³ "Nor'Easter Coastal Storm Flooding on Green Bay". GreatLakesResilience.org. <http://greatlakesresilience.org/stories/wisconsin/nor%E2%80%99easter-coastal-storm-flooding-green-bay-0> (Accessed July 16, 2019).

⁴ Liebl, David S. "Mitigating Flood Risk in the East River". WisconsinAcademy.org. <https://www.wisconsinacademy.org/blog/waters-wisconsin/mitigating-flood-risk-east-river> (Accessed July 16, 2019).

munities. In addition, the FEMA Pre-Disaster Mitigation Grant Program, the Army Corps of Engineers Silver Jackets, and the NOAA Coastal Resilience Grant Program are all relevant to our needs. We ask that you continue to support these initiatives.

More than those requests, though, I am asking for you to muster the political will to do what is called for in response to an obvious and growing threat to communities all across this country. Just last week our Nation celebrated the 50th anniversary of our moon-landing. I am not the first, and I won't be the last, to urge you to recapture the political imagination that allowed us to think big and act boldly at that time, and I am begging you to take that charge seriously. Temperatures and water levels are rising and our weather is becoming identifiably more extreme. Whatever the cause, we have no alternative but to commit ourselves to investing in the infrastructure and enacting the policies to build resilient communities across this country.

Green Bay is an exceptional city, in a great state, in an indispensable nation. With apologies to Senator Cruz, we are home to America's Team. Green Bay is by far the smallest NFL city and the only one with a franchise that is community-owned. We are the little community "that could" in the past and "that will" into the future. My bosses, Green Bay's citizens, know that we are capable of great things as a city, and they are ready to meet the challenges we face head-on. So please lead. Lead us boldly, lead us optimistically, lead us scientifically. We will follow.

Thank you again Chairman Gardner, Ranking Member Baldwin, and members. It is a true privilege to be with you today. I am happy to answer questions.

Senator GARDNER. Thank you, Mr. Genrich.
Dr. Graham, do you want to proceed?

**STATEMENT OF DR. MONTY GRAHAM, ASSOCIATE VICE
PRESIDENT FOR RESEARCH, COASTAL OPERATIONS,
UNIVERSITY OF SOUTHERN MISSISSIPPI**

Dr. GRAHAM. Chairman Gardner, Ranking Member Baldwin, and esteemed subcommittee members, thank you for the opportunity to testify on behalf of the University of Southern Mississippi and the Mississippi coastal region. I have to say Southern Miss because we have a strong connection with our Green Bay partners in the form of Brett Farve.

[Laughter.]

Dr. GRAHAM. I appreciate your interest in addressing economic, recreational, and environmental challenges associated with working waterfronts. This is excellent timing as the State of Mississippi is currently working to strengthen its coastal communities and waterfronts to create a resilience-based economy, and I believe that our efforts can be supported and strengthened by Federal legislation.

Mississippi's working coast has a rich history tied to the sea. It is our blue economy. Harvests for shrimp, oysters, numerous species of fish abound from what has been coined the "Fisheries Fertile Crescent" because of the nutrient-rich waters fed by many rivers. Our warm winter climate has been bringing tourists to the coast for more than 100 years. Visit us in February, you might see as many Wisconsin license plates as you do Mississippi license plates. And shipbuilding continues to rule the manufacturing in Mississippi with a history predating the founding of our United States. World War II was fought and won with Mississippi-built ships, and that carries today as nearly 70 percent of the surface warfighting ships of the U.S. Navy are built in Mississippi.

Resiliency is baked into the DNA of our coastal communities in Mississippi following a generation of natural and human-related engineering disasters. There now exists an entire generation of young people entering the workforce who experienced at least one

disaster in the Gulf of Mexico every 5 years: Hurricane Katrina, Deepwater Horizon oil spill, and two significant openings of the Bonnet Carre Spillway. The ongoing opening of the spillway has flooded the entire Mississippi coast with freshwater from the Mississippi River leading to high mortality of oysters, shrimp, fish, dolphins, and sea turtles and is now generating an economically crippling harmful algal bloom expected to persist through the remainder of this summer.

Recovery and restoration funds, much of them federal, came and they need to come again to help our Gulf communities overcome current losses. But I fear there is an expectation that disasters are needed to keep our economy moving. This is what you would call a disaster-based economy.

Mississippi is at the critical point of making large decisions that move the coastal working waterfront away from a disaster-based economy to a resilience-based economy through workforce and economic diversification.

In Mississippi, under the leadership of Governor Phil Bryant, working with the University of Southern Mississippi, we are building a new blue economy to diversify our traditional economy founded on shipbuilding, fishing, and tourism. This economy will build on new and emerging technology fields around unmanned maritime systems. It creates opportunities for high-paying jobs in science, technology, engineering, and math, such as robotics engineering and machine learning computer skills. It provides new opportunities for Mississippi's best and brightest students to stay on the coast. In short, it builds resilience.

This committee has played a significant and important role in Mississippi's new blue economy in the passage of the Commercial Engagement Through Ocean Technology Act of 2018. On behalf of Mississippi, I thank you for that work, and I look forward to similar legislation such as the forthcoming Advancing the Quality and Understanding of American Aquaculture Act to have comparable incentives for economic development around aquaculture to build a resilient economy in coastal Mississippi.

Other Federal efforts such as the Waterfront Community Revitalization and Resiliency Act can aid our communities in reaching much needed resiliency, but from lessons learned from the Mississippi coast, I recommend the committee consider the regional approaches to resilience planning.

In Mississippi, Hurricane Katrina, Deepwater Horizon, and current flooding from the Mississippi River spread impacts across multiple government boundaries. Disasters do not strike cities. They strike regions. The National Academies recently published a report, *Measuring Community Resilience: Actions for Communities* and the Gulf Research Program. Of interest to you, Chairman Gardner, is that one of the case studies of the National Institute of Standards and Technology's Community Resilience Planning Guide was in Boulder County, three cities and four towns. And I think that is a prime example of resiliency planning.

I highlight a few examples of existing regional and national coordinating bodies engaged in resiliency. The first is Consortium for Ocean Leadership based here in the Nation's capital, represents

leading ocean science, research, and technology, organization, and stands ready to facilitate resiliency planning.

The second is the excellent work of our State Sea Grant programs that include the Great Lakes regions.

And third, specific to us, is the Gulf of Mexico Alliance, a network of five Gulf States. GOMA is authorized currently by each of the governors, and hopefully it will be authorized by Congress under the recently introduced Regional Ocean Partnership Act.

In closing, resiliency planning in advance of a major disaster is the key to quicker recovery, but we should measure the success of true resiliency not based on bouncing back but bouncing forward.

Thank you, Chairman Gardner, Ranking Member Baldwin, and the rest of the subcommittee for your efforts today. Thank you.

[The prepared statement of Dr. Graham follows:]

PREPARED STATEMENT OF DR. MONTY GRAHAM, ASSOCIATE VICE PRESIDENT FOR RESEARCH, COASTAL OPERATIONS, THE UNIVERSITY OF SOUTHERN MISSISSIPPI

Chairman Gardner, Ranking Member Baldwin, and esteemed subcommittee members, thank you for this opportunity to testify on behalf of The University of Southern Mississippi and Mississippi coastal region. I appreciate your interest in addressing the economic, recreational, and environmental challenges associated with working waterfronts. This is fortuitous timing, as the state of Mississippi is currently working to strengthen its coastal communities and waterfronts to create a resilience-based economy, and I believe that these efforts can be supported and strengthened by Federal activities. I appreciate Ranking Member Baldwin's work to support waterfront community revitalization and resiliency through the *Waterfront Community Revitalization and Resiliency Act* and have some ideas to expand upon and strengthen last Congress' already solid piece of legislation.

There are three takeaways from my testimony today:

1. Resiliency is baked into the DNA of coastal communities in Mississippi following a generation of natural and human-related engineering disasters;
2. Mississippi is at the critical point of making large decisions that will move the coastal working waterfront away from a disaster-based economy to a resilience-based economy through workforce and economic diversification;
3. Federal efforts, such as the *Waterfront Community Revitalization and Resiliency Act*, can aid our communities in reaching this much-needed resiliency, but from lessons learned along the Mississippi coast, I recommend the Committee consider the role of regional approaches to resiliency planning.

Mississippi's Economy

As you know, Mississippi's working coast has a rich history tied to the sea. Harvests for shrimp, oysters, and numerous species of fish abound from what has been coined the "Fisheries Fertile Crescent" around the nutrient-rich waters fed by many rivers. The warmer winter climate has been bringing tourists to the coast for more than 100 years. Visit us in February, and you might see as many Wisconsin as Mississippi license plates. And shipbuilding continues to rule manufacturing in Mississippi with a history pre-dating the establishment of the United States. World War II was fought and won with Mississippi-built ships, and that carries today as nearly 70 percent of the surface warfighting ships of the U.S. Navy are built in Mississippi. And our warm Mississippi waters are connected to the Arctic, as the next generation of heavy icebreakers for the United States Coast Guard are now under construction in Mississippi. Huntington Ingalls shipyard in Pascagoula remains the state's largest single-location employer, creating 12,500 jobs.

We are extremely proud of Mississippi's rich history and contributions to our Nation in shipbuilding, fishing, and tourism. These key sectors have the most direct contact to the Gulf of Mexico and form the basis for what is Mississippi's maritime blue economy.

But, the Gulf of Mexico, as richly as it provides opportunity, also carries tremendous risks. There exists now an entire generation of young people entering the workforce who have experienced at least one significant disaster in their Gulf of Mexico at least every five years: Hurricane Katrina, the Deepwater Horizon oil spill, and two significant openings of the Bonnet Carré Spillway (which have flooded the

entire Mississippi coast with freshwater from the Mississippi River leading to significant mortality of fisheries, dolphins and sea turtles, and now generating an economically crippling harmful algal bloom expected to persist through the remainder of this summer). I point out these disasters as specific examples because they reflect major impacts to communities though damage to infrastructure, human health and well-being, as well as job loss.

The recovery and restoration funds, most of them federal, came. Physical recovery can be slow, but it does occur. I would say that for any single disaster, no matter how large, Mississippians exhibit incredible resiliency. But in the eyes of the youngest working generation, they must feel like they are in a boxing match with their hands tied. Mind you, these disaster-recovery cycles are still happening on top of all the other crises we face as a nation, such as housing market collapses, recessions, and the opioid epidemic. The expectation for them must be that some disaster is coming every five years, then that will be followed by recovery funding. This is what you would call a disaster-based economy.

The goal now for Mississippi is to move from that disaster-based economy to a resilience-based economy. This is where the Committee's work through the working waterfronts legislation will have substantial influence on that transition.

Resiliency planning in advance of a major disaster is the key to quick and successful recovery. But we should measure success on the true definition of resiliency, which is not to simply bounce back but to bounce forward. Since Hurricane Katrina in 2005 and Deepwater Horizon in 2010, Mississippi has received billions of dollars in recovery and settlement funds with an eye on bouncing forward. Much of these monies have been spent on needed re-engineering of our coastlines and infrastructure.

But coastal engineering is not the only, or sometimes even the best, answer. We need to reform our blue economy to be more resilient. Taking a page from my freshman *Introduction to Ecology* textbook, the healthiest ecosystems are both productive and diverse. Productivity and biodiversity buffer an ecosystem against damage. Similarly, productive and diverse economies are also inherently buffered against major disruption related to disaster.

In Mississippi, we are building a new blue economy to diversify our traditional economy founded on shipbuilding, fishing, and tourism. This economy will build on new emerging technology fields around unmanned maritime systems. It creates opportunities for high-paying science, technology, engineering, and math (STEM) jobs, such as robotics engineering and machine-learning computer skills. It provides new opportunities for Mississippi's best and brightest students to stay on the coast. In effect, it builds a new and more resilient ecosystem.

Using the Waterfront Community Revitalization and Resiliency Act to Create a Resilience-based Economy

To Governor Phil Bryant's great credit, this new blue economy was not reactionary to a crisis. Rather, it was born from a deliberate plan created by his Ocean Task Force to create a strategic roadmap for new economic opportunities in maritime technology. Governor Bryant knew economic growth on the coast had to be oriented to the maritime economy and that it had to add to coastal economic resiliency. This Committee has played a significant and important role in Mississippi's new blue economy with the passage of the *Commercial Engagement through Ocean Technology (CENOTE) Act of 2018*. On behalf of Mississippi, I thank you for that work. I look forward to similar legislation, such as the forthcoming *Advancing the Quality and Understanding of American Aquaculture (AQUAA) Act*, to have comparable incentives for economic development around aquaculture to continue building a resilient economy in coastal Mississippi.

The *Waterfront Community Revitalization and Resiliency Act* can help support Mississippi's ongoing efforts to ensure resiliency in a number of ways. I'm particularly interested in components of the resiliency plan that aid in efforts to further diversify our economy and that address ecosystem challenges, such as the natural and human engineering disasters I described above.

I appreciate the proactive approach of this bill. Currently, disaster funding is reactive in the sense that we implement resiliency measures after the fact using disaster recovery funding. While disaster recovery aid is badly needed and necessary for recovery, if we're not taking steps to make our communities more resilient in the first place, we're always playing catchup after a disaster strikes, and our future resiliency will only be incremental at best. Encouraging and supporting communities' efforts to develop forward-looking plans for resiliency will strengthen them and will ultimately reduce the amount of Federal spending on disaster recovery.

A Regional Approach to Resiliency Planning

The legislation is strong, it's proactive and it will no doubt carry cost-savings to the taxpayer in the long run. I would, however, encourage you to consider taking a regional approach to resiliency planning. The previous bill targeted units of government for eligibility. However, in Mississippi, Hurricane Katrina, Deepwater Horizon, and the current flooding from the Mississippi River spread impacts across multiple governmental boundaries. Disasters don't strike cities, they strike regions. The National Academies of Sciences, Engineering, and Medicine recently published their report, *Building and Measuring Community Resilience: Actions for Communities and the Gulf Research Program*. One of the case studies they examine is implementation of the National Institute of Standards and Technology's Community Resilience Planning Guide in Boulder County to direct Federal recovery funding. This cooperative group included Boulder County, as well as four cities and three towns within the county. This is a prime example of regional resiliency planning. Additionally, one of the report's recommendations is developing a "major, coordinated initiative" around community resilience, which includes involving several communities and fostering interactions across and among them. The National Academies' Gulf Research Program made this recommendation for Gulf resiliency, and this legislation would authorize support for such an approach.

In Mississippi, we adopt a brand for our 80-mile waterfront as "One Coast" because the municipal jurisdictions across the ten coastal cities are not apparent to the visitor. "One Coast" reflects the common goals and interests of coastal Mississippi. Where the Gulf Coast Regional Planning Commission adopts transportation planning goals for the "One Coast," I believe resiliency planning would be best served if incentivized at the regional level as well.

I would go even further to encourage resilience planning across the entire Gulf region using the Gulf of Mexico Alliance (GOMA), a network of the five Gulf states. GOMA is authorized currently by each of the governors. Hopefully it will be authorized by Congress under the recently introduced *Regional Ocean Partnership Act*. Thank you, Chairman Wicker, for your leadership on this topic.

When needed at the national level, our Consortium for Ocean Leadership, a non-profit based here in the Nation's capital that represents the leading ocean science, research, and technology organizations, stands ready to facilitate resiliency planning to the benefit of overall ocean security. And, I would acknowledge the vital importance of coastal and Great Lakes Sea Grant Programs in forging regional and national resiliency planning as well.

Finally, anytime we talk about resiliency of a maritime economy, we must acknowledge the importance of healthy and productive oceans, lakes, and waterways. An overfished Gulf choked by plastics and harmful algal blooms does not benefit the Nation. In fact, it increases our national vulnerability. As we move forward, we must ensure good management decisions are supported by the best science. I leave you with this vision from Admiral James Watkins,

"Our oceans, coasts, and Great Lakes are clean, safe, prospering, and sustainably managed. They contribute significantly to the economy, supporting multiple, beneficial uses such as food production, development of energy and mineral resources, recreation and tourism, transportation of goods and people, and the discovery of novel medicines, while preserving a high level of biodiversity and a wide range of critical natural habitats."

Thank you, Chairman Gardner, Ranking Member Baldwin, and the rest of the subcommittee members for your efforts to achieve this vision and for having me here to testify today.

Senator BALDWIN [presiding]. Ms. Clark.

STATEMENT OF LYNN CLARK, EXECUTIVE DIRECTOR, HARP AUTHORITY, HARP FOUNDATION

Ms. CLARK. Thank you to the committee for offering this opportunity to Pueblo, Colorado to speak today.

The Historic Arkansas Riverwalk of Pueblo, HARP, or simply the Riverwalk is a story of resilience and resolve. From its earliest days, Pueblo has benefited from its proximity to the Arkansas River. This was one of the many reasons that a steel mill established itself here in the 1880s. The mill was so significant, it be-

came the primary employer in Pueblo, effectively establishing a single industry town.

In the early 1980s, recession hit. The steel mill which had previously employed over 5,600 people experienced massive layoffs, and unemployment was at 20 percent.

It was at this time that the City of Pueblo approached the EDA and was granted funding to have an economic dislocation study done, which resulted in a strategy for economic diversification, beautification projects, and rebranding of Pueblo as a recreation and tourism destination. This study was a turning point for Pueblo and commenced a massive urban revitalization effort.

Cities in crisis tend to take risks, and Pueblo was suffering greatly. A coalition of concerned citizens came together to change the direction of Pueblo's future. As part of the plan, the decision was made to bring the Arkansas' path back through downtown and use it as a focal point for redevelopment of the city.

It was not a simple journey because it would require convincing the citizens of Pueblo to pay for this considerable investment. Many public meetings and many one-on-one conversations led to the approval of a \$12.8 million bond issue in 1995.

Construction of the Riverwalk was such a tremendous undertaking that the strategy was to build it in phases, seeking funding for each phase as we went along. Funding sources have included Federal programs such as the EDA, the American Recovery and Reinvestment Act, and TIGER, Transportation Investment Generating Economic Recovery. Many State programs have contributed, and we have major gifts from local foundations, as well as private citizens.

Development has also included Veterans Bridge, horticulture projects, sculptures, murals, and fountains, as well as an educational area devoted to Zebulon Pike and his expeditions in the region. Our current phase, which is nearing completion, serves as an inviting link to the newly expanded convention center.

Pueblo has seen a shift in business development, transitioning from being almost exclusively a steel town to more diverse manufacturing and office jobs. Recently, \$8.7 million in funding was secured through a ballot issue approved by Pueblo County residents for design and construction of a boathouse and the eastward extension of the Riverwalk channel. Local visitors bureau data tells us that since the Riverwalk has been created, we have increased visits from Colorado residents and surrounding States. This, as a result, has brought in and supported new businesses such as restaurants, hotels, and retail shops.

Property tax data indicates this area has higher property values and boasts some of the most valuable real estate in Pueblo County.

This project has created a new level of quality of life for residents. This is where they bring their friends and family.

Our hospitals and our other large employers use this area as a recruitment tool to attract new employees and their families.

We generate business activity for downtown Pueblo by marketing public and private events. For example, live music in a farmers market on a Thursday night raises the business level by 60 percent in the restaurants.

The beauty and activity of today's Riverwalk is a stark contrast to the downtown area that previously consisted of parking lots, storm water runoff ditches, and utility cooling ponds.

This is our community's front door, and it has all of the curb appeal we envisioned to bring more business to that door. It is the jewel and centerpiece for Pueblo's downtown revitalization efforts and is known as Pueblo's Happy Place.

Any undertaking of this magnitude requires the buy-in from local constituents and governmental support. In the midst of a recession and considerable devastation, Pueblo was able to redefine itself as a beautiful place to live, to visit. It became a viable downtown in which to locate diverse business and create community activity.

The impact and benefit of having an urban waterfront attractions are in some ways immeasurable. But looking back at where Pueblo was headed in the 1980s and where it is going today clearly illustrate that the Riverwalk is a crucial component of Pueblo's future and a priceless undertaking.

[The prepared statement of Ms. Clark follows:]

HISTORIC ARKANSAS RIVERWALK OF PUEBLO

A Story of Revitalization and Resiliency

1. Organization Background

The Historic Arkansas Riverwalk of Pueblo (HARP or Riverwalk) is an urban waterfront located in the center of Pueblo, Colorado's downtown that includes three unique environments: a lake, a navigable manmade channel, and a natural area with a stream. The Riverwalk is publicly owned, free of charge, accessible 24 hours each day and provides cultural, educational, economic, recreational, and social opportunities and experiences to a broad spectrum of the population within our region. It further serves the City of Pueblo by revitalizing an underdeveloped area in the urban core of the City. This urban redevelopment transformed the community and showcases the resolve of the citizens to diversify our local economic base.

The Riverwalk master plan calls for phasing of construction, each phase is completed as funding becomes available. Phases I & II of the Riverwalk were transformational, revitalizing the urban landscape of downtown Pueblo. The masterplan also called for building sites that can be sold to private developers. Several years after the completion of the initial phases real estate development began. The first development projects were residential townhomes, the Professional Bull Riders World Headquarters, the AT&T Service Center and Angelo's Pizza. The Ecowalk Building is home to several office suites, an exercise studio, investment professionals, law offices and 1129 Spirits & Eatery. The historic Waterfront Building has been completely renovated and is home to the Center for American Values featuring a photographic gallery of the Medal of Honor recipients, the Media Center, and Twenty One Steak. The Bella Santi Building holds a variety of businesses, Table 67 a casual dining eatery, and there are upscale residential units on the upper floors. Brue's Alehouse, The Clink Lounge and The Station (a boutique hotel) are in the remodeled former Police Department building. We are waiting for construction to begin on the new Hilton Garden hotel to be located directly on the channel. Our Riverwalk Welcome Center houses the Riverwalk Boat and Entertainment Operations. The Riverwalk currently has building sites available within the current footprint of the venue.

Pueblo's Riverwalk is a story of resiliency and resolve. Two of the City's strengths are its abundant supply of water and its proximity to the Arkansas River and Fountain Creek. The Arkansas River drew the steel mill to the area in the late 1800s, the mill became the largest manufacturer and the primary source of employment for Pueblo. Accessibility to the railroad system and other natural resources in the area continued to make Pueblo attractive to additional manufacturing companies and this resulted in a narrow employment base. The early 1980s brought a time of recession in the western states oil industry which affected the demand for seamless tube production, a product of the steel mill in Pueblo. In 1981, employment at the CF&I steel mill was approximately 5,500, this number declined to about 1,600. By

1982, Pueblo's unemployment approached 20 percent and some wondered if Pueblo would become a ghost town.

The City of Pueblo realized they needed economic assistance and contacted the Economic Development Administration (EDA). The EDA funded an Economic Dislocation Study that resulted in a strategy for redevelopment, which included economic diversification, beautification projects, and rebranding Pueblo as a recreation and tourism destination. The study was a turning point for the City of Pueblo and commenced a massive urban revitalization effort.

The grand vision for the Riverwalk began in 1991 when a coalition of interested citizens came together and conceived the creation of a river walk through downtown Pueblo, Colorado modeled after the famous River Walk in San Antonio, Texas. Both Pueblo and San Antonio had tragic flood events in 1921 that impacted life and property in their communities. After this flood Pueblo made the decision to relocate the Arkansas River flow behind a levee south of the downtown area to protect the city from future flood events. The coalition of Pueblo citizens visited with San Antonio and gathered information on their River Walk. After many visits and meetings with our new friends in San Antonio the Pueblo group realized that returning the river to the historic path through the downtown core could create new economic activity.

Communities in crisis are often willing to take risks. In 1993, the City of Pueblo created the HARP Commission and charged this citizen group with the responsibility to design, fund, and construct this multiple-phase, city-owned project.

The main objectives for the Riverwalk project included:

- Pulling Pueblo out of its economic slump
- The revitalization and beautification of downtown
- Overcoming the single industry focus, and
- Repositioning Pueblo as a tourist and recreation destination

In November of 1995, the citizens of Pueblo passed a 20-year, \$12.85 million bond issue to build the basic infrastructure of the Riverwalk. Subsequent years saw an additional \$20 million in investments and projects in the Riverwalk which established the groundwork for over \$100 million in additional investments and improvements in the downtown area. The HARP Foundation, a 501(c) (3) non-profit organization was also established in 1995, for the purpose of soliciting funds from the public and private sectors to help finance the construction of the Riverwalk and enhance the visitor experience. Groundbreaking for construction took place on September 27, 1996. The HARP Foundation has played an instrumental role in the development of the Riverwalk since it officially kicked off the initial capital campaign on August 15, 1996 which raised the remaining needed funds to complete Phases I and II of HARP.

The Riverwalk was officially dedicated and opened to the public on October 6, 2000. Upon completion of Phases I & II of the project, the City of Pueblo dissolved the HARP Commission and a new entity, the HARP Authority, was formed through an intergovernmental agreement between the City of Pueblo, Pueblo County, Pueblo Board of Water Works, Pueblo Urban Renewal Authority and the Pueblo Conservancy District (Exhibit 1). The HARP Authority is responsible for the promotion, management, supervision, operation, development, and maintenance of the Riverwalk. The management arm, HARP Authority, and the 501(c)3 funding arm, HARP Foundation, work together under a single Executive Director. This structure allows for a consistent mission and centralized future planning.

In 2006 construction began for Phase III, funding consisted of EDA, Community Block Development Grants (CBDG), community donations and corporate donations. This area was named Gateway Park and construction was completed in October of 2007.

Gateway Park was the site of the next project the construction of a pedestrian bridge. This bridge known as Veterans' Bridge received funding from Federal programs such as American Recovery and Reinvestment Act (ARRA), TIGER, and FASTER, state programs such as Colorado Department of Transportation (CDOT), community donations and corporate donations. Veterans' Bridge was completed in 2010. This monument celebrates our community's strong military history, we are known as "The Home of Heroes". The bridge is also featured on Pueblo's Walk of Valor tour, the tour has several stops on the Riverwalk and in the downtown area.

In 2013 to celebrate Pueblo's connection to Zebulon Pike, we installed a world class collection of bronze art depicting animals observed during the 1806 expedition of Zebulon Pike. In Pike's journal he described his camp as being located near the confluence of the Arkansas and Fountain Rivers. This \$450,000 art installation was donated to the Riverwalk by a local foundation that believes the Pueblo community and visitors should be able to enjoy fine art created by nationally recognized artists.

We offer a free Zebulon Pike History curriculum to schools upon request. Students utilize the outdoor education center and classroom labs to study plants, animals, water quality and Pike history. The Riverwalk made a perfect background to display this art and tell this story.

2. Future Planning

Our story is not finished. Per the master plan for the Riverwalk we have been designing and constructing elements as funding becomes available.

In September of 2019 the Riverwalk will be completing a \$2.7 million-dollar phase funded by the City of Pueblo, EDA, Colorado's Department of Local Affairs (DOLA) and the Colorado Regional Tourism Act. This phase creates the long-awaited Riverwalk channel Convention Center connection. The project became a reality when the City of Pueblo was awarded the Colorado Regional Tourism Act grant funding. Some of the other features incorporated in this phase are a children's play area with a chuckwagon climbing feature, and a bronze sculpture display depicting the Charles Goodnight-Oliver Loving Cattle Drive and educational plaques describing Pueblo's role in the early days of the cattle industry.

Funding provided by a 2016 ballot issue approved by Pueblo County residents will make available \$8.7 million dollars for design and construction of the Gateway Center Boathouse, and the eastward extension of the Riverwalk channel. The design portion of this project will begin in the fall of 2019 and we anticipate construction completion in 2021. This eastward extension positions the channel per the masterplan, so that in future phases would take the Riverwalk channel to the east under the I-25 interstate.

We are currently seeking funding for Riverwalk development to the west. The Western Expansion plan would unify property adjacent to the west end of the Riverwalk. (Exhibits 2 & 3) This property consists of shallow cooling ponds from a decommissioned coal burning power plant, warehouses, and other industrial type businesses. Redevelopment of this area and the existing adjoining properties would open up an area for additional Riverwalk recreation activities and commercial development sites.

3. Impact

The impact of having the Riverwalk in downtown Pueblo has been significant.

This project has been vital in attracting new businesses thereby diversifying and stabilizing the local economy as well as the Southern Colorado region.

Our local visitor's bureau data tells us that since the Riverwalk has been created we have increased visits from Colorado residents and surrounding states, this as a result has brought in and supported new businesses such as restaurants, hotels and retail shops.

Property tax data indicates the Riverwalk area has higher property values and boasts some of the most valuable real estate in Pueblo County.

This project has created a new level of quality of life for residents, this is where they bring friends and family.

Our hospitals and other large employers use the Riverwalk as a recruitment tool to attract new employees and their families.

The Riverwalk is an anchor to Colorado Certified Creative District, as designated by Colorado Creative Industries.

The success of each Riverwalk phase has made the project eligible for new funding opportunities.

The Riverwalk attracts over 500,000 visitors annually from Colorado, and bordering states.

The Riverwalk creates business activity for downtown Pueblo by marketing public and private events that are as diverse as the community itself from outdoor movies, July 4th fireworks, music concerts, and locally sponsored events to weddings, company gatherings, and non-profit fundraisers. Excursion boats, gondola rides and pedal boats are available to the public throughout the warm-weather season and can also be reserved for private tours. Musicians and other creative industry partners have organized performances of dance, music and theater at the Riverwalk.

We measure our success by the local businesses reporting increased foot traffic through their doors when we program events and activities on the Riverwalk. For example, live music and a farmer's market on a Thursday evening increases one restaurant's business by 60 percent. The beauty and activity of today's Riverwalk is a stark contrast to the downtown district that previously consisted of parking lots, stormwater runoff ditches and utility cooling ponds. This is our community's front door and it has all of the curb appeal we envisioned to bring more business to that door. It is the jewel and centerpiece for Pueblo's downtown revitalization efforts and is known as Pueblo's Happy Place. (Exhibit 4)

5. Conclusion

A waterfront district in the downtown area supports economic development and the continued endeavor for growth and transformation. Revitalization efforts have changed the face of Pueblo from what was once a single-industry town devastated by unemployment to a growing community with a brighter future. The original objectives to pull the city out of an economic slump, beautify the downtown, and become a tourist destination are a part of our present and future vision.

Exhibits 1–4 follow this page.

Exhibit 1 ORDINANCE NO. 7841 _____

AN ORDINANCE APPROVING THE AMENDED AND RESTATED
HISTORIC ARKANSAS RIVERWALK OF PUEBLO (HARP) AUTHORITY
INTERGOVERNMENTAL AGREEMENT AND AUTHORIZING THE
PRESIDENT OF THE CITY COUNCIL TO EXECUTE SAME

BE IT ORDAINED BY THE CITY COUNCIL OF PUEBLO, that

SECTION 1.

The Amended and Restated Historic Arkansas Riverwalk of Pueblo (HARP) Authority Intergovernmental Agreement dated as of May 19, 2008, a copy of which is attached hereto, having been approved as to form by the City Attorney is hereby approved. The President of the City Council is authorized to execute the Intergovernmental Agreement in the name of the City and the City Clerk is directed to affix the seal of the City thereto and attest same.

SECTION 2.

This Ordinance shall become effective upon final passage and approval.

INTRODUCED: July 14, 2008

BY: Judy Weaver
COUNCILPERSON

APPROVED: [Signature]
PRESIDENT OF THE CITY COUNCIL

ATTESTED BY: _____
CITY CLERK

PASSED AND APPROVED: July 28, 2008

5/20/08 MINUTES

7. **HARP AUTHORITY IGA — AMENDED AND RESTATED**

Hamel reviewed the Board of Water Works' history of committed involvement with the HARP since the early 1990s. He introduced HARP Director, Steve Arveschoug to give background on the issue at hand. Arveschoug voiced his appreciation for the Board of Water Works' contributions in making the HARP what it is today. He explained that because HARP works closely with Urban Renewal Authority (URA) on various projects, it is important to formally bring that organization into the IGA. They play a significant role, plus they have access to financial resources that the Riverwalk does not; it makes sense to expand the IGA and bring them in as a partner in the HARP Authority. An amended and restated HARP Authority IGA is being proposed for consideration today. It would include the URA and increase the number of HARP Authority Board of Directors from five to seven.

Hamel explained the Board's obligation in this agreement. The primary source of raw water is provided to HARP through a 150-year Board of Water Works lease with Aquila, for both the use of Lake Elizabeth and associated facilities, as well as a first right of refusal if their electric utility business ever comes to an end. We also have committed up to 90 acre feet per year of augmentation water. Regarding potable water, we have an obligation to provide up to 7.5 million gallons per year for irrigation and landscaping, plus water for water features. In addition, we provide all the operational expertise and have invested financially in some components of the infrastructure.

Following a lengthy discussion of the Board's involvement in HARP, the Board took action.

McCarthy made a motion to authorize the Executive Director to enter into the amended IGA as detailed. Autbee seconded, and the motion passed unanimously.

AMENDED AND RESTATED

HISTORIC ARKANSAS RIVERWALK OF PUEBLO (HARP) AUTHORITY

INTERGOVERNMENTAL AGREEMENT

THIS Amended and Restated Intergovernmental Agreement (the "Agreement") entered into as of May 19, 2008 between Pueblo, a Municipal Corporation, organized and existing under the constitution and laws of the state of Colorado (herein "City"); Pueblo County, Colorado, a political subdivision of the state of Colorado, organized and existing under the constitution and laws of the state of Colorado (the "County"); Pueblo Conservancy District, a special district organized and existing under the laws of the state of Colorado (the "District"); the Urban Renewal Authority of Pueblo, Colorado, a corporate body organized pursuant to the Laws of the State of Colorado ("URA") and the Board of Water Works of Pueblo, Colorado an independent body established, organized and existing under the charter of the City (the "Board"), (individually the "Party" and collectively the "Parties"), WITNES SETH:

RECITALS:

A. Sections 18(2)(a) and (b) of Article XIV of the constitution of the state of Colorado and the Colorado Intergovernmental Relationships statute, § 29-1-2-1 et. seq. C.R.S., authorize political subdivisions to cooperate and contract with one another, including the establishment of a separate entity, to provide any function, service or facility lawfully authorized to each of the contracting units, including the sharing of costs, if such contract sets forth fully the purposes, powers, rights, obligations, and responsibilities, financial or otherwise, of the contracting parties.

B. Each of the Parties is a political subdivision as defined in the § 29-1-202(2) C.R.S. and desires to cooperate and contract among themselves to create a separate legal entity to promote, manage, supervise, operate, develop, and maintain the project within the jurisdictional boundaries of each of the Parties known as the Historic Arkansas Riverwalk of Pueblo (the "HARP").

C. The Promotion, management, supervision, operation, development, and maintenance of HARP will be in furtherance of the purposes of, and within the powers and authority of each of the Parties.

D. The Parties, except URA, entered into an Intergovernmental Agreement dated December 1, 1997 creating the Historic Arkansas Riverwalk of Pueblo Authority (the "Original Intergovernmental Agreement").

E. The Original Intergovernmental Agreement has been amended and is further amended by this agreement, which amendments include but are not limited to the addition of URA as a Party. This Agreement constitutes a restatement of the Original Intergovernmental Agreement as it exists as of the effective date hereof.

AGREEMENT

In consideration of the foregoing Recitals and mutual covenants and conditions contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, City, County, District, URA and Board agree as follows:

ARTICLE I—DEFINITIONS

For purposes of this Agreement, the following defined terms shall have the meaning given to them in this Article:

1.1 "Act" means the Colorado Intergovernmental Immunity Act, § 24–10–101 et. seq. C.R.S. and any amendments thereto or substitutions therefore.

1.2 "Bonds" means the \$12,850,000 City of Pueblo, Colorado Limited Tax General Obligation Bonds, Series 1996.

1.3 "Development Plan" or "Plan" means the HARP Program Diagram dated November 26, 1996 attached hereto as Exhibit "A" and as same may be hereafter amended by consent of all of the Parties to this Agreement.

1.4 "Land" means and includes Public Land and Private Land.

1.5 "Private Land" means, Lot 2, Block 1; Lot 1, Block 2; Lots 2 and 3, Block 4; and Lots 1 and 2, Block 4 and facilities thereon within the Subdivision.

1.6 "Public Land" means all the land and facilities thereon within any Subdivision except the Private Land.

1.7 "Subdivision" means the Historic Arkansas Riverwalk Project, Filing One, as amended, from time to time, by the approval of both the City and the District.

ARTICLE II—HISTORIC ARKANSAS RIVERWALK AUTHORITY

2.1 There is hereby created and organized as a separate legal entity pursuant to § 29–1–203 C.R.S., the Historic Arkansas Riverwalk of Pueblo Authority (the "Authority"), whose function, purpose and obligation shall be to promote, manage, supervise, operate, develop, and maintain HARP. The Authority shall be an agency and instrumentality of the State of Colorado separate from the Parties, and, except as otherwise specifically provided in the Agreement, shall not be subject to administrative direction by the Parties nor their respective officers or employees. The creation of the Authority, effective December 1, 1997, is hereby continued, approved, confirmed and ratified.

2.2 The governing body of the Authority shall be known as the HARP Board of Directors (HARP Board). The HARP Board shall consist of seven members, two appointed by the City Council of City, one appointed by the Board of Pueblo County Commissioners; one appointed by the governing body of each of the other Parties, and one appointed by the majority vote of an appointment committee composed of five (5) persons, one (1) appointed by each of the governing bodies of the Parties. The members of the HARP Board may be persons other than members of the governing bodies of the parties. The members of the HARP Board shall be appointed for terms of three years, provided, that the members who are first appointed shall be appointed for staggered terms as follows: one appointed by the City Council of City for a term of one year; one appointed by the Board of Commissioners of County for a term of two years; one appointed by the members of the Board for a term of two years; one appointed by the directors of the District for a term of three years; and one appointed by the City Council of City for a term of three years. The member appointed by the URA shall serve an initial term of two years and the member appointed by the appointment committee shall serve an initial term of three years. Any member of the HARP Board may be removed at any time by a majority vote of the members of the governing body or bodies of the Party who appointed such member. In the event of the death, resignation or removal of a member, the Party or Parties who appointed such member shall promptly appoint a successor member to fill the unexpired term of such member.

2.3 Four members of the HARP Board shall constitute a quorum. An affirmative vote of at least four members is necessary to approve or authorize any action by the HARP Board. The HARP Board shall annually elect a chairperson, vice-chair-

person, secretary and treasurer from its members and shall adopt its own bylaws, which shall not be inconsistent with any provision of the Agreement.

2.4 The Assistant City Manager for Community Development shall be an ex-officio member of the HARP Board without vote.

2.5 The HARP Board shall have the power and the authority to exercise all the powers of the Authority.

2.6 All meetings of the HARP Board shall be conducted in accordance with the Colorado Open Meetings Law, §24-6-401 et. seq. C.R.S., as amended or replaced.

2.7 Members of the HARP Board shall serve without compensation.

ARTICLE III—POWERS OF THE AUTHORITY

3.1 The Authority may exercise any and all powers in the furtherance of its function, purpose, and obligation, which powers shall include, but shall not be limited to the following powers:

To make and enter into contracts that are in the furtherance of the function, purpose and obligation of the Authority with the Parties to the Agreement (either jointly or separately), the state of Colorado, the Federal government, any other governmental body or unit, or any private person, partnership or corporation or other private entity; provided, however, that (i) before the purchase of supplies, materials, services, or equipment ample opportunity be given for competitive bidding, in accordance with an established HARP Authority Purchase Policy, and (ii) contracts for improvements be awarded to the lowest and best bidder by competitive sealed bidding after ample advertising. The Authority, however, may use design-build arrangements and contracts with contractors and material suppliers when a donor's restrictions so limit the nature or scope of a construction project or the installation of a public improvement is so singularly unique that it does not lend itself to competitive sealed bidding procedures and requirements. The Authority shall, however, use its best efforts to solicit proposals from companies and contractors who build or supply materials for such unique projects before selecting any contractor or construction supplier for a design build project or purchase.

(b) To have the management, control and supervision of all the business and affairs of the Authority.

(c) To appoint, hire, and retain employees and independent agents, contractors, engineers, and attorneys.

(d) To fix and from time to time increase or decrease fees, rates or charges for services, programs, or facilities furnished by the Authority.

(e) To promote and market HARP and activities conducted thereon.

(f) To request proposals for, negotiate, and make recommendations to the City Council of City with respect to contracts, leases and permits for the development, use, lease, sale or other disposition of Private Land. Each recommendation shall be detailed and include, without limitation, data and information in support of the recommendation, a copy of the request of proposals and responses thereto by parties other than the party who is the subject of the recommendation.

(g) To review and make recommendations to the City Council of City for the use, development, construction, installation, removal and renovation of Public Land and disposition of funds available therefore.

(h) To sue or be sued and to be a party to suits, actions, and proceedings.

(i) To obtain appropriate liability and casualty insurance.

(j) To appropriate and expend funds in accordance with the Approved Annual Plan and Budget adopted and approved as provided in Article IV hereof.

(k) To issue or reissue revenue bonds, notes or other obligations payable from the revenue derived from the functions, services, or facilities of the Authority; provided, however, that the term, conditions, details, sale and payment of such bonds, notes or other obligations, the proceedings relating thereto, the pledge of revenue, and the refunding thereof shall be set forth in a resolution approved by the governing body of each Party (except the Board).

(l) To have and exercise all rights and powers necessary or incidental to or implied from the specific powers hereby granted.

3.2 The Authority shall maintain in good repair, and renovate, rebuild, and replace all public improvement within HARP including without limitation, all buildings, structures, waterways, waterfalls, statuary and exhibits, and shall insure upon completion such improvements against damage, injury, loss, theft, malicious mischief and vandalism in amount not less than their full insurable value. For purposes hereof, "public improvements" include all improvements within HARP that are owned by the City of Pueblo or contracted by, through or for the City of Pueblo or works of art that the City of Pueblo has accepted. Public improvements exclude those owned by a private person or entity. The City agrees to assign to the Author-

ity any warranties provided by contractors or artists for the public improvements covered by this agreement.

ARTICLE IV—BUDGET

4.1 The HARP Board shall, after consultation with the appropriate officers of each Party, prepare an annual operating plan and line item budget for the promotion, management, supervision, maintenance, development, and operation of HARP specifically identifying all items of anticipated revenues (including funds from each Party except the Board) and expenditures for the next calendar year (the “Annual Plan and Budget”). The Parties acknowledge and agree that because the Board has assumed the expense and responsibility of providing and furnishing water for HARP, the Board shall be excluded from and not be responsible for appropriating any other funds for HARP. For purposes of the Article IV, “appropriate officers of each Party” means and includes the chief executive officer and financial officer of each Party.

4.2 The appropriate officers of each Party shall jointly meet with the HARP Board, or the HARP Executive Director, no later than August 20 of each year to consult in the preparation of the Annual Plan and Budget.

4.3 The Annual Plan and Budget shall be submitted to each Party on or before August 31 of each year, commencing August 31, 2008.

4.4 The appropriate officers of each Party (except the Board) shall cause the annual budget prepared and submitted by such officers to the governing body of such Party to contain a specific line item for an appropriation to the Authority based upon the Annual Plan and Budget submitted by the HARP Board together with written recommendations, if any, of such officers. The governing body of each Party shall, in its sole discretion, approve such budgeted specific line item for appropriation to the Authority in an amount equal to, or greater or lesser than the amount contained in HARP Board’s Annual Plan and Budget. The funds budgeted and appropriated by a Party may be disbursed to the Authority on such periodic basis during the calendar year as that Party may determine. If, during any calendar year, Authority revenues are greater than revenues contained in the Approved Annual Plan and Budget for that calendar year, each Party may proportionately reduce its appropriation to the Authority for that calendar year.

4.5 The Parties, (except the Board) hereby declare their present intention and expectation to annually appropriate and budget a pro-rata equitable share of the expenses in excess of revenues for the promotion, management, supervision, operation, development and maintenance of HARP as follows: Beginning in the 2008 budget year, the Parties’ share of expenses in excess of revenues shall be as follows: 50 percent by City and 40 percent by County, with the balance to be shared as follows: (i) URA—\$20,000, with the intent to be increased to a maximum of \$50,000 per year, and (ii) District \$50,000 per year in addition to any maintenance reimbursement. Provided however, that this declaration shall not be construed as contractually obligating or binding on any Party. Provided further, that the obligation of the Pueblo Conservancy District is further conditioned on the Pueblo Conservancy District receiving funding from a proposed Maintenance Fee Assessment levied upon property benefited by the Arkansas River Levy maintained by the Pueblo Conservancy District. It is the further intent of the Parties, that the decision to budget and appropriate funds for the promotion, management, supervision, operation and maintenance of HARP shall be made solely by the respective governing body of each Party, and not by HARP Board or any officer of the Parties. Any obligation of a Party to budget and appropriate funds for the promotion, management, supervision, operation, development, and maintenance of HARP shall be from year to year only and shall not constitute a mandatory payment obligation of the party in any Fiscal Year beyond a Fiscal Year during which such funds are budgeted and appropriated. Neither this Agreement nor any provision hereof shall be construed or interpreted as creating a general obligation or debt or indebtedness or multiple-Fiscal Year direct or indirect debt or other financial obligation whatsoever of any Party within the meaning of any constitutional, statutory or charter debt limitation.

4.6 The HARP Board, after adoption of the budgets of each Party, shall adopt the Authority’s Annual Plan and Budget including the amounts, if any, each Party has budgeted and appropriated for the promotion, management, supervision, operation and maintenance of HARP for the next calendar year (the “Approved Annual Plan and Budget”).

4.7 The HARP Board shall only commit and expend funds in accordance with the Approved Annual Plan and Budget and shall not make any budgetary appropriation or encumbrance or incur any debt or multiple-Fiscal Year financial obligation or initiate any purchase or construction of any facility, improvement or equipment which

will require an expenditure or payment in any succeeding Fiscal Year unless the financial obligations of the Authority payable in any succeeding Fiscal Year are contingent upon funds for that purpose being appropriated, budgeted, and otherwise made available.

4.8 All revenues derived from (a) the use or lease (but not the sale or other disposition) of the Private Land, and (b) the use of, and activities conducted on the Public Land and facilities located thereon (except facilities, including without limitation, parking areas and parking facilities, constructed or installed on the Public Land by City funds other than the net proceeds of the Bonds; provided, however, that City funds shall constitute a majority of the funds used for such construction or installation and for such purpose "City funds" means and includes all grants and awards to the City by the Federal or state government or any agency thereof) shall be paid to, collected and held by the Authority in a separate account and expended by the Authority solely for the maintenance and operation of HARP. Authority will at least quarterly prepare and submit to each Party a financial report showing by line item all such revenues and expenditures during the prior quarter, year-to-date, and prior two years' actual revenues and expenditures.

4.9 The HARP Board may appoint advisory committees consisting of such persons and for such purposes as the HARP Board may determine.

ARTICLE V

5.1 The Land is owned by the City. As included within the Development Plan and Subdivision, portions of land previously owned by the District (the "District Land") and transferred to the City are and will be used in compliance with and meet the flood control and recreational purposes and responsibilities of District. City will hold, use and transfer District Land only in compliance with the Development Plan and Subdivision.

5.2 The HARP Board shall deliver to City Council of City and to the other Parties its written recommendations for the development, use, lease, sale or other disposition of all or any portion of Private Land which shall be consistent and in conformity with the Development Plan and Subdivision (the "Recommendations"). City Council of City will authorize and approve the development, use, lease, sale or other disposition of Private Land in accordance with the Recommendations, unless the City Council of City, for any reason, after public hearing held within sixty (60) days after receipt of complete and detailed Recommendations, rejects, alters or modifies, in whole or in part, the Recommendations (the "City Council Action"). In such event, the City Council of City, in its discretion, may either (a) return the Recommendations with the City Council Action to the HARP Board for reconsideration, or (b) direct that the Private Land be developed, used, leased, sold or otherwise disposed of as the City Council of City may determine, provided such determination is consistent and in conformity with the Development Plan and Subdivision. The provisions of the Article 5.2 shall not prevent nor be construed to prevent the City Council from acting with respect to such Recommendations earlier than said 60-day period, provided, however, that if the Recommendations or City Council Action relate to the sale of the Private Land, the City Council of City may not act with respect thereto earlier than thirty (30) days after receipt of such Recommendations. Notice of any public hearing provided for in the Article 5.2 shall be given to the Authority at least ten (10) calendar days before the date of the public hearing.

5.3 Pursuant to the provisions of Section 7-21 of the Charter of the City, City Council of City shall create a Special Fund and will segregate and hold in the Special Fund and appropriate and expend the net proceeds from the sale or other disposition of Private Land (but not the lease or use of Private Land) for the improvement, maintenance, development, and renovation of HARP; provided however; that prior to the City Council's appropriation of said funds for the stated purposes, the City Council of City may consider any written recommendations of the HARP Board with respect to any such appropriation received by the City Council of City prior to any specific appropriation.

5.4 On written recommendation of the HARP Board, the City Council of City will cause to be placed on its agenda an appropriate resolution or ordinance setting forth needed rules, regulations, fees, rates and charges for or with respect to the use of the Public Land and activities conducted thereon, provided that any such resolution or ordinance and all provisions thereof shall be subject to approval and adoption by the City Council of City in its sole discretion.

5.5 No Disqualified Person shall acquire or hold any interest, direct or indirect, in any contract, development agreement, lease, or permit for the development, lease, use, purchase, sale or other disposition of Private Land (the "Development Project"), nor shall any Disqualified Person have any interest, direct or indirect, in any con-

tract or proposed contract for materials or services to be furnished or used in connection with any Development Project. Every contract, development agreement, lease or permit made in violation of the Article 5.5 shall be voidable by the Authority, unless a majority of the HARP Board determines that, in light of such interest, the participation of the Disqualified Person in such Development Project would not be contrary to the public interest. For purposes thereof "Disqualified Person" means and includes (a) a member of the HARP Board or employee of the Authority, (b) an immediate member of the family (spouse, father, mother, son, daughter, brother or sister) of any member of the HARP Board or employee of the Authority, and (c) any corporation, limited liability company, partnership, sole proprietorship, trust or other person or entity carrying on a business in which a person described in (a) or (b) above has a financial ownership or employment interest, or in which such person is an officer, manager or director.

ARTICLE VI—BOND PROCEEDS

6.1 City will use the net proceeds of the Bonds to construct, acquire and improve HARP.

ARTICLE VII—WATER

7.1 The Board will make available and supply water to the HARP project in the quantities set forth and subject to the conditions set forth below:

7.2 Non-Potable Water

(a) The Board is a party to a Real Property Lease with Utilicorp United, Inc., by its Division, WestPlains Energy, dated September 9, 1996 and recorded September 30, 1996 in Book 2932, Page 991, Instrument No. 1140809 of the records of the Pueblo County Clerk and Recorder (the "Lease") under the provisions of which WestPlains is obligated to continuously divert, transport, and store, through and in the WestPlains water facilities, the amount of water lawfully available and reasonably necessary to accomplish the decreed beneficial uses under the WestPlains Water Rights. The return flow from said water usage will be a portion of the water that the Board will supply to the HARP project.

The Lease also provided for a right of first refusal to the Board to purchase both the WestPlains Water Facilities and the WestPlains Water Rights. The Board is not obligated to exercise said right of first refusal and may not do so.

(b) The Board received a decree in Case No. 93 CW 086 in the District Court, Water Division No. 2 in Colorado, for conditional water rights and a plan of augmentation for the HARP project. In Case No. 04CW014 in the District, Water Division No. 2, in Colorado, the Board received a decree making a portion of the HARP water right absolute and continuing the remaining conditional rights in good standing.

The quantities of non-potable water to be furnished by the Board in connection with the HARP project shall be limited to:

- (1) those waters which pursuant to the Lease Agreement are obligated to be diverted by Utilicorp, return flows from which will be utilized in the HARP project;
- (2) the water derived from the rights of Utilicorp, if in fact they are eventually purchased by the Board pursuant to the right of first refusal;
- (3) the water decreed to the Board in Case No. 93 CW 086, District Court, Water Division No. 2,
- (4) such water of the Board from its other supplies not to exceed 90 acre-feet per Annum.

In explanation, the HARP project has been designed so that it can function if necessary with quantities of water smaller than the existing WestPlains diversions. By the closing of certain gates and structures, the quantities of water flowing in the channel can be greatly reduced, while still substantially maintaining the appearance of a flowing stream. The Board will promptly notify the Authority of any changes in water supply available from the Lease Agreement or other sources that will necessitate the closing of gates or structures in order to operate the HARP project.

The Board agrees to furnish from its HARP decree, and other water sources, a quantity of water to the HARP project to augment, supplement or replace the WestPlains return flows as necessary in a quantity not to exceed 90 acre-feet per annum.

7.3 The water to be furnished by the Board in connection with the HARP project shall be limited to the existing boundaries of the project as they are described in the Development Plan. The Board shall not be obligated without a further agreement to supply water to any expanded or increased HARP project.

7.4 *Potable Water.* Any potable water to be supplied by the Board to the HARP project will be furnished in accordance with the Board's then existing policies con-

cerning potable water furnished to the City of Pueblo, its parks, buildings or facilities, except as set forth below. For the purposes of the Board's existing policies, the irrigated areas of the HARP project shall be construed to be and shall constitute a park 5 acres and larger. Potable water supplied for irrigation under Article 7.4 of this Agreement shall not exceed 7.55 million gallons per annum and shall be supplied by the Board without rates, fees or other charges. Potable water shall be supplied from existing Board mains, and the Board shall not be responsible for extending said mains or service lines at its cost. Any such costs of extended mains or service lines shall be at the expense of the HARP project. Potable water use shall be metered and monitored by the HARP Authority in the same manner as water furnished to City parks.

7.5 If the buildings are city-owned, leased or occupied, the Board will charge for water furnished and the extension of water service in accordance with the Board's then existing policies concerning potable water furnished to the City of Pueblo, its buildings or facilities.

7.6 *Small Structures.* Small entertainment or refreshment kiosks or structures may be established within HARP, including those which may not be leased to private lessees, on land not designated as building pad sites with the HARP project. The Board will charge for water furnished and the extension of water service to any such structures in accordance with the Board's then existing policies concerning portable water furnished to the City of Pueblo, its buildings or facilities.

7.7 *Return Flows.* The return flows from all non-potable water furnished by the Board to the HARP project shall not be recycled and shall be allowed to return to the Arkansas River. Any fountains or water features of the HARP project served by potable water shall be recirculated insofar as reasonably possible without the expenditure of excessive monies on engineering and recirculating equipment.

7.8 *Board Review of Fountains and Water Features.* The design of all fountains or water features to be incorporated in the HARP project shall be submitted in a timely fashion to the Board and the Board shall have the opportunity to examine and approve or disapprove said features in the context of the adequacy of water supplies and the Board's existing water distribution system to serve said fountains or water features. "Water feature" for purposes of this Agreement means a fountain, waterfall or other structure, the use of which would significantly increase the loss of water by evaporation or seepage beyond the loss which would normally occur in the HARP channel or lake areas of the HARP project. If in the Board's opinion, the fountains or water features are not appropriately designed for the use of the supplies of water and system available to the HARP project to be furnished by the Board, the Board may approve or disapprove of such design of fountains or water features. Approval shall not be unreasonably withheld or delayed, but if the Board disapproves, then the Board shall not be obligated to furnish water, either potable or non-potable under this Agreement for such water features or fountains, the plans for which the Board has not approved, provided, however, that if the Board disapproves, any other Party to the Agreement may, upon written notice given to the Board within thirty (30) days after its decision to disapprove, request the Board to reconsider its decision.

ARTICLE VIII—LIABILITY, INDEMNIFICATION AND IMMUNITY

8.1 Neither the individual members of the HARP Board, nor any of the Parties, or their governing bodies, officers, agents or employees, shall be liable or responsible for any act or undertaking of Authority, contractual or otherwise, regardless of the procedure by which such act or undertaking may be entered into, including the approval by any Party.

8.2 The Authority shall, to the extent permitted and within the limitations of the "Act", indemnify and defend each Board member, officer and employee of the Authority in connection with any claim or actual threatened suite, action, proceedings in which he or she may be involved in his or her official capacity by reason of his or her being or having been a Board member, officer or employee of the Authority, or by reason of any action or omission by him or her in any such capacity; provided, however, the Authority shall have no obligation to indemnify and defend any such board member, officer or employee of the Authority for any suit, claim, action or proceedings arising out of criminal offenses, willful and wanton acts or omissions, or gross negligence of such councilmember, officer or employee. The Authority's obligations pursuant to this Section shall be limited to monies of the Authority available for such purpose, including, but not limited to, insurance proceeds.

8.3 *Immunity.* The Authority, the County, the City, the District, the URA and the Board, and their respective board members, commissioners, council members, officers and employees shall be entitled to all immunities, protections and limits on li-

ability provided by the Act and all other applicable laws in connection with the organization, operation and activities of the Authority and the activities of the District, the URA, the Board, the County and the City in connection therewith. None of such immunities, protections or limits on liability may be waived.

ARTICLE IX—DEFAULT, WITHDRAWAL AND TERMINATION

9.1 If a Party remains in default in the performance of any of its obligations hereunder for a period of sixty (60) days after receipt of written notice from the HARP Board or any other Party specifying such default, the HARP Board or any other Party may:

(a) remove such defaulting Party as a participating Party under this Agreement (the "Removal"); and/or,

(b) institute appropriate legal action in law or equity, including specific performance, to enforce the defaulting Party's obligations hereunder.

In the event of litigation under this Agreement, the court shall award the prevailing party its costs and expenses, including reasonable expert witness and attorney fees.

9.2 Any Party may withdraw as a participating Party under this Agreement upon action taken by its governing body delivered to Authority and each of the other Parties at least one hundred eighty (180) days prior to December 31 of the year of withdrawal (the "Withdrawal").

9.3 The term and position of any member of HARP Board appointed by a Removed or Withdrawn Party shall automatically expire and vacate upon the effective date of such Removal or Withdrawal.

9.4 Except as otherwise provided in Article 9.5, this Agreement shall remain in full force and effect until terminated by the mutual consent of all Parties, except Removed or Withdrawn Parties whose consent shall not be required.

9.5 The Withdrawal or Removal of any Party shall not terminate this Agreement or the Authority. Upon the Withdrawal or Removal of any Party, the remaining Parties shall expeditiously amend and modify this Agreement to continue the Authority upon such terms and conditions as such other parties shall mutually agree; provided, however, that if the other Parties do not so amend or modify this Agreement within ninety (90) days after the effective date of the Removal or Withdrawal of any Party, this Agreement and Authority shall terminate and cancel.

9.6 The provision and obligations of Articles 5.1 and 7 shall survive the Withdrawal or Removal of any Party, the termination of this Agreement, and/or the dissolution of Authority for the benefit of the City and District. Article 5.1 may be enforced by District and Article 7 may be enforced by City.

9.7 In the event of the termination of this Agreement or the dissolution of Authority, all assets of Authority shall be transferred to City to be used for the promotion, management, supervision, operation, and maintenance of HARP. The term "assets of Authority" shall not include the water rights or water leases owned by the Board.

ARTICLE X—MISCELLANEOUS

10.1 This Agreement shall become effective upon the date this Agreement is approved by the governing bodies of all the Parties, and may be amended or modified in writing approved by the governing bodies of all the Parties, except Removed or Withdrawn Parties.

10.2 This Agreement shall be governed by and construed in accordance with the laws of the state of Colorado.

10.3 If any section, clause or provision of this Agreement shall for any reason be determined to be invalid or unenforceable, such determination shall not affect any of the remaining sections, clauses or provisions of the Agreement.

10.4 This Agreement may not be assigned in whole or in part by any Party. This Agreement shall inure to the benefit of and be binding upon the Parties and their respective successors.

10.5 Nothing in this Agreement expressed or implied is intended or shall be construed to confer upon any person, firm or corporation other than the District, the Board, the County, the URA, and the City any right, remedy or claim under or by reason of this Agreement, this Agreement being intended to be for the sole and exclusive benefit of the District, the Board, the County, the URA, and the City.

10.6 This Agreement may be executed in any number of counterparts, each of which, when so executed and delivered, shall be an original; but such counterparts shall together constitute but one and the same agreement.

10.7 Nothing in this Agreement shall be deemed or construed to limit, impair or restrain any of the powers and authority of the City, the County, the District, the

URA, or the Board, conferred by constitution, statute, charter or other laws, including but not limited to, the lawful exercise of their respective legislative powers.

10.8 Nothing in this Agreement shall be deemed to modify, amend or repeal any action duly taken by the HARP Authority under and pursuant to the Original Inter-governmental Agreement.

Executed as of the day and year first above written.

BOARD OF COUNTY COMMISSIONS
OF PUEBLO COUNTY, COLORADO

By *Anthony Ruiz*
Chairman of the Board

Attest: *Rosalia*

Title: Office Administrator

PUEBLO, A MUNICIPAL CORPORATION

By *[Signature]*
President of the City Council

Attest: *Gina Duescher*
City Clerk

Approved as to form:

Thomas
City Attorney

PUEBLO CONSERVANCY DISTRICT

By *[Signature]*

Title: President HARP

Attest: *Chudia Robinson*

Title: Secretary Treasurer

BOARD OF WATER WORKS OF
PUEBLO, COLORADO

By *Don C. Hamel*

Title: Executive Director

Attest: *Laki Merty*

Title: Exec Assistant

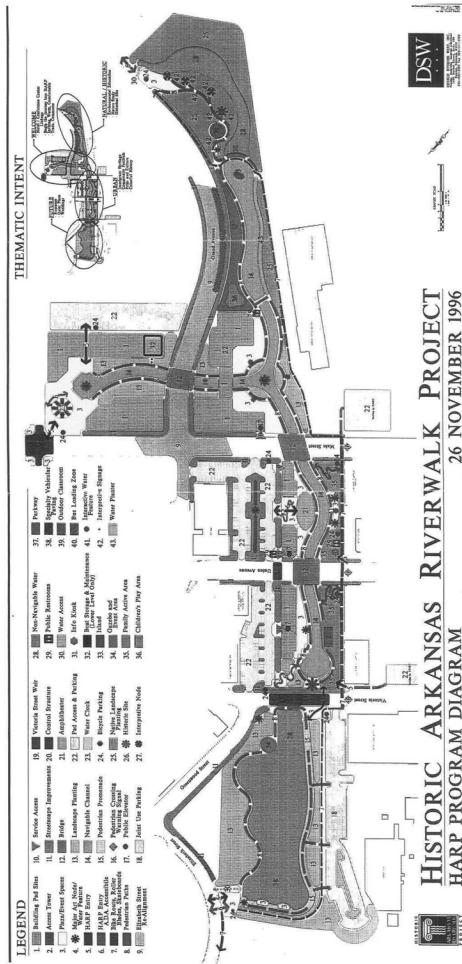
URBAN RENEWAL AUTHORITY OF PUEBLO

By *Ray L. Lyell*

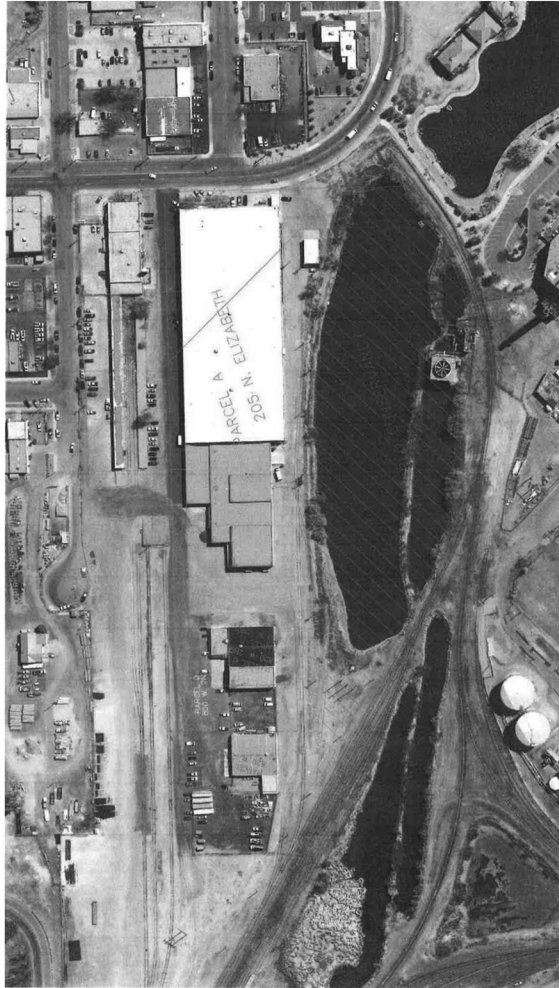
Title: CHAIRMAN

Attest: *[Signature]*

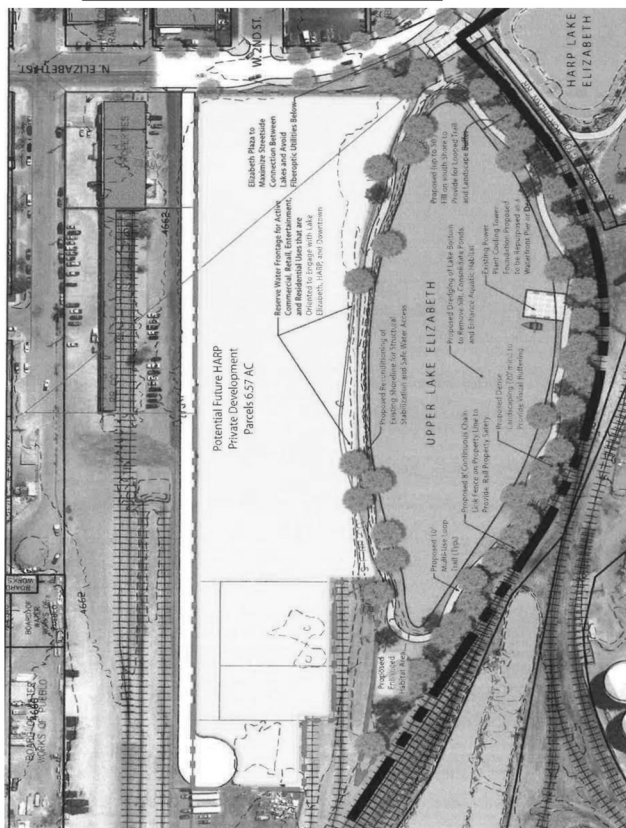
Title: E. D. URAP



Riverwalk Western Expansion Concept-Exhibit 2



Riverwalk Western Expansion Concept-Exhibit 3



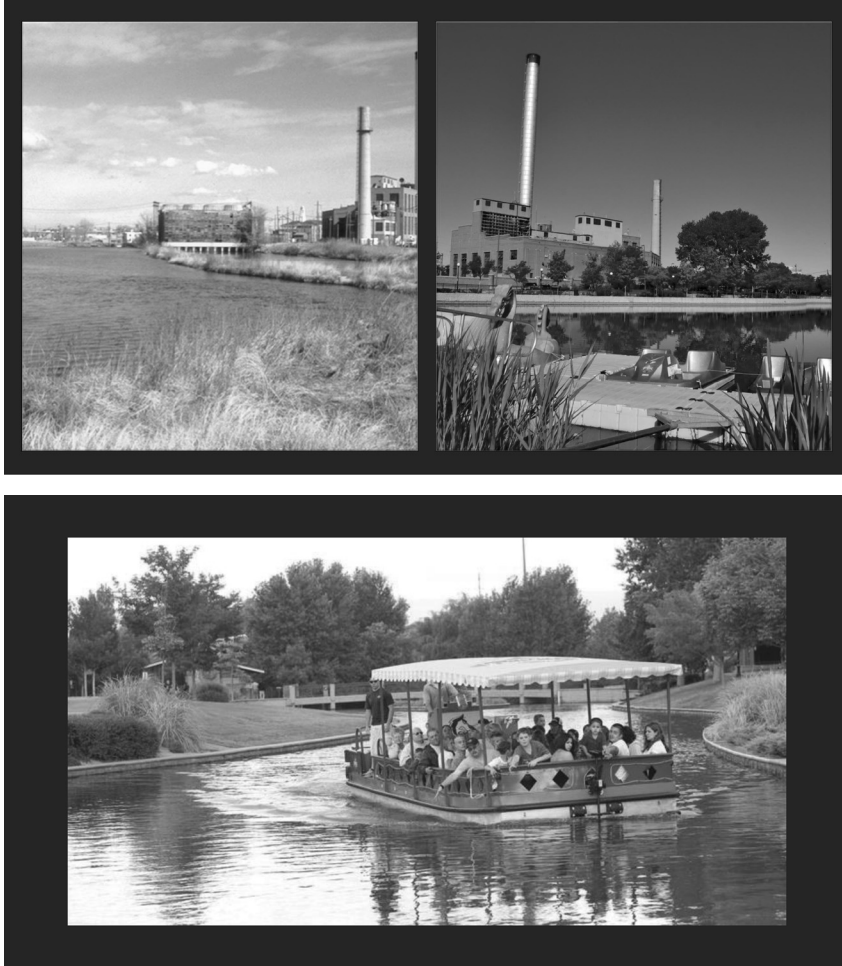


Arial View of the Historic Arkansas Riverwalk

Pueblo, Colorado

Exhibit 4







Senator BALDWIN. Thank you.
Mr. Friis.

**STATEMENT OF MICHAEL (MIKE) J. FRIIS, EXECUTIVE
COMMITTEE MEMBER, NATIONAL WORKING WATERFRONT
NETWORK; DEPARTMENT OF ADMINISTRATION'S
WISCONSIN COASTAL MANAGEMENT PROGRAM**

Mr. FRIIS. Members of the Subcommittee, I am honored to provide this testimony and speak with you today regarding our Nation's working waterfronts.

Many cities and towns were built around working waterfronts which shaped our character and economies. The diversity of their geographies and histories are ours. As a nation, places are part of what we have achieved and as valuable resources to our Nation's economy, they are part of our future.

In Wisconsin, our coastal communities have made significant improvements to increase access and maintain the commercial viability of their coastal waterfronts, but with the current climatic conditions and rapid deterioration of infrastructure, they are struggling to keep up. Coastal communities are facing several natural waterfront challenges such as high water levels, bluff erosion, and increased frequency and severity of coastal storms and flash flood events. In addition, communities are left dealing with manmade challenges like legacy contaminants on land and in water and an aging water-based infrastructure that commercial and recreational users depend upon.

Examples of Wisconsin and Great Lakes regional efforts to address the issues include a Wisconsin Coastal Management Program's partnership with the City and County of Milwaukee, and numerous nonprofits have enhanced public access to the water for the area's residents and visitors. The Menomonee Valley in the heart of Milwaukee was a forgotten place for generations. Just below the bluffs of working class neighborhoods, the river was blocked by railroads, highways, and high sheet pile walls along fac-

tory property lines with no public access to the thousands of residents who lived within walking distance.

Through the Coastal Program's support on several projects along the Menomonee Valley, public access has been opened. Sheet pile walls have been replaced by natural riverbanks and paths to the river's edge, canoe launches and fishing piers have been built. And the river is now visited by anglers, families, and classes of children.

Like living in a highly urban setting, physical and cognitive disabilities may limit a person's ability and exposure to water-based outdoor recreational experiences. Partnerships and investments from the Coastal Program have provided the connection and experiences to the Great Lakes, their shores and tributaries. These amenities that enhance the quality of life and allow for a personal experience with our coastal resources also fosters and creates a stewardship ethic that will preserve them.

CARES is a project acronym that stands for Coastal Action for Resilient and Economic Security of southwest Wisconsin's bluffs, beach, and infrastructure assets. This effort is providing resources and assistance to communities in southeast Wisconsin to plan for and prepare for coastal hazards. Funded by the former NOAA Regional Coastal Resiliency Grant Program, this project has enabled the Wisconsin Coastal Management Program and partners to collaborate and provide needed resources and focused assistance to 22 municipalities in four counties in southeast Wisconsin dealing with Lake Michigan coastal hazards, which are currently exasperated by high water levels.

This effort is bringing together local governments in the region with State and Federal agencies, scientists, outreach specialists, and a community of practice to learn about shared experiences and develop an approach to plan and prepare for coastal hazards.

Regionally, the Great Lakes-St. Lawrence Governors and Premiers supports implementation of the strategy for Great Lakes-St. Lawrence River's maritime transportation system. The strategy's goals are to double the maritime trade, shrink the environmental impact of our transportation network, and support the region's industrial core. Key aspects of this include but are not limited to harmonization of regulations and investments in smart ship technology.

In conclusion, the economic and environmental wellbeing of our Nation's waterfronts benefits us all, and the shared stewardship is a responsibility we should accept.

Intergovernmental—that is local, State, tribal, and federal, collaboration and cooperation is necessary to be able to realize and enhance our working waterfronts and build local capacity. Coordination allows for sharing of expertise and resources to realize the most successful impact.

Thank you.

[The prepared statement of Mr. Friis follows:]

PREPARED STATEMENT OF MICHAEL (MIKE) J. FRIIS, EXECUTIVE COMMITTEE MEMBER, NATIONAL WORKING WATERFRONT NETWORK; DEPARTMENT OF ADMINISTRATION'S WISCONSIN COASTAL MANAGEMENT PROGRAM

Members of the subcommittee. I'm honored to provide this testimony and speak with you today regarding our nations working water.

To truly appreciate something, one must experience it firsthand. Wisconsin's Great Lakes are no exception. The Great Lakes are a source of recreation, commerce, and spiritual renewal. The tributaries, rocky shorelines, sandy beaches and high bluffs of Lake Michigan, Green Bay and Lake Superior are our gateway to their waters. Providing and improving public access to the coastal resources for communities and individuals to grow an appreciation of these places is an important mission of the Wisconsin Coastal Management Program (WCMP).

Challenges

While many of us may think nothing of taking a walk along the shore, getting into a watercraft, wading into the water or fishing from the shore, for others it is not so simple. By their nature, some of these special public spaces are remote or are difficult to access for members of society that lack physical or financial means. Their inability to access these public treasures and develop an appreciation for our Great Lakes coastal resources is a loss for us all. Ensuring balanced resource protection, achieving sustainable economic development and maintaining the quality of life in our state is a goal of the Wisconsin Coastal Management Program. For the program it means all of the citizens of Wisconsin should have the opportunity for a personal experience and to develop an understanding of our coastal resources. That goal is achieved through partnerships with local governments and nonprofits and with the Program's funding assistance to develop the ideas, plans, and the construction of trails, fishing piers and boat launch sites that can be utilized by people with different physical abilities and in population centers where these amenities can be enjoyed and enrich the lives of as many of our fellow Wisconsinites and visitors as possible.

Cities and towns were built around working waterfronts and they are still a valuable resource for Wisconsin's economy. Our communities have made a significant number of improvements to increase access to their coastal waterfront but with the current climatic conditions and rapid deterioration of infrastructure, they are struggling to keep up. Our coastal communities are facing a number of natural waterfront challenges such as high-water levels, bluff erosion and increased frequency and severity of coastal storms and flash flood events. In addition, communities are left dealing with man-made challenges like legacy contaminants on land and in the water and aging infrastructure that commercial and recreation users depend on. Our communities cannot keep up with the demand on their coastal waterfronts from locals, tourists and commercial activities without State and Federal financial assistance.

Wisconsin and Great Lakes Management and Development Initiatives Examples

CARES—Coastal Actions for Resilience and Economic Security (CARES) of Southeastern Wisconsin's bluff, beach, and infrastructure assets

This effort is providing resources and assistance to communities in Southeastern Wisconsin to plan and prepare for coastal hazards. Funded by the former NOAA Regional Coastal Resilience Grants Program, this project has enabled the Wisconsin Coastal Management Program, Wisconsin Sea Grant, the University of Wisconsin-Madison, and Southeastern Wisconsin Regional Planning Commission to collaborate and provide needed resources and focused assistance to 22 municipalities and 4 counties in Southeastern Wisconsin dealing with Lake Michigan coastal hazards which are currently exacerbated by high water levels. This effort is bringing together the local governments in the region with state and Federal agencies, scientists and outreach specialists in a "Community of Practice" to learn about shared experiences and develop approaches to plan and prepare for coastal hazards.

Project goals include: *Enhanced risk awareness, Identification of coastal hazard vulnerabilities, guide risk-reduction actions* and possible actions to address them; *Enhanced risk awareness* through outreach and mapping of shoreline recession; *Guidance on risk-reduction actions* like bluff best management practices, bluff slope vegetation, nature-based shorelines, harbor maintenance planning, and erosion-resilient beach practices; *Identification of coastal hazard vulnerabilities* and possible actions to address them; and *Funding and technical assistance* to plan the implementation of coastal resilience actions.

Early outputs of the project include:

- A "Great Lakes Port, Harbor, and Infrastructure Cost Matrix and Dredging Contract Database" which provides a framework for smaller harbors and marinas to estimate future maintenance costs due to dredging and storm damage to support resilience planning at these facilities.

- Mapping of historic shoreline and bluff erosion rates to help understand how the coast has receded in the past to identify hot spots and aid in future planning. This information is available publicly on the Wisconsin Shoreline Inventory and Oblique Photo Viewer.
- A “Coastal Resilience Self-Assessment” tool to help staff and decision-makers of coastal counties and municipalities weigh the effects of coastal hazards and begin to consider planning and mitigation actions which may increase the coastal resilience of their community. This tool has been used with 13 communities to help identify coastal resilience issues and priorities.
- Based on the self-assessment results, a portfolio of community projects was solicited and funded to address local resilience priorities. For example, Port Milwaukee identified a need to conduct regular assessment of its waterfront infrastructure. Using grant funds, the Port will upgrade the capacity of its harbor survey boat to allow staff engineers to conduct a thorough infrastructure inspection to assess vulnerabilities to coastal hazards and identify strategic mitigation measures. The Port will leverage the Harbor Infrastructure matrix to aid in this project.

Lake Superior Coastal Hazards Community of Practice (COP) is a NOAA Project of Special Merit to the WCMP. This project group formed out of an expressed interest in the mapping and policy communities of northern Wisconsin to more effectively organize people, resources, information and data to aid in the mitigation and response to coastal hazards events.

The initial specific hazard issue to be addressed in this project is culvert mapping, which is important to accurately understand flood hazard risk but is at present performed piecemeal by various entities in Wisconsin’s Lake Superior watershed. This uncoordinated approach has led to duplication of effort and discrepancies between culvert inventories and associated hydrologic models, problems which can hinder planning and response to extreme coastal flooding events. The project will coordinate strategic efforts to: a) reduce redundancy; b) formalize data and communication channels amongst members and; c) provide opportunities for technical assistance to local communities.

Project goals include:

- Formally organize the structure for a self-sustaining Coastal Hazards Community of Practice that provides technical assistance and guidelines to local Wisconsin communities.
- Utilize COP members mapping expertise to collectively improve flood risk data, mapping and models which can be used to demonstrate the value of the COP by providing technical assistance to local communities and influencing subsequent administrative policies and guidelines through the case study on culvert mapping.
- Create and manage a cloud-based collaborative support environment (CSE) that promotes the best available data and improves communication among COP members.
- Develop a Hazard Action Plan that outlines best practices for information sharing that can be quickly implemented during a future hazard event.

Port and harbor planning

The Conference of Great Lakes and St. Lawrence Governors and Premiers unites the chief executives from Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Ontario, Pennsylvania, Québec and Wisconsin. This group has created the Great Lakes Maritime Task Force and called for the Great Lakes St. Lawrence River maritime transportation system (MTS) to be authorized, managed and funded as a single system. The MTS includes more than 100 commercial ports spread across eight states and two provinces, more than 40 provincial and interstate highways, and nearly 30 rail lines link the 15 major ports of the MTS and 50 regional ports with consumers, products and industries all over North America. These ports serve as a critical connection between the Atlantic Ocean and the Ohio, Illinois and Mississippi River transportation systems, and integrate the region with global supply chains. The MTS supports a \$6 trillion regional economy, more than 220,000 jobs and \$30 billion in business revenue each year. Yet each year, the aging system and its ability to sustain this activity continues to decline.

The Great Lakes St. Lawrence Governors & Premiers supports implementation of the Strategy for the Great Lakes-St. Lawrence River Maritime Transportation System, which was developed in 2016. The strategy’s goals are to double maritime trade, shrink the environmental impact of our transportation network, and support the region’s industrial core. The strategy recommends actions to maintain and ex-

pand the maritime transportation system and established a Regional Maritime Entity to coordinate state and provincial actions.

Great Lakes Marinas

Developing a Coastal Storm Preparedness, Adaptation, and Response Plan for Great Lakes Marinas (NOAA Coastal Storms Grant): This project was to develop a regionalized coastal storms preparedness, adaptation, and response plan for marinas in the Great Lakes. This tool is being developed to guide marinas in implementing long-term hazard mitigation, and to provide them with the resources and planning mechanisms necessary to respond properly to a coastal storm event.

Advancing Stormwater Management at Marinas in the Great Lakes (Great Lakes Protection Fund Grant): Green infrastructure (GI) is an approach to stormwater management that can result in substantial environmental benefits including improved water quality and greater resilience to climate change impacts such as flooding from storm events. This project will: 1) assemble a set of educational resources geared to stormwater management at marinas including development of a decision support tool to identify appropriate marina GI practices; 2) support the marinas to design and implement GI practices at three Great Lakes marinas; 3) monitor the effects of the GI practice on water quality.

The Great Lakes Clean Marina Network is a group of Great Lakes marina stakeholders and state clean marina programs. Network members collaboratively work with technical experts and outreach professionals to promote clean and resilient marinas in the Great Lakes. The Wisconsin Clean Marina Program started by the WCMP provides guidance, training and education that help marina and boatyard operators and owners improve their management practices, promote environmental stewardship and resiliency, and educate recreational boaters. Most coastal states and territories have a clean marina program.

Coastal Tourism

Coastal tourism continues to be a vibrant industry for many coastal communities. Coastal tourism provides a significant impact to local and regional economies and supports local businesses and employment. Coastal tourism is heavily reliant on a healthy community waterfront, clean water and public access.

There are numerous examples of successful coastal tourism initiatives and partnerships across the Nation. In Wisconsin, partnerships between the Wisconsin Coastal Management Program, Wisconsin Department of Tourism, Wisconsin Harbor Towns Association and the Lake Superior Scenic Byway have created opportunities to strengthen coastal tourism in innovative, meaningful and impactful ways. This not only reaches to the state's remote and rural areas but includes our urban coastal working waterfronts.

In Wisconsin, the value and connection between tourism and the state's natural resources is readily apparent. Because of this, Governor's Evers has included in the current state budget the creation of the Office of Outdoor Recreation within the Department of Tourism.

Public access & social justice

Living within extensively built environments is a situation that may limit the opportunity and exposure to outdoor recreational experiences for people. In Milwaukee, for example, the Wisconsin Coastal Management Program has partnered with the City, County, the Milwaukee Metropolitan Sewerage District and numerous nonprofits to provide for and enhance the experience for that area's residences and visitors. The Menomonee River in the heart of Milwaukee was a forgotten place for generations. Just below the bluffs of working-class neighborhoods, the river was blocked by railroads, highways, and high sheet pile walls along factory property lines, with no public access to the thousands of residents who lived within walking distance to it. Through WCMP's support on several projects along the Menomonee River, public access has been opened, sheet pile walls have been replaced by natural riverbanks with paths to the river's edge, canoe launches and fishing piers have been built, and the river is now visited by anglers, families, and classes of children. Corey Zetts, Executive Director of the Menomonee Valley Partners told me "It's shocking today to see the photos of the channelized, inaccessible waterway just 20 years ago. Today, along this same stretch of the Menomonee, you can see fish, herons, and a diverse cross section of the Milwaukee community walking, fishing, or just taking in the view. Through WCMP's investments, people now enjoyed the public space along the river, vibrant stretches of riverfront which were unavailable to previous generations."

These partnerships and the investments from the WCMP have provided the connection and experience the Great Lakes, their shores and tributaries with trails, boat launches and fishing piers. These amenities that enhance the quality of life

and allows for that personal experience with our Great Lakes resources, fosters and creates a stewardship ethic that will preserve them.

LiDAR & Geospatial Data Sharing (NOAA's Digital Coast)

Water resources are an important topic to the citizens of Wisconsin whether one is talking about fishing, using tap water from your own well or municipal water system, or swimming at one of the Great Lakes' many beaches. Federal, state and local land and water managers all use geographic information systems (GIS) to inventory, analyze and make maps showing the distribution, quality, quantity and environmental conditions that contribute to good water quality. By combining factors such as soils, vegetation, wetlands and streams, wells, agricultural activity, underground storage tanks, pipelines, and where people live, these managers can analyze existing problem areas, such as contaminated wells, algal blooms or model potential wastewater discharge impacts of new construction. In many cases, they can identify potential remedial solutions to existing problems or point to smarter alternatives before construction begins.

Promote water industry technology

Combining research and technology and targeting growing water technology businesses is critical to solving environmental health and economic challenges in the Nation's coastal communities. Water technology can provide an opportunity to build and sustain coastal economies along the Nation's waterfronts. An example to draw from is the Water Council in Milwaukee, WI whose objective is to assist in assembling industry and academic R&D collaboratives.

Conclusion

The economic and environmental well-being of all our nations waterfronts benefit us all and the shared stewardship is a responsibility we should accept.

Intergovernmental (local, state, tribal and federal) collaboration and cooperation is necessary to be able to revitalize and enhance our working waterfronts and build local capacity. Coordination allows for sharing of expertise and resources to realize the most successful impact.

Senator BALDWIN. Thank you.

I would be willing to pass if you wanted to—okay.

Thank you to all four of you for your testimony. And I wanted to start with a question for our Wisconsin witnesses.

Many communities in Wisconsin plus across the country, especially in the Mississippi and Great Lakes basins, have faced very severe flooding challenges this year. And that is really compounding the flooding impacts that we have had over the last several years. It also has strained our local response capacity.

I am interested in hearing what you see as the greatest needs in terms of helping communities become more resilient and what solutions you have seen that have worked particularly well for communities and how we can build upon those successes to provide voluntary tools for communities to better face the flooding and other challenges.

And, Mr. Mayor, I will start with you.

Mr. GENRICH. Thank you, Senator.

Yes. So we are at sort of the early stages of getting our arms around this issue. As I mentioned, we pulled together a team of flood experts from around the State. Mr. Friis, being one of them, came up to Green Bay with a number of his colleagues who have a great deal of expertise in this area and really just engaged in a brainstorming session about what the next steps might look like. So for us, it is really sort of assessing what our risks are and then engaging in a planning process, identifying the best solutions for those risks and how to implement them. I think it is going to be some combination of green infrastructure elements, as well as tra-

ditional gray infrastructure to better support our storm water management system.

I mentioned in my testimony that this is not something that can be handled by one municipality. It really needs to be a watershed effort. So very interested in collaborating with our surrounding municipalities, working with NEW Water, which is our regional wastewater utility in the area. They have been doing some great work along these lines. So Federal programs that sort of incentivize that kind of collaboration I think would be really helpful.

I think there are some existing programs that have also been beneficial to a number of communities who are dealing with some of these challenges. The Great Lakes Restoration Initiative obviously is something that has been widely supported, and we have seen the benefits of that in the region and all across the State of Wisconsin.

There is also the FEMA Pre-Disaster Mitigation Grant Program, the Army Corps of Engineers Silver Jackets, and the NOAA Coastal Resilience Grant Program that I think could meet some of our needs if we are prepared to take advantage of some of those programs. Obviously, very interested in seeing your legislation advance. Coastal resiliency is a huge priority of mine, of the city's in general, and I think the time is right for us to act.

Senator BALDWIN. Thank you.

Just before I turn to Mr. Friis, is there an obvious way for you to look for best practices from other communities, or is that something that you think the Federal Government could do a better job of?

Mr. GENRICH. So as a part of that group, Julie Nordak from UWC Grant participated, and she pulled together a number of similarly situated communities that we might be able to look to. The one in the State would certainly be MMSD, Milwaukee's Metropolitan Sewerage District. They are really kind of a path-breaking organization, and I think a lot of communities are looking to them around the country. Toledo is actually another city, another Great Lake city, that is similarly situated to the City of Green Bay. Dubuque was another example. So certainly models out there.

But to be frank, we do need the resources that the Federal Government can bring to bear on the solution. Then we can certainly look to what other communities are doing and move forward.

Senator BALDWIN. Very good.

Mr. Friis, I only have a few seconds left, but if you want to take a kick at this. And then we will do a second round and I will ask a follow-up.

Mr. FRIIS. Quickly I could say one of the key parts is data collection as well, understanding what the changing regimes are for storms, how the landscapists can accommodate those, and definitely how you can fit into that system both the green and the gray infrastructure to work with that, things like information that we can capture through places like the Digital Coast.

Senator BALDWIN. Senator Scott.

**STATEMENT OF HON. RICK SCOTT,
U.S. SENATOR FROM FLORIDA**

Senator SCOTT. So I come from Florida. We got a lot of coast, as you know. It is a big economic driver for our State. We had 126 million tourists last year.

So thinking about what we are doing and thinking about what you are doing in some of the cities where you are not on the coast, what can Congress do that would help jump start small businesses investing and making sure something like Pueblo happens? To all of you.

Ms. CLARK. From the Pueblo, Colorado experience, it was invaluable to have regional offices like for EDA in Denver that have staff that are willing to help educate the local level how to apply for the grant, you know, what the driving forces for funding are, and then making sure that we finish the application properly and get it in. We received EDA funding for our project twice.

Dr. GRAHAM. I would jump in that Mississippi in contrast does not have a large coast, and we use that actually to our advantage. So we could take the leveraging power that we have from some key Federal agencies that primarily are located out at Stennis Space Center but make up this Federal ocean community, which has a very high density of ocean scientists. And we can leverage that using the state's resources. They have been very key at resourcing what we need to build up this new technology economy.

But then you also need—if you are going to attract the smaller businesses, you have got to give them the innovation spaces. So what we are doing is now linking innovation spaces across the coast as well. And then hopefully we will take some of these resources that we have had from BP's settlement and other resources that have come to the state and try to develop some capitalization fund to try to attract small business.

So for us it has been a very hand-in-hand partnership-oriented approach where it ranges from the Federal Government all the way to the private sector.

Senator SCOTT. Mayor.

Mr. GENRICH. Yes. I would just identify a couple of successful partnerships in Green Bay. So as part of that group, Julia Noordyk from UW Sea Grant participated in the EPA's Brownfields program which has been really helpful to us. We have, obviously, had a working waterfront for a very long time. We want it to continue to work. One of the problems, though, in the past is that there was a lot of contamination associated with some of those uses along the waterfront. So the EPA's Brownfields program has been hugely helpful to us in being able to redevelop and continue to have an activated waterfront, and make sure that those contaminants are being removed.

Another thing that I touched on in my testimony is our hope to relocate some coal piles, which are on the waterfront currently. So hoping to tap into some Federal Department of Transportation dollars, some State Department of Transportation dollars to make that relocation possible and then also sort of upgrade our port capabilities so that the City of Green Bay does have a 21st century commercial port that can compete with other communities.

Senator SCOTT. Mr. Friis.

Mr. Friis. I think ensuring appropriate and consistent cooperation among the Federal agencies would be great. An example would be working together with the Army Corps of Engineers to see that your beaches are well taken care of through the process of navigational dredging that you might see within the state.

Senator Scott. Have the Federal agencies from a regulatory standpoint been easy, hard, helpful, a pain in the rear?

Mr. FRIIS. I think everybody to a person on an individual level was very eager to cooperate because collectively we are working on the same issues.

Ms. CLARK. To follow up on how it is to work with some of these agencies, we recently worked with the Denver regional EDA office, and I have to give compliments to that staff. I myself—this was my first Federal application, and we did not have a clear understanding of how all the pieces and parts fit together. There are many drafts before you get to the final application and submit your information for a potential funding. They did a stand-up job, and I would look to the Denver office and ask them how do they get that kind of staff there for local people to get in contact with.

Senator SCOTT. Anybody else?

Dr. GRAHAM. As you know, working in the maritime world has a different set of complexities than working in the freshwater world. And the permitting process for some of the ventures that you are entering into probably could be a little more streamlined in the maritime world.

Senator SCOTT. Senator Baldwin.

Senator BALDWIN. Thank you, Senator Scott.

You have heard the buzzes. That means we have a vote on the floor. It is almost at its end. So with our witnesses' forbearance, I am going to call the subcommittee into a recess. I am going to run to the floor and cast a vote. I will run as fast as I can back, and I do have a couple more rounds of questions.

So the Subcommittee is officially in recess.

[Recess.]

Senator BALDWIN. Thank you to our witnesses for your patience. I got in two of the three votes, and I think we have some time to wrap up before I have to run back for the final vote.

So the Subcommittee will come back to order.

Mr. Friis, I am going to start with you but open this up to other panelists.

One of the observations in your testimony caught my eye. You wrote that our communities cannot keep up with the demand on their coastal waterfronts from locals, tourists, and commercial activities without State and Federal assistance.

In your leadership at the state and national level, you have developed and overseen a wide range of strategies to assist local communities address their waterfront challenges. And I am interested to hear your perspective on this and would open it up, as I said, to other witnesses as well. When communities seek to revitalize, what assistance do they tend to need the most, and what assistance has made them most successful in implementing their revitalization visions?

Mr. FRIIS. I think one of the clearest examples might be in the Menomonee Valley in Milwaukee. I think at one time it was called

America's largest Brownfield. And, Senator, you probably saw it before the redevelopment. It was really a wasteland where nobody really wanted to go, and it cut off part of the community from the rest of the city and really secluded them from opportunities for experiences and jobs.

So what we saw there was the locals coming together much like along the Arkansas River, whereas the Menomonee Valley Partners was a group that included folks from the Milwaukee Metropolitan Sewerage District, the 16th Street Community Health Care Center, the city and the county coming together to look at that and say how are we going to address this. And one of the first projects was working together with them with a Coastal Management Grant on the sustainable design criteria, so creating an expectation of what people wanted, and then when it was built, we wanted to see some resiliency there. We wanted to see family-supporting jobs. We wanted to see public open space. We wanted to see ecosystem services incorporated with that green infrastructure. So there is a storm water park that when it is not flooded, it is a place that you can play Frisbee. There are bike trails where people can bike to work. There are riverwalks where people can recreate and kids can go down and learn about micro-invertebrates.

So once they developed a vision, they were able to implement it—I think their energy invigorated all of us. We funded some of the initial work. Our Brownfields program within the Wisconsin Department of Natural Resources was there. Our then-Wisconsin Department of Commerce. We worked with the EPA. I think it was EPA award winning projects that went on in there. So it was really sort of building that synergy, that energy, and keeping it going, sustaining. Sometimes it is technical assistance. Sometimes it is funding. Sometimes it is making those connections and coordination. That is why the Menomonee Valley has been such a great example for us in terms of both economic and environmental redevelopment.

Senator BALDWIN. I invite the other panelists to weigh in on this also. Ms. Clark?

Ms. CLARK. I think as I went over before, the process really was getting buy-in from our own community that we needed to change the way we looked. We were primarily a steel town, manufacturing town. We do not have the beautiful view of the Rocky Mountains like Denver and Colorado Springs. So we have mountains in the distance. We are primarily an arid type landscape and environment. So taking our largest natural resource, the Arkansas River, and deciding to make that what we are known for was really the turning point.

Funding comes along as it comes along. And I think cooperation between communities that have an existing success story—ours was a relationship with San Antonio. That city opened its arms to our community and helped us learn best practice. Trial and error on their part became information for us to try to change what our community could do.

Dr. GRAHAM. So I think for us, we need diversification in our economy. And we are looking at sort of technology, engineering fields to do that.

The problem that we face with that is we have got the draw. We have got the community buy-in. We have got the Federal agencies providing sort of this gravity. Then when we have the private sector come and start looking around, their questions are more about workforce. Where are they going to get their workforce from. So we have to close that loop. It is almost a chicken and the egg kind of thing, but we have to close that loop with workforce development training, show that there is a body of people who are willing to fill these jobs in the region. And then you have that engine going.

Mr. GENRICH. Well, I would just say that the City of Green Bay's experience has been really positive with Mr. Friis and his organization. And so I think it would be of great benefit to push more resources down to folks like Mike and others around the country.

One recent example is I mentioned Bay Beach being a swimmable beach here with their next summer season. And there are going to be challenges associated with that. You mentioned the algal blooms that have plagued the bay. That is not going anywhere anytime soon, but I think it is a helpful tension to push forward so that when people are asking why we cannot use our waterways, why we cannot enjoy this natural resource, we have an answer and we have a plan to address those water quality issues.

But Mike's office has been really great to work with and has so much experience in other coastal communities around the state, that enabling them to do more work I think would be really helpful.

Senator BALDWIN. That is great.

So the last question was on revitalization. Sometimes you cannot separate them, but I want to kind of take this last question more focused on resiliency. And a number of you have talked about the need to cooperate with the whole region, the whole watershed.

Mayor, in your testimony, you discussed the challenges that face communities that are at the very bottom of the watersheds, which receive runoff and water coming from further upstream. And I know this is a challenge for many places, especially towns and cities further down very large rivers. Those places are not only seeing flash floods from precipitation that falls near them but also increasingly severe volumes of water from heavy rainfall that are quite far upstream.

So is there need for additional tools to support voluntary collaboration on the resiliency at the whole watershed level? And what watershed level actions can help reduce downstream costs? Whoever wants to jump in first. Should I call on you, Dr. Graham?

Dr. GRAHAM. We have probably the extreme of the watershed influencing us with 41 states touching the Mississippi River drainage basin. And so that at its core is a national issue. I mean, that is so large that it is not really necessarily just voluntary. I think we have to legislate some of the changes that are needed up in the watershed so that the Gulf, from our perspective, stays healthy and resilient. We believe that resilient people come from resilient ecosystems, and it is even bigger than just every now and then rainfall. The Mississippi River is so big, it is capturing climate as well. And that is a very huge deal for us, that the increased precipitation up over the northern tiers of the river catchment is going to affect us long term. I think we are seeing that now.

Senator BALDWIN. Mr. Friis, if I can call on you on that question. I think you referenced earlier the work that the Milwaukee Metropolitan Sewerage District is doing upstream as an example. But any further expansion you want to give on this topic?

Mr. FRIIS. Sure. So I think I was referring to the Milwaukee Metropolitan Sewerage District's Green Seams Program where they were dealing with a water quantity issue within their service area. Because they have combined sewers within that area, they are looking at how they can deal with that quantity, at the same time accomplishing a water quality benefit. So they were looking at identifying properties that may have had wetlands, hydric soils, and how they could work with those landowners on appropriately managing that, maybe even purchase them by the district and do restoration activities.

We are looking at sort of taking the green infrastructure concept on a watershed level. We are looking at other places in the state like that. Iron County, which in 2016, 2018 received some torrential rainfalls that created a great deal of damage to the public and private infrastructure up there. We are looking at working with the county, the municipalities, the Wisconsin Wetlands Association on helping identify wetlands and pointing towards their functional values and how maintaining those wetlands, enhancing their storm water retention values could help prevent another washing out of harbors like they saw in Saxon Harbor.

Senator BALDWIN. Ms. Clark of Mayor Genrich, do you wish to—

Mr. GENRICH. Sure. Yes, just a quick comment on the Mississippi River watershed. I was on an inland lake, inland flowage in Birchwood, Wisconsin this past weekend, whose waters end up in the Gulf of Mexico. I mean, it is just massive, the size of the watershed. But from our perspective, as I mentioned, a multi-jurisdictional operation is going to be really important for us. So if there is a way to incentivize that cooperation, I think that would be helpful and to somehow reduce development pressure in some of these municipalities that are upstream of us so that that land stays out of development, stays natural, and is able to keep more nutrients and more water on the land above us.

Senator BALDWIN. Ms. Clark.

Ms. CLARK. This is a little out of my area, considering what I do. But I think that in Colorado and especially Pueblo, we do have organizations that look out for our interests in the watershed area because we have been impacted as a city by cities above us, by the Fountain Creek and the Arkansas River. I would be happy to provide more detailed information for the record.

Senator BALDWIN. Thank you.

I want to thank our four witnesses again especially for your forbearance in terms of a brief recess.

To the majority staff, I thought there is something that I am supposed to recite before I gavel the Committee in terms of how many days Members have to submit—okay.

The hearing record will remain open for two weeks. We ask you to reply promptly to any follow-up questions that the Committee chooses to send.

Again, thank you.

And the Subcommittee is now adjourned.
[Whereupon, at 3:28 p.m., the hearing was adjourned.]

A P P E N D I X

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. TAMMY BALDWIN TO MAYOR ERIC GENRICH

Question 1. What challenges have you encountered by working on watershed issues at the municipal level? Would resiliency efforts at the watershed level help solve these problems? What types of assistance for watershed resiliency efforts would be most helpful to communities like yours?

Answer. Our biggest challenge is in defining issues for flooding in the watershed, and then identifying solutions, including funding. At this point, the City will need to purchase some structures, install grey infrastructure, and create green solutions to manage flooding.

We believe, very strongly, that resiliency efforts in the city would help solve some of the problems. We've been awarded a grant (Great Lakes Champions Mini Grant) enabling us to audit our ordinances to ensure that they support the implementation of green infrastructure. We will also seek other grant funding to hire a resiliency coordinator to manage these efforts. However, we'll need to find more permanent sources of funding.

We welcome expertise from professionals working in the field of resiliency, water quality, storm water management, environmentally responsible land use, and the like. We'll benefit by learning from other communities engaged in this work. The Great Lakes Champions grant comes with mentors, who are professionals in their fields, as well as monthly meetings with partner communities. Both of these will be highly impactful for the City of Green Bay. We will also work with up-river communities in defining problems and identifying solutions.

Question 2. What experiences have your communities had with natural or "green" infrastructure? What have been the strengths of these approaches? What are barriers to communities, like yours, using these approaches more frequently?

Answer. We have implemented some green infrastructure in the City, especially in new construction. These approaches keep water in place, preventing run-off toward the Fox River (part of the Fox River Basin and the Lake Michigan). The strength of the green infrastructure approach is to, for example, bring natural elements to renovation projects, particularly those in dense urban areas.

With the Great Lakes Champions grant, we will learn which barriers we may have that prevent more wide-spread implementation of green infrastructure. Ultimately, like any other infrastructure, adequate funding for maintenance and installation will produce more long-lasting outcomes.

Lack of community and business approval of green infrastructure, along with a steady funding source, are barriers to wide-spread implementation.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. TAMMY BALDWIN TO DR. MONTY GRAHAM

Question 1. What challenges have you encountered by working on watershed issues at the municipal level? Would resiliency efforts at the watershed level help solve these problems? What types of assistance for watershed resiliency efforts would be most helpful to communities like yours?

Answer. There are a number of water quality issues that arise from the watershed scale, yet manifest impact at local/municipal scales. These include recent impacts from flooding on the Mississippi River and subsequent opening of the Bonney Carre Spillway resulting in impacts covered in my written testimony. The greatest challenge in developing watershed solutions is the upscaling from municipal authorities to Federal action. These issues are inherently cross-jurisdictional at all levels of government, which creates further challenge to scoping a solution. In short, communities along the Mississippi coast rely on economic, geographic, health, etc. commonalities to forge alliances (e.g., coastal Mississippi's 'OneCoast' initiative).

However, impacts are not always uniform across the coast or between coastal communities.

These alliances are, by definition, loose coalitions. The best way to enhance resilience planning across a region bound by common goals and vulnerable to common threats would be to establish regional authorities (as seen in the transportation sector) which could respond to or influence common resilience needs and planning under state or Federal authorization. Federal assistance aimed at regional authorities would have tremendous impact for coastal communities.

Question 2. What experiences have your communities had with natural or “green” infrastructure? What have been the strengths of these approaches? What are barriers to communities, like yours, using these approaches more frequently?

Answer. “Green” infrastructure is still a young term. However, coastal Mississippi like other coastal regions prone to flooding and storm events, has made strong utilization of the natural landscape versus the built landscape to improve resilience.

The primarily green infrastructure projects have been the implementation of living shorelines in our coastal communities. Although, in practice, Mississippi has relatively small living shoreline area, the planning and development of private waterfront acreage in living (versus hardened or built) shoreline is increasing. Conversations between private waterfront landowners and insurance industry are taking root.

Communities have become more interested in how they may maintain natural and beneficial use of an area through the use of green infrastructure because it is a focus of the Community Rating System (an incentive program under the National Flood Insurance Program). If they can capture points for open space and/or preservation of natural and beneficial use, then they can ultimately lower their flood insurance premiums.

The direct benefits and strengths of green infrastructure along our coastal communities can be seen in erosion protection and stabilization, habitat restoration, buffers against inundating storm events, generation of aesthetic value, and lowered comparative cost to built infrastructure. Barriers to utilization of green infrastructure include permitting process, evaluation of effectiveness, incentives for implementation, relatively few examples of success, contractor knowledge for installation, and lack of public education for benefit.

Question 3. Mississippi, like Wisconsin, has had a remarkable amount of flooding this year that have devastated our communities. What resources are needed to allow Mississippi to be better prepared for future flooding events? What scale is resiliency planning and response capacity needed in order to reduce the impacts of extreme events and annual flooding cycles? Are these resources needed at the local, watershed, state, Mississippi-basin, or other level? What resources are most important to allow communities to do this necessary work within the next 5–10 years?

Answer. Mississippi must have a ‘seat at the table’ for flood control planning, infrastructure development, response planning, a decision to action related to flood control measures that might harm the state and its coastal waters. There remain questions about the decision process over opening Bonney Carre Spillway, but not opening the Morganza spillway. This will be even more critical as Mississippi River sediment diversions are opened to allow broader distribution of freshwater into coastal waters near Mississippi. As presented in my written testimony, we simply cannot exist in a constant state of disaster recovery and expect the future of coastal economy and human well-being to be bright. Having a longitudinal Mississippi-basin resilience and sustainability plan with Federal funding in place to develop and implement multi-jurisdictional planning/response activities would be a huge advancement. The governors of the five Gulf states created the Gulf of Mexico Alliance to do just this on priority issues common to all. A similar Mississippi River Basin Alliance linking state, Federal and non-governmental entities on common issues around water management could have similar impact.

RESPONSE TO WRITTEN QUESTIONS SUBMITTED BY HON. TAMMY BALDWIN TO
MICHAEL (MIKE) J. FRIIS

Question 1. What challenges have you encountered by working on watershed issues at the municipal level? Would resiliency efforts at the watershed level help solve these problems? What types of assistance for watershed resiliency efforts would be most helpful to communities like yours?

Answer. Our biggest challenge is in defining issues for flooding in the watershed, and then identifying solutions, including funding. At this point, the City will need to purchase some structures, install grey infrastructure, and create green solutions to manage flooding.

We believe, very strongly, that resiliency efforts in the city would help solve some of the problems. We've been awarded a grant (Great Lakes Champions Mini Grant) enabling us to audit our ordinances to ensure that they support the implementation of green infrastructure. We will also seek other grant funding to hire a resiliency coordinator to manage these efforts. However, we'll need to find more permanent sources of funding.

We welcome expertise from professionals working in the field of resiliency, water quality, storm water management, environmentally responsible land use, and the like. We'll benefit by learning from other communities engaged in this work. The Great Lakes Champions grant comes with mentors, who are professionals in their fields, as well as monthly meetings with partner communities. Both of these will be highly impactful for the City of Green Bay. We will also work with up-river communities in defining problems and identifying solutions.

Question 2. What experiences have your communities had with natural or "green" infrastructure? What have been the strengths of these approaches? What are barriers to communities, like yours, using these approaches more frequently?

Answer. We have implemented some green infrastructure in the City, especially in new construction. These approaches keep water in place, preventing run-off toward the Fox River (part of the Fox River Basin and the Lake Michigan). The strength of the green infrastructure approach is to, for example, bring natural elements to renovation projects, particularly those in dense urban areas.

With the Great Lakes Champions grant, we will learn which barriers we may have that prevent more wide-spread implementation of green infrastructure. Ultimately, like any other infrastructure, adequate funding for maintenance and installation will produce more long-lasting outcomes.

Lack of community and business approval of green infrastructure, along with a steady funding source, are barriers to wide-spread implementation.

