OVERSIGHT OF THE ARMY CORPS’ MANAGEMENT OF THE MISSOURI RIVER

FIELD HEARING

BEFORE THE

SUBCOMMITTEE ON SUPERFUND WASTE AND REGULATORY OVERSIGHT

OF THE

COMMITTEE ON

ENVIRONMENT AND PUBLIC WORKS

UNITED STATES SENATE

ONE HUNDRED FIFTEENTH CONGRESS

FIRST SESSION

AUGUST 22, 2017

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Oversight of the Army Corps’ Management of the Missouri River

TUESDAY, AUGUST 22, 2017

U.S. Senate,
Committee on Environment and Public Works,
Subcommittee on Superfund, Waste Management
and Regulatory Oversight,
Washington, D.C.

The following hearing was taken at the South Dakota State Capitol, Room 413, 500 East Capitol Avenue, Pierre, South Dakota, on the 22nd day of August, 2017, commencing at 10 o’clock a.m., before Cheri McComsey Wittler, a Notary Public, Registered Professional Reporter, and Certified Realtime Reporter within and for the State of South Dakota. Hon. Mike Rounds (chairman of the subcommittee) presiding.
Present: Senator Rounds.

OPENING STATEMENT OF HON. MIKE ROUNDS,
U.S. SENATOR FROM THE STATE OF SOUTH DAKOTA

Senator Rounds. Good morning, everyone. Testifying on our first panel today is Mr. David Ponganis. He is the Director of Programs for the Northwestern Division of the U.S. Army Corps of Engineers. He is here with us today, and we’re going to welcome him. I would like to give an opening statement, and I would explain to everybody that the way that this process works is that we will also allow statements for the record as well. A number of you may very well want to do that. That statement time period will be open for a period of two weeks. We’ll also have statements entered into by a number of other United States Senators who wish to have their thoughts included in this testimony as well.

The Environment and Public Works Subcommittee on Superfund, Waste Management, and Regulatory Oversight is meeting today to conduct a field hearing entitled Oversight of the U.S. Army Corp’s Management of the Missouri River.

I’d like to thank our witnesses for being with us today, and I look forward to hearing their testimony. It is fitting that we would hold this hearing here as we approach the bicentennial of the settlement of Ft. Pierre. Since its early days as a trading post in the 19th Century, the Missouri River has been a vital component of the lives of the people living along the riverbank.

The United States Army Corps is responsible for managing the Missouri River in a way that effectively maintains the River’s eight authorized purposes: Flood control, navigation, irrigation, hydropower, water supply, water quality, recreation, and fish and wild-
The Missouri River plays a vital role in the economy and livelihoods of those of us living in communities along the River. We depend on the River for drinking water, recreation, and agriculture. Proper management of the Missouri is an essential component to the successes of our cities and towns. Proper management of the Missouri requires the Corps to work closely and communicate extensively with stakeholders, such as state and local governments, and understand the needs of the communities within the Missouri River Basin. After the 2011 flood in which communities all along the Missouri as well as our State Capitol of Pierre suffered millions of dollars in damage to homes, city streets, sewage systems, and parks, citizens and local government officials quickly focused on what steps should be taken to make certain this type of destruction never happens again.

Because one of the driving factors of the destruction was the lack of advanced notice to the residents who received less than one week to prepare for the rising flood waters, a 2014 Water Resource Reform Bill, also known as WRRDA, attempted to provide the Army Corps with additional resources to increase their flood monitoring capabilities. This legislation authorized the Army Corps to coordinate with various government agencies to administer a soil moisture and snowpack monitoring network and maintain snowpack monitoring sites in the Upper Missouri River Basin.

At a March 2016 subcommittee hearing titled Five Years From The Flood: Oversight of the Army Corps’ Management of the Missouri River and Suggestions For Improvement, which we held in North Sioux City, we learned that the Army Corps had made little progress towards implementation of the snowpack monitoring network because they had failed to submit an appropriations request to Congress to fund the program. Additionally, we learned the Corps was unclear as to what agencies should take the lead on implementing the program, which also prevented them from moving forward with the snowpack monitoring network. As a result of this information, I had language included in the 2016 WRRDA bill that directed the U.S. Army Corps to be the lead agency for coordinating the soil moisture and snowpack monitoring network in the Upper Missouri River Basin.

Additionally, I was able to have an amendment included in the 2017 Senate Energy and Water Appropriations Bill that would have provided the Corps with $2 million to begin implementation of a snowpack monitoring program.

Throughout the 2017 runoff season there was a noticeable improvement in communication between the Corps and stakeholders in the Upper Missouri River Basin. I was encouraged to see the Corps’s effort to hold stakeholder conference calls, public meetings, and post regular snowpack level updates on their website.

I look forward to receiving an update from the Corps and the state and local governments regarding their views of the coordination among stakeholders during this past runoff season. The Corps, in conjunction with the U.S. Fish & Wildlife Service, is also responsible for administering the Missouri River Recovery Program which aims to replace the lost habitat of three threatened and endangered species along the Missouri River. The program seeks to coordinate
with local stakeholder groups, in particular the Missouri River Recovery Implementation Committee, to develop sandbar and wetland habitat to conserve the pallid sturgeon, the least tern, and the piping plover.

A more recent issue we have been confronted with has been the rapidly rising and falling water levels in Lake Sharpe that have occurred over the past several months. These fluctuating water levels have been responsible for property damage, and there are concerns this may also impact the fish spawn that recreational fishermen along the Missouri depend on for a successful fishing season.

I hope to hear from the Corps that these water releases are being done responsibly and with consideration of the various interests along the River. A healthy, well managed Missouri River is critical to the communities surrounding it. Today we will hear testimony from both the U.S. Army Corps and state and local government officials on the status of the management of the River and any potential improvements that can be made to better meet the needs of both of surrounding communities and the Corps.

Each witness will have five minutes to present their testimony, and I will follow up with questions to the witnesses. I’d like to again thank our witnesses for being with us today, and I look forward to hearing their testimony. I will also share, once again, that their full statements will be made a part of the record of the meeting.

And, with that, I will simply say to Mr. Dave Ponganis, welcome once again. We had a good chance to visit with you at the previous meetings, and we look forward to hearing your thoughts today. Before I have Mr. Ponganis begin, I just wanted to take a moment to acknowledge Ms. Jodi Farhat who is with us today. As she nears her retirement from the federal service this September, Jodi has served our region in the nation for 34 years.

For the past eight years she has been the Chief of the Missouri River Water Management for the Northwestern Division of the Army Corps. Jodi has been responsible for the regulation of the Missouri River Mainstream Reservoir System by directing water releases to make certain all congressionally authorized purposes were served. Most recently, Jodi spearheaded the Corps’ efforts to institute monthly updates with the region on projected runoff conditions, status of mainstream reservoirs, and scheduled releases to improve the transparency of operations and communications with the public.

Jodi, I’ve had a flag that’s being flown over the United States Capitol to commemorate your years of service which you will receive within the next few weeks. Again, thank you for your years of service to this Nation, and enjoy your well-ordered retirement. Mr. Ponganis, whenever you are ready to begin, you may begin your testimony.

STATEMENT OF HON. DAVID PONGANIS, PROGRAMS DIRECTOR, U.S. ARMY CORPS OF ENGINEERS, PORTLAND, OR

Mr. Ponganis. Thank you, Chairman Rounds. I am Dave Ponganis, Programs Director of the Northwestern Division of the U.S. Army Corps of Engineers. I am pleased to be here today to
discuss the Corps’ operations of the Missouri River and the status of the Missouri River Recovery Program.

As you mentioned, the Missouri River Mainstream System is comprised of six multipurpose dams and reservoirs, which include hydroelectric power plants and recreational areas. The Corps also operates and maintains a 735-mile navigation channel downstream of the six dams from Sioux City, Iowa, to the mouth near St. Louis.

The Corps manages this complex and extensive system for eight Congressionally authorized purposes, as you mentioned all eight of those. Cycles of flooding and drought have always been a major part of the Missouri River Basin hydrology. The 2011 flooding was the result of unprecedented hydrologic events. Heavy snowpack in the mountains and on the plains of the basin during the winter combined with record rainfall—fall in May and June over much of Montana, North Dakota, and South Dakota resulted in the extraordinary flood event of 2011. But despite the record runoff in 2011, the pendulum swung the other way in 2012 as a drought sped throughout the basin.

Runoff in the upper basin was less than one-third the amount recorded in 2011. This year in 2017 we have again experienced both extremes but this time in a single year. Heavy snow accumulated on the plains early last winter, and yet snowpack, especially in Yellowstone’s basin, surged, and the forecast indicated potential for another high runoff year. But then the snow on the plains tapered off and melted in orderly fashion in late February, and the flood risk began to diminish. Mountain snowpack peaked near average in the reach above Fort Peck and much above average in the Yellowstone basin. By the time it melted and entered the reservoir, drought had developed across the plains. And now in mid-August concerns have turned to drought that is intensifying every day across eastern Montana and the western and central Dakotas. While there is now a drought in portions of the basin, water levels in the reservoirs are sufficient to serve the authorized purposes at this time.

And, most important, all water stored in the annual flood control pools will be evacuated by the start of next year’s runoff season, reducing flood risk in this ever changing region. Following the flood of 2011, the Corps set up an external technical review panel to assess the Corps’s operation of the system prior to, during, and after the 2011 flood event. The independent panel recommended infrastructure investments to ensure the flood release spillways and tunnels are ready for service and our levees are in good condition. That work is essentially complete. The Corps works closely with both the federal agencies that produce water supply forecasts. Post 2011 the Corps worked with the National Weather Service, the Natural Resource Conservation Service, and the states to share existing data. Working with them, we have also developed a joint proposal for a comprehensive plains snowpack and soil moisture monitoring network for the upper plains. The Corps has also enhanced its coordination with tribes, state, and local government officials and other agencies during the period of heightened flood risks, including these monthly basin updates. In the following meeting with you in January,
Mr. Chairman, the Corps initiated a weekly update which is posted on our website each Tuesday providing stakeholders a clear, concise report on the snowpack, reservoir conditions, and other critical information. Thank you for that suggestion. We are hopeful that the improvements in runoff forecasting and sharing of critical data will provide even greater lead time for flood events resulting from high plains and mountain snowpack, although, unfortunately, they will have little impact on the more typical rainfall flooding, which is most common in the lower basin. Finally, the Corps is reviewing comments received from the public on the Draft Missouri River Management Plan EIS. We received over 450 comments. We’re now reviewing those. And we’re going to go through a process with input from the region through the Missouri River Recovery Implementation Committee. This concludes my testimony. Thank you for allowing me to testify about the ongoing operation of the Missouri Mainstem Reservoir System and the Missouri Recovery Program. I would be happy to answer any questions you may have.

[The prepared statement of Mr. Ponganis follows:
STATEMENT OF PAUL LEPISTO, REGIONAL CONSERVATION COORDINATOR, IZZAK WALTON LEAGUE OF AMERICA, PIERRE, SD

Chairman Rounds, I am David Ponganis, Programs Director of the Northwestern Division of the U.S. Army Corps of Engineers (Corps). I am pleased to be here today to discuss the Corps’ operations of the Missouri River and the status of the Missouri River Recovery Program.

The Missouri River Mainstem Reservoir System (System) is comprised of six multipurpose dams and reservoirs, which include hydroelectric power plants and recreational areas. The six dams on the mainstem of the Missouri River form the largest system of reservoirs in the United States. The Corps also operates and maintains a 735-mile navigation channel downstream of the six dams, from Sioux City, Iowa to the mouth near St. Louis, Missouri; and works with levee sponsors who maintain hundreds of miles of Federal and non-Federal levees along the river.

The Corps manages this complex and extensive System for eight congressionally authorized purposes: flood risk management, navigation, hydropower, municipal and industrial water supply, water quality control, recreation, irrigation, and fish and wildlife. The Missouri River Master Manual is the Corps manual that guides the operating regime of the reservoirs under a wide range of water conditions (years of drought, years with flood conditions, and normal rain years) consistent with the authorized purposes. In addition, operation of the System must also comply with other applicable Federal statutory and regulatory requirements, including the Endangered Species Act.

Cycles of flooding and drought have always been a major part of the Missouri River Basin hydrology. The 2011 flooding was the result of unprecedented hydrologic events. Heavy snowpack in the mountains and on the plains of the basin during the winter, combined with record rainfall in May and June over much of Montana, North Dakota and South Dakota, resulted in the extraordinary flood event of 2011. Runoff above Sioux City, Iowa, totaled 62 million acre feet compared to the normal 25 million acre feet, more than double the average and the highest on record, requiring record releases from all six mainstem dams.

Despite the record runoff in 2011, the pendulum swung the other way in 2012 as flash drought spread throughout the basin. Runoff in the upper basin was less than one-third the amount recorded in 2011. Inflows to the reservoirs dwindled as the drought expanded across the upper basin. As the tributaries of the lower basin dried up, the Corps made above normal releases from the mainstem reservoirs to serve navigation and water supply users downstream. The combination of low inflows and high releases drafted more than 8 million acre feet of water from the System in 2012. Reservoir levels at the three largest of the Corps dams (by storage capacity)—Garrison, Oahe, and Fort Peck—declined to levels between 8 feet and 14 feet into the conservation pool, leading to requests by upper basin stakeholders for drought conservation. Fortunately, that drought was short-lived and reservoir levels rebounded in 2013 and 2014.
This year, in 2017, we have again experienced both extremes—but this time in a single year. Heavy snow accumulated on the plains early last winter, an ominous sign for citizens of the basin with fresh memories of the record flood of 2011. Mountain snowpack, especially in the Yellowstone basin, surged and the forecasts indicated the potential for another high runoff year. But then, the snow on the plains tapered off and melted in an orderly fashion in late February, and the flood risk began to diminish. Mountain snowpack peaked near average in the reach above Fort Peck, and much above average in the Yellowstone basin, but by the time it melted and entered the reservoir drought had developed across the plains. And now, in mid-August 2017, concerns have turned to the drought that is intensifying every day across eastern Montana and the western and central Dakotas, which is now an extreme drought to an exceptional drought in portions of those states according to the U.S. Drought Monitor.

Runoff from the plains and mountain snowpack this year captured by the mainstem reservoirs is now providing excellent recreational opportunities both at the reservoirs and on the river reaches between them. Reservoir levels are sufficient to allow normal access for users to withdraw water for irrigation and for municipal and industrial purposes; and the Corps is making releases to serve navigation and other downstream uses, while generating hydropower. We are also operating the System to support fish and wildlife needs along the main stem of the Missouri River, including during the nesting seasons for the endangered interior least tern and the threatened piping plover, which are now winding down.

Hence, the reservoirs have served both to reduce the flood risk and to dampen the impact of drought in the region this year. While there is now a drought in portions of the basin, water levels in the reservoirs are sufficient to serve the authorized purposes at this time. And most important, all water stored in the annual flood control pools will be evacuated by the start of next year’s runoff season, reducing flood risk in this ever changing region.

Following the flood of 2011, the Corps set up an external technical review panel to assess the Corps’ operation of the System prior to, during, and after the 2011 flood event for the purpose of gaining lessons learned and recommendations to improve future operations. The independent review panel recommended infrastructure investment to ensure that the flood release spillways and tunnels are ready for service and that our levees are in good condition. That work is essentially complete.

The independent panel also recommended that the Corps conduct several studies on the operation of the System. The 2011 flood was a historical event that provided a new “data point” to incorporate into the tools used to predict, monitor and manage this System. The Corps is incorporating the information and lessons learned from the 2011 flood event into the models and tools we use to manage Missouri River operations.

The Corps works closely works with the Federal agencies that produce water supply forecasts. Post 2011 flood, the Corps has worked with the National Weather Service, the Natural Resource Conservation Service, and the states to share existing data. Working with them, we also have developed a joint proposal for a comprehensive plains snowpack and soil moisture monitoring network for the upper plains. The Corps has also enhanced its coordination with Tribes, State and local government officials, and other agencies during periods of heightened flood risk including monthly basin update calls leading up to and during the peak runoff season to ensure awareness and two-way communication of potential flood risk. These calls include staff from the National Weather Service and are recorded and available online through the Corps web site.

And following a meeting with you in January, Mr. Chairman, the Corps initiated a weekly update which is posted on our website each Tuesday, providing stakeholders a clear, concise report on plains and mountain snowpack, reservoir conditions and other critical information to ensure public awareness of basin conditions. Initially we planned to suspend the weekly updates until next year once the flood threat diminished, but as a result of the overwhelming positive response, the update has become part of our normal business process and will continue year-round. Thank you for that suggestion.

We are hopeful that improvements in runoff forecasting and sharing of critical data will provide even greater lead time for flood events resulting from high plains and mountain snowpack, although unfortunately they will have little impact on the more typical rainfall driven flooding which is most common in the lower basin.

Finally, the Corps is reviewing comments received from the public regarding the draft Missouri River Recovery Management Plan-Environmental Impact Statement (EIS) as it moves toward preparing a final EIS. The draft EIS examined alternative ways to manage the Missouri River Recovery Program to meet the Corps’ obligations under the Endangered Species Act for the
river’s threatened and endangered species—the pallid sturgeon, interior least tern, and piping plover—while allowing the Corps to operate the river for the benefit of residents and businesses of the basin.

The Corps received approximately 450 comments on the draft EIS via public meetings, mail, and online comment forms. Comments were received from members of the public, businesses, non-governmental and civic organizations, Federal, State and local governments, and Tribal governments. The final EIS will include a comment response report index, which will State how the Corps addressed the comments on the EIS.

While the Corps is reviewing the public comments, it is also conducting government-to-government consultation with Native American Tribes and is consulting with the U.S. Fish and Wildlife Service (USFWS) to develop the Biological Assessment for formal Endangered Species Act Consultation. Due to ongoing consultation, it is too early to know how this process will impact the final EIS. After receiving the Biological Assessment, the USFWS will prepare a Biological Opinion, and then the Corps will issue a final EIS and Record of Decision with its selected alternative.

This concludes my testimony. Thank you for allowing me to testify about the ongoing operation of the Missouri River Mainstem Reservoir System and the Missouri River Recovery Program. I would be happy to answer any questions you may have.

Senator ROUNDS. Thank you, Mr. Ponganis. Let’s just begin. Recently there’s been an increasing conversation regarding the safety and maintenance of the U.S. Army Corps dams across the United States. Can you provide us with a status update regarding the safety and maintenance needs of the dams along the Missouri River?

Mr. PONGANIS. Yes, sir. Post 2011 flood event, we did receive supplemental funding from Congress. And, as I mentioned in my testimony, all but a few things have been repaired from that flood event. There’s a few—still existing work at the spillway gates at Garretson. But other than that, everything that we have experienced damage from that event has been repaired. The levies, of course, they have ongoing circumstances, and we look at those every year and where necessary do provide for repairs.

Senator ROUNDS. In your testimony you discussed the independent review panel that was convened following the 2011 flood. This technical panel recommended infrastructure investment to prevent future flooding and make sure the levies are in good condition. You say the Corps has essentially completed this work. Can you elaborate on what the panel recommended and what work the Corps has been doing in response to their recommendations?

Mr. PONGANIS. So there were several recommendations about the infrastructure itself. There was—they wanted us to look at the
gates and their structural integrity and also the spillways. They did want us to look at the levy system downstream and do the repairs. As I mentioned, there was a lot of damage at one of the spillways at Fort Peck so we looked at each dam, did an inventory of the potential damages that did occur through the supplemental funding. We got the contracts in place, and the repairs have been made.

Senator Rounds. In your testimony you mentioned the work the Corps is doing with the Natural Resources Conservation Services and the joint proposal you have developed for a snowpack and soil moisture monitoring program in the upper plains. The 2014 Water Resources Development Act, also known as WRRDA, authorized the creation of the program in response to the 2011 flood. At a 2014 hearing I held in North Sioux City you testified that one of the reasons the program had been so slow to develop was because the Corps was unclear as to which agency should take the lead in managing the program. After hearing your testimony I had language included in the 2016 WRRDA bill that directed the Army Corps to be the lead agency in the development of snowpack and soil and moisture monitoring programs. Since the passage of this legislation has the Corps followed this directive and become the lead agency in developing the soil and snowpack monitoring program, and can you give me a status report on the program?

Mr. Ponganis. As you mentioned, Chairman Rounds, in the Senate markup of our appropriations for FY ’17 there was $2 million that we were going to use to initiate that effort. Unfortunately, that did not appear in the final FY ’17 appropriations. We would be hopeful that in FY ’18 we would get direction to do that. We do have capability to start that work and work with the other agencies to develop a plan. And we looked at this back in 2013. I think there’s been a lot of improvements since then on what kind of monitoring can be done. I think we need to refresh that plan, sir, and to get some funds to start that would be the best step forward.

Senator Rounds. I’m increasingly concerned about the rapid change in the water levels in Lake Sharpe. And there are certain other areas along the Missouri as well. In some instances the water level is fluctuating several feet overnight. These extreme changes in water level have damaged property along the Missouri, and I have concerns that it is also impacting wildlife that depend on a steady water level to survive. Can you tell me who is making these decisions for these releases and how these releases fit into the flood control plan?

Mr. Ponganis. So, sir, as—you may know, that we, the Corps, looks at how much water is released for all project purposes. One of those project purposes is hydropower generation. When we provided Western Area Power Administration the guidelines, if you will, for daily releases within that they have—they have the ability to fluctuate the power plant. So on average we ask them to provide, let’s say, 30,000 out of Oahe. They have the ability to go higher or lower than that as demand for electricity increases or decreases throughout the day. So it’s up to Western Area Power to manage that electrical grid and provide for load. So they do fluctuate, and that’s what we see down here is the releases out of Oahe being from peaking the hydropower plants to provide for load for when
the lights turn on during the day and your cycles there over the week.

Senator Rounds. This is kind of a—and this is an opportunity to share this with the public in this part of the area because this is a change in the way the water levels have moved compared to previous years. There are some days here in which you're releasing 58,000 cubes, cubic foot per second, and at other times I suspect you're down under 9,000 cubic feet per second in the same 24-hour period. Now while you may be averaging that out at 30,000 cube feet per second, when you maximize that and minimize that it would seem to me that there would be impact not only on wildlife but property in the area. Now I understand the goal here is to stay within a maximum and a minimum parameter of some sort, but when there is clear evidence that this is at very high levels compared to what we've seen in the past, is there a monitoring system in place to make sure that you're not exceeding your upper levels that—in terms of the property damage that could be occurring because of that very high maximum rate for short periods of time?

Mr. Ponganis. They do have to stay within the stage elevations at the maximum—that we have set for flood stage. And they are below those. Historically, if you look at the graphs over the last 20 plus years, the last 10 years don't have as many peaks—as high a peak as maybe the last historical record would show. So whereas maybe we haven't experienced and seen that here recently, if you look at the history behind it, Mr. Chairman, there has been periods where it has even exceeded what we've seen the last 10 years. But they have not and they do not go above the flood stage elevation.

Senator Rounds. Is there any evidence or has there ever been a study done with regard to what this does to our fisheries in the Lake Sharpe area when we're raising and lowering them like that? And does that have any bearing on the ability of the WAPA to determine on a daily basis what that water level is?

Mr. Ponganis. Sir, I'm not aware of any.

Senator Rounds. Would you take it for the record, please.

Mr. Ponganis. I'll take it for the record and get back to you, sir.

Senator Rounds. Thank you. In addition to my concerns about the wildlife and the property along the River, I'm concerned that the drastic fluctuations in the water levels will impact canal walls when the soil behind the walls becomes saturated and the tieback systems that keep these walls upright is weakened. Has the Corps considered the impact that these water releases will have along canal walls along the River? And would the Corps consider spreading the water releases out over several hours rather than the dramatic changes we're seeing overnight? By that, I'm thinking specifically I've seen it myself where literally the water is over the top of the seawalls or the water—the actual vertical embankments that have been placed in a number of the residential regions in the Lake Sharpe region for certain, which they're actually above those walls.

And what's happening is that when the water is moving up and down as quickly as it is, it's not only saturating the ground behind it but now that ground, when it's rapidly coming back down, those walls are now at risk because that heavy water laden moisture of
soil behind it and the weakening of ties that are in there are now beginning to move those walls. Is the Corps aware of that?

Mr. PONGANIS. Sir, we’re going to have to get back to you on the specifics in this area. I know in general we do take that into consideration when setting what we call ramping rates, how fast you can go up or how fast you can go down in terms of releases or how fast we can drop a reservoir because of the same - So I know that’s a concern that we have nationally. I just don’t have the specifics here, sir, but we’ll get back to you on that.

Senator ROUNDS. Okay. Is there a—is there a maximum amount of power which is available for production on each of these dams in terms of transmission capabilities? What I’m curious about is, as I understand it, there’s a limited amount of transmission capability, and it is shared between the production on the mainstem dams of the Missouri and also other types of renewable energy sources, such as wind power. With the development and increasing use of wind power, particularly in the Upper Midwest, are we sharing those limited transmission resources between the two?

Mr. PONGANIS. That would be a question for Western Area Power Administration, sir, but I am generally aware of the issues surrounding that. There are many issues with the integration of like wind, which has a more variable output and how you, if you will, backstop that with other low generating resources like a hydro-power facility. So there’s a whole bunch of issues surrounding that, sir, and I think having some discussion with the Western Area Power on the transmission side and how they balance that would be worthwhile.

Senator ROUNDS. Is it true or is it your understanding—as the Corps responsible for the operation of the actual generating facilities and so forth, is it true that the ability for a—a demand for power in a very short term is handled very well by hydroelectric generating capacity as compared to other types of generating systems?

Mr. PONGANIS. Yes.

Senator ROUNDS. In other words, you can turn it on and turn it off very quickly so when the demand is out there, if they need demand right now, that demand can come online very quickly using hydroelectric power?

Mr. PONGANIS. Yes. Compared to other generating resources like a thermal plant, yes.

Senator ROUNDS. And so since normally in the past we’ve had firm power that we’ve sometimes used—we used coal-fired plants in the past—we’re using less of that power and we’re using more renewable sources throughout the Upper Midwest. Is that a fair statement?

Mr. PONGANIS. I believe so, sir.

Senator ROUNDS. And so with those other renewable resources that are perhaps more inconsistent than firm power is, the demand from on-demand power coming from hydroelectric plants is perhaps greater today than it has been in the past?

Mr. PONGANIS. As a general statement, I believe so. Yes, sir.

Senator ROUNDS. Would that not suggest that perhaps there needs to be a review of the guidelines for how the use of hydroelectric power is generated and how that fits in with regard to the
other expected requirements for management of the Missouri River such as flood control? What I'm suggesting is this: We now have a new demand for hydroelectric power because it fits very well with renewable resources that are perhaps inconsistent in their delivery of power. And yet at the same time we have a transmission system which shares both hydroelectric and other types of power.

While you have an obligation to get a certain amount of water out just because the amount of water in and amount of water out on an annual basis has got to pretty much average, you've got times which they are demanding a huge amount because it fits well into the shortfall of a renewable source, such as wind power at times, and at the same time you need to release enough water to make sure that the dams are in an appropriate fashion to handle any possible additional snowfall the following year. Is that a fair analysis of what you find today?

Mr. PONGANIS. Yes. And, you know, because we have multiple avenues to release water through the power plant, we have the regulating outlets. We have the spillways. So if there ever is a situation where we—the power demand is not there to use the power plant, we do have other means. But it is that balancing act that we try to go through the year in.

Senator ROUNDS. I'd like to follow that up a little bit. Are there any plans right now to open up any of the bypass spillways, the tunnels as we call them out here, to avoid or—because of the fact that there may not be the need for generation or the ability to generate through the power plant or you may -Do you have any plans to open up the tubes to bypass the generating facilities in any of the mainstem dams at this time?

Mr. PONGANIS. Not at this time, sir, no.

Senator ROUNDS. So you believe the 30,000 average coming through right now will bring you back down out of the flood and normal operating ranges by what time this year?

Mr. PONGANIS. By December, sir.

Senator ROUNDS. By December. And that's based upon averaging out 30,000 cubes?

Mr. PONGANIS. Yes, sir.

Senator ROUNDS. Are there—right now what I'm seeing and what I'm hearing in the local area, and once again as much of an educational process as anything else, it seems to me that the demand for hydroelectric usage in conjunction with new forms of power as they come online, perhaps created the need for a review of how fast these generating facilities should be increased and decreased so that we're not causing undue problems with regard to wildlife by major fluctuations and also with regard to property damage possibilities where if you are at 58 to 60,000 cubes coming through here and if you are over those seawalls, assuming those seawalls were built to an anticipated level for normal operating, it seems to me that maybe that's an area that we should pursue or at least look at as to whether or not those regulations and understandings with WAPA are, number one, being handled appropriately now and whether or not there needs to be additional guidelines laid out for that movement up and down. And I'd like your thoughts on that, if you could. Recognizing we're getting into policy area, but I'd like your thoughts.
Mr. PONGANIS. From a general perspective—not maybe specific to the Missouri, sir, because there’s a lot of different basins around this country that have these issues. And as you see the renewable resources—wind, solar—come online, the energy market, the transmission system, is being challenged from what it used to be, as you said before, as a lot of base load.

And so what you see across the country is—especially because of the hydropower facilities can, as you say, respond quickly to those changes from those other generation resources, you do see the demand for the use of these hydroelectric facilities to turn on and off more often. What that means to the project itself is you start seeing more wear and tear, more demand for more maintenance because they’re—you know, it’s like starting and stopping an engine. Like in your car. If you run it steady load for a while versus the stop and -start and stop traffic in the city, it takes the wear and tear.

So across the country I’ve seen—from my standpoint, seen that occurring. And we respond to that. Of course, we—we do our annual inspections. But I do see that—an increasing trendline on the demand for some maintenance because of that.

Senator ROUNDS. So not only could we have a possibility of having problems with wildlife that we really don’t have an answer to right now, and we know that we’ve got issues at least in the local area here in the central part of South Dakota with regard to property that has most certainly been impacted by the increasing and decreasing on a daily basis of significant water flows, but you’re also indicating that there has been on the part of the maintenance and the operations of the facilities themselves a change that you’re seeing in terms of maintenance needs based upon the turning on and turning off of these facilities on an inconsistent basis during the same time period. Is that what I’m hearing?

Mr. PONGANIS. From a national scale, sir, yes.

Senator ROUNDS. Would you say that that national scale would be any—would it be any different locally on the hydroelectric dams on the mainstem of the Missouri River than what you’ve seen on a national scale?

Mr. PONGANIS. It depends on the plant and where it fits within the transmission system. Certain power plants are more important from a power perspective where they stand against the transmission system in their ability to help balance that. So it is site specific, sir, and would tend to require that we look at that on an individual basis.

Senator ROUNDS. Is it true that the most valuable electrical production is production which is available on an immediate on-demand basis?

Mr. PONGANIS. It’s my understanding that is—yes.

Senator ROUNDS. So for Western Area Power Administration whose responsibility it is to maximize the output of power, as I understand it, in a cost-effective manner, for that organization this is a money-making opportunity to provide power when it is most needed, which is at high demand times.

Mr. PONGANIS. And I firmly believe, sir, that Western Area Power Administration is there to meet the regional load, regardless of the economics surrounding it. That’s their charge. And I think they try to do that job very well.
Senator ROUNDS. So but they will have to follow within guidelines that are laid out under the management plan for the Missouri River; correct?

Mr. PONGANIS. Yes.

Senator ROUNDS. So if there was a place that we go to assure that there is a reasonable expectation as to water levels, based upon what we’re listening today in terms of—and what we’re learning today in terms of impacts on the dam facilities themselves, and the fact that we’ve asked for information on the impact on the fisheries in the area and the wildlife in the area and also based upon what we clearly can see here as property damage that occurs, it seems to me that unless there is a guideline, they have unfettered access to a minimum and maximum production capabilities of each of the mainstem dams that may have to be revisited. Are you aware of anything that would—anything incorrect in my statement?

Mr. PONGANIS. No, sir.

Senator ROUNDS. Okay. Thank you. Let me move on a little bit. We’ve heard from a number of individuals who have appreciated the increased communication between the Corps and the stakeholders regarding snowpack levels and flood risk along the Missouri. Can you give me your assessment of the changes that you’ve made regarding the public awareness this past flood season and the improvements or changes that you think can be made in 2018?

Mr. PONGANIS. So, sir, during the 2011 flood event the—it was well recognized that communication on the operation of the system with the public is extremely important. Out of that we started monthly calls starting in the January time frame typically through June, July, where we had those updates. I think it was based upon the conversation you had with Jodi and Colonel Henderson at the time in January where you suggested that we try to do that on a more frequent basis that we started a weekly web posting of information. And that was supplementing our monthly calls. And we’re going to continue to do that through—through the year. It’s just another way to be transparent in our operations. I think that has greatly improved the communication. And, as I said, we’ll continue to do that as we go finish off this year and start 2018.

Senator ROUNDS. Okay. Can you tell me the status, Director Ponganis, on the—the status of the Real Estate Guidance Policy Letter No. 26 and the proposed rulemaking, Use of Army Corps of Engineers Reservoir Projects For Domestic, Municipal, and Industrial Water Supply? Director Ponganis, can you explain to me the rationale behind the Corps not recognizing the State’s right to manage the natural flows of the Missouri that appears to be found within your Guidance Policy Letter No. 26. Are you familiar with what I’m talking about?

Mr. PONGANIS. Yes, sir.

Senator ROUNDS. Had more than one communications about it?

Mr. PONGANIS. Yes, sir.

Senator ROUNDS. Talk to me about it.

Mr. PONGANIS. This has been an evolving situation within the Corps over the last several years, as you know, Senator. The issue is to get an easement across Corps property for a water right holder to get to the water. The regulations, as they were written, indi-
cate that to get that easement that you’d have to enter in for a con-
tract on storage. The guidance that we have on that falls into two
different laws, surplus water in Section 6 and permanent rights
under Water Supply. There is a rulemaking ongoing. As a matter
of fact, the rulemaking comment period was just extended this
week—last week, end of last week, beginning of this week. It was
about to end but has been now extended through November I be-
lieve it’s 18th, 2017. That information will come out here shortly
on a news release.

That was to lay out a more consistent national policy on how to
approach this issue. But, again, that’s still in the works. Until then
we are working on an individual basis. If a water right user, hold-
er, comes in and wants to do that, we take that individual request
and we have to go up to our headquarters over to the Assistant
Secretary of the Army’s Office for approval to enter into those con-
tracts and easements. And per WRDA, for the next now about
eight years there will be no charges on that—on those contracts.

Senator ROUNDS. The reason why we ask, and we’re going to
have testimony from the mayor of Pierre shortly, the City of Pierre
has been undertaking a burdensome permitting process in order to
obtain an easement to cross Corps land to have access to the River.
The Corps is requiring the City to obtain a 404 Permit and has re-
quested additional information from the City which will cost them
literally thousands of dollars in engineering studies. It appears as
though the Corps has either made this into an extremely burden-
some process as to avoid or at least to delay the implementations
of these easements.

And most certainly it appears as though the Corps has taken the
position that although our state law clearly has issued a permit so
that we can—and this is crazy. We want to just simply be able to
irrigate park land right along the Missouri River, but we have to
cross the easement in order to—or the Corps land to get to the
water where we have a state identified water right of that moving
through. I’m curious as to the thought process behind the—this ex-
isting. And, once again, the Rule 26 comes into play. Either the
Corps is not recognizing a state water right law, which has been
in existence for 100 years or better, or we’re misunderstanding
something. Because this is simply access to get to water that most
certainly under our State’s laws, as clearly as identified and recog-
nized in the original Flood Control Act of 1943—or we’re missing
something else here. And I’m just wondering if you could shed
some light just for the folks in the local area about why we’re hav-
ing this kind of challenge to cross Corps land to get to the water
which we have a state water right to obtain?

Mr. PONGANIS. So, Mr. Chairman, again, when this issue came
up several years ago with—and

Secretary Darcy was the Assistant Secretary of the Army for
Civil Works at the time, she did a—she looked at this from a na-
tional perspective and found out that we were not—we were not
implementing across the board a consistent program to address
that particular issue. And that was really the genesis for the rule-
making effort. And, as I just mentioned, where the comment period
has been extended. We recognize the water rights of holders. We’re
not in that business. That’s state business. But we do have to look
at that easement crossing our land. And, again, the rulemaking
was trying to get to a consistent program to address that specific
question.

Senator Rounds. Sometimes one size does not fit all. Director
Ponganis, you’ve been very patient with me as I worked my way
through a series of questions here. I’ve got just a couple of other
ones here. And I most certainly appreciate the comments that you
made. The City of Ft. Pierre, now celebrating its 200th birthday
this year, they’ve been impacted by the buyout of numerous resi-
dential properties by the Army Corps. As a result, there is now a
checkerboard of dozens of vacant lots fully furnished with infra-
structure and basically no tax revenue.

Is there a process in place that the Corps has for negotiating or
returning pieces of property like this to a community, to a munici-
pality, to a county? Is there a process in place today, or is this
something that we need to look at in terms of further legislation?

Mr. Ponganis. So my understanding, Mr. Chairman, is there
was a specific act that allowed for the Corps to either purchase the
property from willing sellers or flood proof property. Underneath
that law when we purchased that land there is no provisions for
us to resell that. So if there is a desire on the part of the City to
look at that, that could require some assistance from the committee
in terms of maybe some legislation in a WRRDA bill that would
allow for that specific transaction to occur.

Senator Rounds. Very good. Thank you. Is there—I want to go
back over just the big picture one more time so that we’re clear and
give you the opportunity to clarify anything if I’ve misunderstood
what you indicated. The mainstem dams of the Missouri River, cur-
cently while they may have more water in them than what you
want in December, that’s expected this time of the year, you antici-
pate that with an average flow, an average flow of 30,000 cubic foot
per second through the system, thereabouts, you will be well within
or at least you will be within the normal operating range as you
—as the plan calls for along the mainstem dams with those dams
by the time freeze up comes or at least the first part of December.
Is that fair to say?

Mr. Ponganis. Yes, sir.

Senator Rounds. And, furthermore, that the fluctuations that
we’re seeing here have been a demand for power which has been,
under your knowledge, following within the guidelines that have
been laid out in the past for WAPA to be able to request power in-
creases or generation increases on demand but that there are no
further restrictions other than a minimum and a maximum, that
you believe that they have been adhering to with regard to the
total amount of water being released from the mainstem dams?

Mr. Ponganis. Yes, sir.

Senator Rounds. So if there was a need or if there was an inter-
est on the part of regulating further the maximum and minimums
in a time frame for delivery of those, you believe that that would
have to be something taken up within the operating plan, or is
there another way or a better way to be able to respond to that to
eliminate some of the real concerns and clear evidences of damage
being done along the River today?
Mr. PONGANIS. I think, Mr. Chairman, that would have to be looked at from both the operating perspective, operating manual, as well as from a perspective of WAPA on meeting load. So it's not just looking at the physical changes that you would look at from the ability of WAPA to meet a regional load. So it would have to be a joint effort, sir.

Senator ROUNDS. But based upon the current projections at this time, you do not see water releases through anything other than the regular hydro plants along any of the mainstem dams on the Missouri River?

Mr. PONGANIS. For the remainder of this season.

Senator ROUNDS. For the remainder of this season. Okay. Very good. Mr. Ponganis, thank you very much for your testimony today.

Mr. PONGANIS. Thank you.

Senator ROUNDS. At this time we're going to take just a few minutes and we'll change around and you'll hear testimony from several of our local witnesses as well.

Senator ROUNDS. Our witnesses joining us for our second panel today are Mayor Steve Harding, Mayor of Pierre, South Dakota; Jeanne Goodman, Chief Engineer, South Dakota Water Program, Department of the Environment and Natural Resources in Pierre, South Dakota; Mr. Paul Lepisto, Regional Conservation Coordinator, Izaac Walton League of America. Welcome, and I appreciate your taking time to come in and visit with us today. I will turn to our first witness, Mayor Harding, for five minutes. Mayor Harding, your full statement, full testimony, will be included for the record, but you may begin your testimony.

**STATEMENT OF HON. STEVE HARDING, MAYOR, CITY OF PIERRE, PIERRE, SD**

Mayor HARDING. Thank you, Chairman Rounds, and thank you for the invitation to testify this morning. I am Steve Harding, Mayor of Pierre. Through my testimony today I hope to add to the Subcommittee's understanding of the challenges for Pierre and other River communities like Pierre who are facing and obtaining federal permits to access Missouri River water. Before I get further into my testimony, I do want to thank you, Chairman Rounds, for your ongoing leadership to facilitate communications between Missouri River communities and the Corps of Engineers.

Thank you for your efforts. As you know, the 2011 Missouri River flood devastated the communities of Pierre and Ft. Pierre. On the positive side, it's also caused the City of Pierre's relationship with the local Corps of Engineer's office to grow. We do receive regular updates of snowpack, water releases, and river levels. These scheduled updates provided by the Corps greatly increase the community's confidence and understanding of River management. With that in mind, the City of Pierre would highly encourage the Corps of Engineers to purchase additional snowpack monitoring equipment to enhance reliable flood control information for the Missouri River communities like Pierre. As you know, Pierre is nestled along the Missouri River, and the River is very much a central part of our community. In fact, two miles of our parks system are riverfront. We take great pride in showcasing our natural resource, and we work hard to keep our riverfront property inviting.
As you’d expect, keeping the green space along the River green does require irrigation.

Pierre currently has to use treated water to irrigate its parks. Pierre’s water is supplied by ground water produced by a series of local wells. All water produced by the wells is treated prior to distribution. This treatment comes at an expense to the City and ultimately to taxpayers of our community. To control these costs the City is working to gain access to Missouri River water for irrigation purposes. In March of last year we worked with the South Dakota Department of Environment and Natural Resources to obtain a water permit so we could utilize river water for irrigation. In May of last year DENR approved the permit. We subsequently requested an easement from the Corps so we could access the water DENR gave us permission to use.

The federal permitting process has proved to be challenging, financially burdensome, and somewhat bizarre, especially when considering the scope of our requested permit. DENR gave us permission to use 1.57 cubic feet per second between April 1 and November 30. For perspective, the amount of water is less than two-thousandths of a percent. That’s .00155 percent of the water that flows past Pierre annually. After making contact with the Corps, it was our understanding that submission of the 404 Permit form was the first step in the federal process for obtaining an easement. As you might know, 404 permits are typically required prior to construction activities. Although it seemed abnormal to submit a 404 Permit at this initial stage of the process, we complied and submitted the form. After submission of the 404 Permit form, the City received an additional request from the Corps for more information. It did not appear to be an official Corps form or permitting application.

It was just typed in a Word document. The City of Pierre has obtained a number of 404 permits in the past, and we have never been asked for this level of detail to obtain the 404 Permit. To date the City of Pierre has not been able to fulfill the additional request for information. The City would need to invest tens of thousands of dollars in engineering studies to provide the secondary details requested by the Corps. For example, the Corps requested information regarding pump size and approach velocity.

These details require the entire irrigation distribution system to be fully engineered. It is difficult for the City Commission to justify completing a distribution system design when we have no guarantees we’ll be provided access to the River or have the ability to utilize that distribution system. As a small government unit, the unit in Pierre works hard to find financial efficiencies. By utilizing river water for irrigation, we are looking to lower costs, which ultimately benefits our citizens. The City simply wants access to the water we have already been granted permission to use. To that end, the City’s request today is for a consistent, streamlined easement process that will allow entities that have been given legal rights to utilize Missouri River water to be able to access that water. I’d ask that the Corps clearly outline the permitting process, with time lines, financial obligations, and process flow. Thank you for the opportunity to submit testimony. I look forward to working with the
Corps to find a reasonable solution to the City's current permitting concerns.

[The prepared statement of Mr. Harding follows:]

STATEMENT OF HON. STEVE HARDING, MAYOR, CITY OF PIERRE, PIERRE, SD

Chairman Rounds, Ranking Member Harris, and Members of the Subcommittee,
I am Steve Harding, Mayor of Pierre, South Dakota. Through my statement today, I hope to add to the subcommittee’s understanding of the challenges communities are facing in navigating the Federal permit process and obtaining Federal easements for water access.

Flood Management
At the outset, I do want to thank Chairman Rounds for his ongoing leadership in helping Missouri River communities understand the management of the Missouri River by opening lines of communications between the U.S. Army Corps of Engineers (USACE) and local government leadership.

Although the 2011 Missouri River flood was devastating to Pierre, it did cause the city of Pierre’s relationship with the local Corps of Engineers Office to grow immensely. We now receive regular updates about snow pack, water releases and river levels. These scheduled updates greatly increase our comfort level and understanding of river management. I want to thank the USACE for its ongoing cooperation and information sharing on this matter.

To that end, it is our understanding that money has been appropriated to the USACE for the purchase of additional snow pack monitoring equipment. The City supports the purchase to further enhance reliable flood control information for Missouri River communities.

I also want to commend the staff of our local Corps of Engineers Office. We enjoy a solid relationship with the local team and greatly appreciate their cooperation and professionalism.

River Access
As you know, Pierre is nestled along the Missouri River, and the river is very much a central part of our community. In fact, two miles of our park system are riverfront.

The City takes great pride in showcasing the natural resource and works hard to keep our riverfront property inviting. As you’d expect, keeping the green space along the river green does require irrigation.

Pierre’s water is supplied by groundwater produced by a series of local wells. All water produced by the wells is treated prior to distribution. The City feels it is unnecessary to use water treated for drinking purposes to be used for irrigation in our parks. Treated water comes at an expense to the City and ultimately, the taxpayers.

To control these costs and because of our proximity to the Missouri River, the City is working to gain access to Missouri River water for irrigation purposes.

In March of 2016, the city of Pierre worked with the South Dakota Department of Environment and Natural Resources (SD DENR) to obtain a Water Permit which would allow the City to utilize river water for irrigating our riverfront park system.

In May 2016, SD DENR approved the permit. The SD DENR determined that there is unappropriated water available for irrigation use, that the diversion could be developed without impairing existing rights, that the City’s intended use of the water is beneficial and it was in the public interest.

Subsequently, the City sought an easement from the USACE to access the water we had been given rights to utilize. Unfortunately, the Federal permitting process proved to be challenging to navigate, and financially burdensome—especially when considering the scope of the requested permit. The amount of water we would use annually is less than 2 thousandths of a percent—that’s .00155 percent) of the water that flows past Pierre annually.

After making contact with the USACE with our initial intake and irrigation plan, it was our understanding that submission of the 404 Permit form was the first step in the USACE process for obtaining an easement. As you might know, 404 Permits are typically required prior to construction activities. Although it seemed abnormal to submit a 404 Permit at this initial stage of the process, we complied and submitted the form.

After submission of the 404 Permit form, the City received an additional request from the USACE for more information. This secondary request for information did not appear to be on an official USACE form or permitting application, nor did we previously understand this document to be part of the easement permitting process.
To date, the city of Pierre has not been able to fulfill the additional request for information. To fulfill that request, the city would need to invest tens of thousands of dollars in engineering studies. For example, the USACE requested information regarding pump size and approach velocities. Those details require the entire irrigation distribution system to be fully engineered. It is difficult for the City to justify completing a distribution system design when we have no guarantees we’ll be provided access to the river or have the ability utilize that distribution system.

It is the City’s opinion that the request is incongruous with the scope of the project, and we do not have a clear understanding of the Federal easement permitting process. What steps remain in the easement permitting process?

As a small government unit, the city of Pierre works hard to find financial efficiencies. By utilizing river water for irrigation, we are looking to lower costs which ultimately benefits our citizens. The City simply wants access to the water that we have already been granted permission to use.

To that end, the City’s request today is for a consistent streamlined easement process that will allow entities that have been given legal rights to utilize Missouri River water to be able to access that water. We’d ask that the USACE clearly outline the permitting process with timelines, financial obligations, and process flow. The City understands processes are necessary, however, it is our experience that the current process is cumbersome, overly burdensome, and financially prohibitive. We question why the USACE is making it so challenging for the City to provide this cost saving service to our community.

Thank you for the opportunity to submit testimony. I look forward to working with the USACE to find a reasonable resolution to the City’s current permitting concerns.

Senator Rounds, Thank you, Mayor Harding, for your testimony. Our next witness is Ms. Goodman. Ms. Goodman, you may begin.

STATEMENT OF JEANNE GOODMAN, CHIEF ENGINEER, SOUTH DAKOTA WATER PROGRAM, PIERRE, SD

Ms. Goodman. Thank you, Thank you, Chairman Rounds. My name is Jeanne Goodman. I’m the Chief Engineer of the Water Rights Program for the South Dakota Department of Environment and Natural Resources. Thank you for the opportunity to testify. I want to share DENR’s perspective of the Corps’s management of the Missouri River since the 2011 flood event, DENR’s efforts in managing water use of the Missouri River, and how federal and state management of the—efforts of the River need to work collaboratively. Following post 2011 Missouri River Flood Independent Review Report recommendations, the Corps began improving communication systems between other agencies and distributions of current conditions, storage forecasts, and planned releases with federal, state, and local officials during periods of heightened flood risk.

DENR appreciates the Corps’s improved communications, especially during spring flows and runoff conditions, through monthly conference calls. Updates of basin conditions posted on their website have been particularly helpful this year, as early mountain snowmelt and late spring runoff impacted Lake Oahe levels resulting in variable flows of Lake Sharpe. However, the Independent Review Report conditions [sic] for studies to enhance data collections, forecasting, and runoff from plains snow, which was insufficient in preparing for and managing the 2011 flood, have not been implemented. This key piece in flood management was authorized by the 2014 Water Resources Development Act, or WRRDA, but the Corps needs to step up as the lead agency to make this program happen.

Water laws in South Dakota dates back to statehood and declares all waters of the state are property of the people of the state.
The right to use the water may be acquired by appropriation, as provided by law. Water right permits can be issued if there is unappropriated water available. The use will not unlawfully impair existing rights. The proposed use is beneficial and is in the public interest. Meeting these criteria, water right permits are issued for the use of the natural flows from the Missouri River. Natural flows are essentially those waters that would flow in the River, whether or not the mainstem reservoirs existed.

The Corps, however, does not recognize natural flows or the State’s jurisdiction over them. Instead they consider all water in reservoir as stored water under federal authority. In 2008 the Corps issued Real Estate Guidance Policy Letter No. 26, a policy requiring municipal and industrial water users to acquire a water storage contract prior to the Corps issuing an access easement to a Missouri River reservoir for a pump site. Since the Corps ignores the existence of natural flows and had no process for issuing contracts, the effort of the policy was to place a moratorium on easements to Missouri River reservoirs. This moratorium hit South Dakota hard because out of the 1,000 miles of Missouri River shoreline, only about 100 are on two short free-flowing stretches in the state. 90 percent of the River became off limits to potential users of the Missouri River water. How can South Dakotans use Missouri River water? How can they put it to beneficial use when access to the River is denied? We agree the Corps has certain authorities under the 1944 Flood Control Act and the 1958 Water Supply Act but strongly dispute the Corps’s definition of stored water as being all water held within the boundaries of the reservoir. A proposed rulemaking published in December 2016, which was intended to standardize how the Corps will charge for stored water and further define stored water versus natural flows, has failed to fully recognize states’ jurisdictions in the matter. As Governor Daugaard commented on the proposed rulemaking, “The proposed rule is unacceptable to South Dakota” because the Corps attempts to write into rule the agency’s legal authority to expand federal storage right claims and control over the allocation of all of the Missouri River water without regard to state water laws.”

State’s rights to natural flows of navigable waters within their borders are constitutionally founded and protected in the Equal Footing Doctrine. Congress acknowledged this states’ right in the first sentence of Section 1 of the 1944 Flood Control Act by stating, “It is declared to be the policy of the Congress to recognize the interests and rights of the states in determining the development of the watersheds within their borders.” As a consequence of the Doctrine and the enacted law, the Corps must acknowledge the State’s right to natural flows for states to effectively manage the Missouri River water. Governor Daugaard’s complete comment letter on the proposed rulemaking has been filed for the record with my testimony. To address these issues South Dakota suggests Congress take the following actions: Direct the Corps to continue basin updates for congressional, state, and local interest and step up as lead agency to develop and implement a plains snowpack and drought monitoring network as authorized by the 2014 WRRDA. Secondly, acknowledge that natural flows through the reservoirs exist and re-
main under the jurisdiction of the states by rescinding Real Estate Guidance Policy Letter No. 26 and allowing users to access the water for which they have obtained state water rights. And, three, reject the current proposed rulemaking, Use of Army Corps of Engineers Reservoir Projects for Domestic, Municipal, and Industrial Water Supply. I hope this information is useful to your Subcommittee, Mr. Chair. Thank you.

[The prepared statement of Ms. Goodman follows:]

STATEMENT OF JEANNE GOODMAN, CHIEF ENGINEER, SOUTH DAKOTA WATER PROGRAM PIERRE, SD

Chairman Rounds, Ranking Member Harris, and Members of the Committee, my name is Jeanne Goodman, Chief Engineer of the Water Rights Program, South Dakota Department of Environment and Natural Resources (DENR). Thank you for the opportunity to testify. I want to share DENR’s perspective of the Corps’ management of the Missouri River since the 2011 flood event, DENR’s efforts in managing water use of the Missouri River, and how Federal and State management efforts need to work collaboratively.

Following the post 2011 Missouri River Flood Independent Review Report recommendations, the Corps began improving communication systems between other agency forecasts and distribution of current conditions, storage forecasts, and planned releases with Federal, state, and local officials during periods of heightened flood risk. DENR appreciates the Corps improved communication especially during spring flows and runoff conditions through monthly conference calls. Updates of basin conditions posted on their website have been particularly helpful this year as early mountain snowmelt and late spring runoff impacted Lake Oahe levels resulting in variable flows in Lake Sharpe.

However, the Independent Review Report recommendations for studies to enhance data collection, forecasting, and runoff from plains snow, which was insufficient in preparing for and managing the 2011 flood, has not been implemented. This key piece in flood management was authorized by the 2014 Water Resources Development Act, but the Corps needs to step up as lead agency to make this program happen.

Water Rights law in South Dakota dates back to statehood and declares all waters within the State as the property of the people of the state. The right to use the water may be acquired by appropriation as provided by law. Water right permits can be issued if there is unappropriated water available, the use will not unlawfully impair existing rights, the proposed use is beneficial, and is in the public interest. Meeting these criteria, water right permits are issued for use of the natural flows from the Missouri River. Natural flows are those waters that would flow in the river whether or not the main stem reservoirs existed.

The Corps, however, does not recognize natural flows or the state’s jurisdiction over them. Instead they consider all water in a reservoir as stored water under Federal authority. In 2008 the Corps issued Real Estate Guidance Policy Letter No. 26, a policy requiring municipal and industrial water users to acquire a water storage contract prior to the Corps issuing an access easement to a Missouri River reservoir for a pump site. Since the Corps ignores the existence of natural flows and had no process for issuing contracts, the effect of the policy was to place a moratorium on easements to Missouri River reservoirs. This moratorium hit South Dakota hard, because out of a thousand miles of Missouri River shoreline, only about one hundred are on two short free-flowing stretches in the state. Ninety percent of the river became off limits to potential users of Missouri River water.

How can South Dakotans put Missouri River water to beneficial use when access to the water is denied? We agree the Corps has certain authorities under the 1944 Flood Control Act and 1958 Water Supply Act but strongly dispute the Corps’ definition of stored water as being all the water held in reservoirs. A proposed rulemaking published December 2016, intended to standardize how the Corps will charge for stored water and further define stored water versus natural flows, failed to fully recognize states’ jurisdiction in the matter.

As Governor Daugaard commented on the proposed rulemaking, “the proposed rule is unacceptable to South Dakota” because the Corps “attempts to write into rule the agency’s legal authority to expand Federal storage right claims and control over the allocation of all of the Missouri River water without regard to State water laws.” States’ rights to natural flows of navigable waters within their borders are constitutionally founded, and protected, in the Equal Footing Doctrine. Congress ac-
knowledged this states’ right in the first sentence of Section 1 of the 1944 Flood Control Act by stating “it is declared to be the policy of the Congress to recognize the interests and rights of the States in determining the development of the watersheds within their borders and likewise their interests and rights in water utilization and control.’ As a consequence of the doctrine and the enacted law, the Corps must acknowledge the state’s right to natural flows for states to effectively manage Missouri River water. (Governor Daugaard’s complete comment letter the ‘Use of Army Corps of Engineers Reservoir Projects for Domestic, Municipal & Industrial Water Supply’ proposed rulemaking is attached.)

To address these issues, South Dakota suggests Congress take the following actions:

1. Direct the Corps to follow through on the 2011 Missouri River Flood Independent Review Report by continuing basin updates for congressional, state, and local interests and step up as lead agency to develop and implement a plains snowpack and drought monitoring network authorized by the 2014 WRDA.

2. Acknowledge that natural flows through the reservoirs exist and remain under the jurisdiction of the states by rescinding Real Estate Guidance Policy Letter No. 26 and allowing users to access the water for which they have obtained State water rights.

3. Reject the current proposed rulemaking “Use of Army Corps of Engineers Reservoir Projects for Domestic, Municipal & Industrial Water Supply”.

I hope this information is useful to the Subcommittee. Thank you.

Senator ROUNDS. Thank you for your testimony, Ms. Goodman. We’ll now hear from our next witness, Mr. Paul Lepisto. Mr. Lepisto, you may begin.

STATEMENT OF PAUL LEPISTO, REGIONAL CONSERVATION COORDINATOR, IZAAK WALTON LEAGUE OF AMERICA, PIERRE, SD

Mr. LEPISTO. Thank you, Mr. Chairman. The Izaac Walton League of America appreciates the opportunity to testify here today. Our written testimony provides much greater detail, but we would like to address several topics this morning. We believe the Missouri River is one of the most altered ecosystems on earth. The ’44 Flood Control Act created eight authorized purposes that are in direct conflict. 35 percent of the River is impounded by reservoirs, and 33 percent is artificially channelized by the Bank Stabilization and Navigation Project. Creation of the dams in the BSNP resulted in millions of acres of the River’s aquatic and terrestrial habitat being destroyed. That habitat historically made the Missouri River one of the richest ecosystems on earth. While habitat restoration is ongoing, we believe much more must be done. Restoration will provide critical habitat for over 85 native fish species and over 140 bird species along the River. We recognize the paradox the Corps faces every year. Flood control requires removing water from the reservoirs while the other purposes require storing water.

Also only 53 percent of the basin is regulated by the mainstem reservoirs, leaving areas of the lower basin subject to flooding regardless of Corps’s action. We urge better communication by the Corps with the public on this topic. We also encourage the Corps to rethink rather than just rebuild structures that repeatedly fail. More levy setbacks and river widening projects should be used. This would give the River more room to roam, provide flood risk reduction, and reestablish floodplain conductivity. The incredible dynamics of the basin are evident again this year as has been touched on this morning. Areas are experiencing severe to exceptional drought while dam releases are high. We believe there’s an urgent need for a much more flexible management ap-
proach, and we would support updating the master manual to allow additional in-season release adjustments that more closely match that year’s actual runoff. We believe the federally listed species are poster children for our largely unhealthy river. Restoring habitat will benefit the listed species and the fish species that are now listed as rare or declining. We urge action that in selected areas would allow the River to restore its own habitat for self-sustaining fish and wildlife populations. This will recover the River, reduce flood risk, and improve water quality, while increasing recreational opportunities. We call on the Corps to continue the BSNP Mitigation Program and strongly urge them to seek the funding to get the BSNP Mitigation Program back on track. The recreation industry on the Missouri River is a major economic engine that supports local, regional, and national businesses. Its economic impact exceeds by more than 10 times the Flood Control Act’s original expectations for it.

Recreation produces and sustains thousands of year-round jobs in and out of the basin, yet we’re concerned about the health of the fisheries on the reservoirs. Stable or rising springtime levels, especially at Fort Peck, Sakakawea, and Oahe, are essential for fish recruitment. We do support the Corps’s unbalanced management approach in their attempts to raise water levels in at least one of the reservoirs each spring. The League commends the Corps for improved engagement with other agencies for the monitoring of snowpack, soil moisture, and frost depth every year. However, we too are disappointed the Corps has not yet requested the funding for gauges that accurately measure runoff and snow water equivalent. We urge the Corps to incorporate climate change and its impact in their future runoff scenarios and in their annual operating plan development process. In most years the amount of water in the Missouri River Basin is limited, especially from the upper semi-arid basin. We support the Corps meeting navigation flows if and only if commercial navigation is actually on the lower river. This should be enacted every year that runoff is at or below average. We obviously acknowledge the importance of getting the reservoirs out of the exclusive flood control zone, but we would ask for water conservation measures every year once that goal is reached. We also urge the Corps to work with other agencies to lessen sediment in the reservoirs by encouraging conservation methods that reduce erosion, and we would support exploring ways to decrease and/or transport sediment from the reservoirs. The League believes the Missouri River benefits everyone if it’s healthy, and if it’s managed for multiple uses, the River will create even more jobs, revenue, and recreational opportunities for families in the basin and all across the nation. And, with that, I thank you for your time and consideration.

[The prepared statement of Mr. Lepisto follows:]

STATEMENT OF PAUL LEPISTO, REGIONAL CONSERVATION COORDINATOR, IZAAK WALTON LEAGUE OF AMERICA, PIERRE, SD

The Izaak Walton League of America (League) appreciates the opportunity to provide written testimony on the topic: “Oversight of the Army Corps’ Management of the Missouri River.” The League was founded in 1922, and has over 42,000 members and nearly 230 chapters around the country. Many of the League’s members are avid recreationists that fish, hunt, and truly enjoy living in the Missouri River
basin. The river plays a major role in many of our members' daily lives. The League looks to collaborate with all interests in the basin to find common sense, science-based solutions that work with the river rather than against it. The Missouri River basin encompasses land covering one-sixth of the continental United States. The Missouri, America’s longest river, is one of the most altered ecosystems on earth. Many of the alterations followed passage of the 1944 Flood Control Act (FCA), which created eight authorized purposes: flood control, hydropower, recreation, fish and wildlife, irrigation, water supply, water quality, and navigation. These purposes—by their individual water needs—have been, and continue to be, in direct conflict with each other.

The Missouri River is far different than the “Big Muddy” explored by Lewis and Clark. Today, 35 percent of the river is impounded by six massive main stem reservoirs and 33 percent is artificially channelized in the 735 mile Bank Stabilization and Navigation Project (BSNP) from Sioux City, Iowa to St. Louis, Missouri. With creation of the dams and the BSNP, millions of acres of the river’s historic aquatic and habitat have been lost or destroyed. This includes much of the riverine forest and shrub land vegetation, nearly all of the sandbars and islands, and the majority of the river’s shallow and slow water habitat. The alterations were so significant the river is now 120 miles shorter between Sioux City and St. Louis. While some habitat recovery and restoration efforts are ongoing, the League believes much more must be done. League members, especially those living in Iowa, Nebraska, and South Dakota, want to see the recovery efforts continue and expand. The League believes many more areas along the river are in need of restoration and conservation efforts due to the high-quality recreational, natural, scenic, and historical resources they contain. With additional restoration, areas of the river could again provide critical habitat for over 85 native fish species, including the endangered pallid sturgeon, and more than 140 year-round and migratory bird species, including the bald eagle and the federally listed least tern and piping plover. The river’s man-made alterations destroyed most of the braided side channels, chutes, wetlands, islands, sandbars, backwaters, natural floodplain, and upland forest areas that historically made the Missouri River one of the richest ecosystems on earth.

We appreciate your consideration of the following topics concerning current and future Missouri River management issues:

1) The Corps’ Overall Management
2) Suggestions for Future Management
3) The Missouri River Recovery Program (MRRP)
4) The Need for Improved Stream Gauges to Aid in Runoff Forecasting
5) Recreation
6) Navigation
7) River Bed Degradation
8) Sedimentation
9) Aquatic Invasive Species

Overall Management

The League realizes the tremendous paradox the Army Corps of Engineers faces each year related to water management on the Missouri River. Flood control is the only one of the eight authorized purposes that requires removing water from the reservoir system. The other seven authorized purposes all require storing water in the reservoir system. Another complex management issue for the Corps is that only 53 percent of the Missouri River Basin is regulated by the six mainstem reservoirs. That leaves roughly half the basin largely unregulated and subject to regular flooding, regardless of what is proposed in the Corps’ Annual Operating Plan (AOP) or any other management action. The League urges the Corps to increase communication with the public about this fact to help educate people that it doesn’t, and can’t, control the runoff in the entire basin. Despite the agency’s best efforts, periodic flooding will occur along stretches of the lower river.

Future Management

The League continues to encourage the Corps to always look outside the box and “re-think” rather than just “re-build” man-made flood control structures that repeatedly fail. We believe it’s time to look at non-structural alternatives to levees. We wholeheartedly support increasing levee setbacks and completing additional river widening projects, like the Deer Island Project north of Omaha-Council Bluffs that gives the Missouri River more room to roam. This will provide additional flood risk reduction to the lower basin and reduce the stage of the river during high flow periods.

The Missouri River Master Manual calls for a 3,000 foot floodplain from Sioux City to Kansas City and a 5,000 foot floodplain from Kansas City to the mouth near St. Louis. The League has repeatedly urged the Corps to work with local govern-
ments on new zoning ordinances to implement this wider floodplain. This action would continually save taxpayer dollars and produce a healthier river by reestablishing needed floodplain connectivity.

A reconnected floodplain will naturally produce and provide needed habitat for fish and wildlife thereby aiding recovery of threatened and endangered species. The naturally created habitat will also provide increased recreational opportunities for families in the basin. That boost from the recreation industry will have a positive economic impact and create many more year-round jobs.

The incredible dynamics of the Missouri River Basin have been evident again this year. Many areas of the upper basin experienced severe to extreme and even exceptional drought conditions this spring and early summer. At the same time, flows out of the dams were at very high levels due to the Corps releasing water from high mountain snowpack. This huge hydrological swing demonstrates how quickly basin conditions change. The League believes these dramatic swings demonstrate the urgent need for a much more flexible approach to the day-to-day management of the Missouri River.

We firmly believe the Corps’ management policies must be much more adaptable to the actual basin hydrologic conditions. We support changing and updating the Missouri River Master Manual so it would allow additional in-season adjustments to water releases. This would enable the Manual to accurately match the actual high or low runoff as each year unfolds. Critically important water management decisions, that ultimately impact all the residents of the basin, should not follow a “locked in stone policy” set months before the actual runoff conditions are realized. Millions of people in the basin depend on the Missouri River and its resources for their livelihood and as an important component to their quality of life. That human demand, and the overall health of the river itself, require a much more modern, adaptable approach to water management than the current Master Manual policies permit.

The current Master Manual review of water in storage in the reservoir system to determine navigation support and season length does not adequately address the needs of residents in the basin. Basin conditions can, and do, change rapidly. Additional timely reviews throughout the spring and summer months are urgently needed to accurately determine the proper amount of releases from the reservoir system every year.

The League would also enthusiastically support a comprehensive review of the eight Missouri River Authorized Purposes in the FCA. We believe the eight purposes need to be thoroughly reviewed in terms of what is best for the American taxpayer as well as the needs of all the people in the entire Missouri River basin. This review should incorporate today’s economic values and priorities, instead of being limited to those included in the FCA.

The Missouri River is still operating on a 70 year old business plan. This review of the eight authorized purposes is urgently needed and long overdue for the American taxpayer and for the river itself. The Missouri River basin is very different today compared to what was envisioned when the FCA was passed. Some of the authorized purposes meet or greatly surpass original expectations. For example, recreation today exceeds original FCA estimates by more than 10 times. Other purposes, however, have fallen well short of original expectations. Commercial navigation is less than one-tenth what the FCA estimated it would be, yet the Corps’ water management continues to favor navigation despite little or no barge traffic on the lower river. This dramatically demonstrates why this review needs to fully funded, completed, and recommendations from it sent to Congress to make long over-due changes in the FCA.

A comprehensive review of the authorized purposes would be a prudent investment, one that would produce savings for the taxpayer in the future. A review and any subsequent changes would streamline future Corps operational expenses and it would finally bring Missouri River management into the 21st century.

The Missouri River Recovery Program (MRRP)

The League supports the Corps’ efforts in the Missouri River Recovery Program (MRRP). We believe the three federally listed species—the pallid sturgeon, least tern, and piping plover—are “poster children” for what is mostly an unhealthy river. Restoring a portion of the millions of acres of lost riverine habitat will not only benefit the listed species, but also help the 51 of 67 native fish species now listed as rare or declining on the river.

The Corps worked hard to develop the new Missouri River Recovery Management Plan (MRRMP). The plan’s Draft Environmental Impact Statement (DEIS) was released in December. The plan included six proposed alternatives for Missouri River recovery. This Federal action will include activities designed to recover the Missouri River species protected under the Federal Endangered Species Act (ESA) and will
be conducted pursuant to the 1958 Fish and Wildlife Coordination Act and the Water Resources Development Act (WRDA) of 1986, 1999, and 2007. This authority includes Section 3176 of WRDA 2007 that expanded the Corps’ authority for recovery and mitigation activities in the upper basin states of Montana, Nebraska, North Dakota, and South Dakota. All these authorities have been combined into the MRRP.

In our comments on the MRRMP-DEIS the League shared our concerns on the Corps’ preferred alternative, Alternative 3. We feel this alternative relies too heavily on mechanically constructed habitat and is too dependent on receiving future Federal funding. We believe this leaves needed habitat recovery extremely vulnerable to future Federal budget cuts which would make species and river recovery highly unlikely.

We would like to see the Corps incorporate additional recovery options that, in selected areas, lets the river do some of the work and recover fish and wildlife habitat on its own. The League also believes the Corps should strive to change the status quo on the Missouri River. We strongly urge the development of recovery alternatives that will ensure the long-term survival and recovery of a self-sustaining population of the listed and other native species. We believe this would greatly improve the overall health of the river, reduce flood risk, and increase water quality and recreational opportunities.

The League supports the efforts of the Missouri River Recovery Implementation Committee (MRRIC). The committee was authorized in section 5018 of WRDA 2007. The League was an original member of the MRRIC and continues to have a high level of involvement with the committee. The MRRIC is made up of representatives from a wide variety of basin stakeholder interests as well as state, tribal, and Federal representatives. MRRIC provides guidance to the Corps and the U.S. Fish and Wildlife Service (FWS) on current and future actions of the MRRP for the listed species on the river. Through the MRRIC, the Corps is now working collaboratively with tribes, Federal and State agencies, and other stakeholders throughout the Missouri River basin.

The League believes a thorough analysis of all the recovery actions through the adaptive management plan will ensure that all future management decisions and actions are continuously improved. Updating and incorporating what is learned through regular and comprehensive scientific monitoring of the river will provide benefits to the listed species and lead to the recovery of portions of the habitat lost and/or destroyed along the Missouri River.

Much of the MRRP efforts have occurred within the area of the BSNP. This is to mitigate for the destruction of over 522,000 acres of aquatic and terrestrial habitat between Sioux City and St. Louis. The League encourages the Corps to continue implementing recovery efforts in this area and to strive to reconnect portions of the lower river with its historic flood plain.

The League also urges the Corps to consider other areas along the river, as authorized in Section 3176 of WRDA 2007, for recovery efforts. We feel this will improve recovery opportunities for the listed and other imperiled species by putting recovery projects across a much wider geographic area. This will increase public support of the MRRP by having projects on the ground in multiple states.

The loss of wetlands along the Missouri River has impacted the historic migration corridor for waterfowl and other bird species. The League supports restoring the wetland habitat needed to attract and maintain historic migrating waterfowl populations, providing hunting and birdwatching opportunities that will provide significant economic benefits throughout the region.

The wetland loss along the river has also contributed to increased water quality problems. This adds to water treatment costs and further complicates species recovery. League members, especially those in Iowa, Nebraska, and South Dakota, want the river’s natural attributes, including wetlands, backwaters, side channels, chutes, and islands, to return to portions of the lower river. These areas are capable of producing both long-term ecological and economic benefits.

The League supports the Corps’ efforts to restore some of the natural features and dynamics of the Missouri River.

We encourage the Corps to continue the BSNP mitigation program and acquire land from willing sellers to develop additional shallow water and terrestrial habitat. The League supports projects that restore SWH. However, to achieve full recovery potential, the revetments that have been placed across the openings of previously constructed side chutes need to be opened. This will allow the chutes to function as they were designed. Re-opening chutes that have either been closed or silted in will provide some sorely needed SWH for many native fish and wildlife species along the lower river. The restoration efforts will have positive impacts on all fish and wildlife throughout the region.
Studies conducted by the FWS and other agencies show that over twice as many fish species are utilizing the created SWH areas than use the navigation channel. A Corps’ study also shows that the emergent sandbar habitat (ESH) projects have had tremendous response from nesting terns and plovers. These habitat restoration projects are working with the river—not against it.

The recovery projects have also been a boon for the river. Anglers, hunters, boaters, birdwatchers, and others have been using these areas proving the old adage “if you build it, they will come.” The Missouri Department of Conservation and the Nebraska Game and Parks Commission concluded in a recent study that recreational spending provides $68 million in annual economic impact to areas along the Missouri River between Yankton, SD and St. Louis, MO. With additional habitat recovery projects, even more people will come to spend time on or along the river.

In addition to the economic boost from outdoor recreation, restoration projects provide broader economic benefits throughout the entire region. These projects involve restoring and creating habitat for terns, plovers, and pallid sturgeon in the basin. To perform this work, the Corps contracts with local construction companies. This creates or maintains jobs that inject money into local economies through purchases of materials, fuel, food, and lodging. With robust annual funding for the MRRP, the Corps could readily implement more of these important economic and ecological restoration projects.

To successfully complete necessary recovery plans, the League supports fee title acquisition of land from willing landowners. We believe fee-title acquisition should be used when major restoration work is needed to improve the ecological function of the river or when public access is anticipated or desired. We urge Congress to appropriate the needed funds for the Corps to get back on track with the BSNP habitat mitigation effort outlined in previous WDRAs and other legislation for areas in the lower basin.

We also want to see more recreational and educational opportunities in the new recovery management plan. Recreation should be compatible with wildlife but could include canoeing, kayaking, boating, fishing, hunting, and hiking trails. This will encourage use by schools, scouts, groups, and families that want to learn more about the nation’s longest river.

The League also favors of the Corps working on restoration projects in cooperation with State agencies, including the Iowa Department of Natural Resources, the Nebraska Game and Parks Commission, and the South Dakota Department of Game, Fish and Parks. The Corps should also look for additional support through other partnerships and volunteers.

The League also requests the Corps address the following in future recovery efforts: Water Quality—Is water quality in the Missouri River or from any of its tributaries a contributing factor to low reproduction of the endangered pallid sturgeon or for the 51 of 67 native fish species now listed as rare or declining along the Missouri River?

Water Supply—Can recovery actions be developed that more closely mimic the historic flows of the Missouri River, flows that are beneficial to native fish and wildlife species including the listed species?

Genetic Diversity—Can recovery actions be developed that will preserve and protect the genetic diversity of the upper basin population of pallid sturgeon?

Recreational Access—Can recovery actions be developed that also connect more of the river to its flood plain and connect more people to the river? The public needs many more areas where they can access the river to hunt, fish, birdwatch and just enjoy the river with family or friends. When you get people on or near the river, they will be much more likely to support the activities that improve the health of the river.

Stream Gauges—Runoff Forecasting

The League commends the Corps for engaging with the National Oceanic Atmospheric Administration, the National Weather Service, the Natural Resource Conservation Service, and other Federal, State and local agencies to increase monitoring of plains and mountain snowpack water content, soil moisture, and frost depth to more accurately determine the actual annual runoff.

However, we are disappointed that the Corps has still not asked Congress to provide robust investment in modern stream gauges to accurately monitor flows in the Missouri River’s tributaries and the snow water equivalent in the upper basin. This enhanced monitoring would enable the best data possible for forecasting annual runoff across the basin. We also encourage the Corps and other agencies to incorporate data dealing with climate change and its impacts, both wet and dry, when completing future runoff scenarios and developing the Annual Operating Plan.
To improve annual water management within the basin, the League encourages the Corps to utilize every tool available. Tools that consider hydrological and economic factors such as water supply, collection, storage and diversion, withdrawal, consumption, and water requirements in the river basin. We believe the Corps needs to implement medium and long-term water management planning in order to avoid potential conflicts over water management for the basin.

Recreation

The South Dakota Department of Game, Fish, and Parks has conducted studies that show the annual economic benefits from recreation on the Missouri River in the Dakotas and Montana are greater than $100 million. That huge economic impact exceeds by more than ten times the 1944 Flood Control Act's original expectations for recreation.

The recreation industry on the Missouri River is a major economic engine, one critical for local, regional, and national businesses. With that positive impact and for quality of life issues, League members remain concerned about the overall health of the fisheries in the system's reservoirs. Our members have particular concerns about the fisheries in the big three reservoirs: Fort Peck Lake in Montana, Lake Sakakawea in North Dakota, and Lake Oahe in North and South Dakota. The record high releases in 2011 flushed a tremendous amount of forage fish, chiefly rainbow smelt, out of Lake Oahe. Stable or rising reservoir levels in the big three reservoirs are essential in the spring and in the early summer. These are needed to facilitate recruitment of forage fish populations.

The League supports the Corps' current management approach for the big three reservoirs in which it attempts to raise water levels in at least one of the reservoirs each spring. Given the economic importance of the recreation industry and how dependent that industry is on a healthy fishery, we encourage the Corps, when possible, to raise or at least hold reservoir levels steady each spring in all of the big three reservoirs.

The Missouri River reservoirs provides world-class recreational opportunities for residents and hundreds of thousands of visitors each year. Those opportunities generate abundant income for businesses across the Nation. The recreation industry produces and sustains thousands of yearround jobs for people in and out of the basin.

Navigation

The League believes water is the most fragile natural resource in the Missouri River basin. In most years, water is in very short supply, especially in the semi-arid upper basin. In years of average or, even more importantly, below average basin runoff, the League supports the Corps meeting navigation flow targets with reservoir releases if and only if commercial navigation traffic is actually going to be on that reach of the Missouri River.

Navigation is the single largest consumer of Missouri River water annually. However, navigation continues to fall dramatically short of its yearly shipping tonnage expectations. According to the General Accountability Office (GAO), the vast majority of the Missouri River navigation traffic, mostly comprised of sand and gravel, travels less than 10 miles. The League believes a tremendous economic and ecological burden is placed on the rest of the basin to supply valuable water to move sand and gravel only a few miles on the lower river.

We also believe this water conservation policy should be made effective not just when portions of the basin are in severe drought, but every year that runoff is expected to be at or below the long-term average. Adopting this policy would save the basin millions of acre feet of water. Once water is released from the reservoir system, it's gone from the system forever. During previous prolonged droughts, upper basin states have spent millions of dollars “chasing water.” Examples include having to extend or relocate boat ramps and water intakes in the reservoir system to maintain access critical for the recreation industry and for irrigation and domestic water systems.

The League acknowledges and agrees with the importance of getting the reservoir system out of the Exclusive Flood Control Zone each year, but we ask that the Corps begin to implement conservation measures each year once that goal is met.

Riverbed Degradation

The League supports efforts to address riverbed degradation, or down cutting, of the Missouri River. Riverbed degradation is having substantial negative impact on public and private infrastructure, fish and wildlife habitat, and recreational opportunities. Riverbed degradation has also led to a drop in groundwater elevations along areas of the lower river, which is impacting water wells and the functionality of nearby wetlands. The League believes the BSNP needs to be thoroughly evaluated. The BSNP is maintained by a series of wing dikes and revetments, which have
created a “self-scouring” channel. The League and many others believe the BSNP is actually over-engineered and is a major contributor to bed degradation. We would like this issue closely examined to see what would happen if some of the BSNP structures were removed. We believe that would allow the river to start to heal itself.

We also encourage the Corps to consider what impact commercial sand dredging in the Kansas City area is having on the riverbed in that reach. Is that activity having an impact on the bridges, utility crossings, water intakes, and other infrastructure? Also what is the impact of that activity on native fish and wildlife habitat?

The League is very concerned about how riverbed degradation is impacting the Missouri’s tributaries. The beds of many tributaries are also dropping as they seek to match the same elevation as the decreasing Missouri River bed. How is this impacting the health of the tributaries and what impact is this tributary bed degradation having on the other authorized purposes and overall health of the Missouri River? The cost to maintain infrastructure along the Missouri River in areas with severe bed degradation will only continue to increase if these problems are not corrected.

Sedimentation

The League also has serious concerns about the amount of sediment accumulating in the six main stem reservoirs. We urge the Corps to work with State and Federal agencies to reduce the sediment coming into the reservoirs by encouraging landowners to utilize conservation methods that reduce soil erosion. We also support efforts by the Corps to explore options to reduce and transport the previously accumulated sediment within the upper ends of the reservoirs. The accumulated sediment decreases reservoir storage capacity, negatively impacting flood control and decreasing hydropower capabilities. The excess sediment in the reservoirs also has tremendous negative impacts on forage and game fish spawning success and, at times, boating access. We encourage the Corps to find a cost-effective method to transport the excess sediment downstream to the sediment-starved lower Missouri River and beyond to the Gulf of Mexico as it historically traveled.

Invasive Species

The League requests the Corps take the steps necessary to control the spread of invasive plant and animal species in and along the Missouri River. Invasive species are crowding out native species and are hurting the overall health of the river. The League strongly encourages the Corps to develop a long range plan that utilizes aggressive control measures to contain invasive plant and animal species. Asian carp and zebra mussels are two primary species of concern. Steps must be implemented to keep these species and all other invasives from being moved to other waters. For the future viability of the Missouri River, we must do everything possible to stop the spread of invasive species now.

Summary

The members of the Izaak Walton League of America believe the Missouri River is a national treasure. It’s one of the nation’s most unique rivers, well worth protecting and enhancing for this and future generations. The League believes a healthy Missouri River provides benefits to throughout the basin and beyond. The Missouri is an incredible economic engine that, if managed correctly and for multiple uses, would create even more jobs and tax revenue for local and State governments, and additional recreational opportunities for families not just along the river, but across the Nation.

Thank you for your time and consideration.

Senator Rounds. Thank you for your testimony, Mr. Lepisto. I’ll now follow up with some questions for each of you. I’d like to begin with Mayor Harding. Mayor Harding, in your testimony you described the federal water permitting process as “challenging to navigate.” I also understand that it has proven to be financially burdensome. Do you have suggestions as to how this permitting process can be made easier for communities such as Pierre?

Mayor Harding. Mr. Chairman, I would turn to the city engineer that has been really involved in that entire process, if that would be possible.

Senator Rounds. You know, let me just have you take it for the record, and if you could come back and offer some suggestions, we would certainly appreciate that.
Mayor HARDING. Absolutely. Be happy to. Yes.

Senator ROUNDS. Great. Thank you. I was struck by—Mr. Mayor, I was struck by the relatively low volume of water needed for irrigation that you described in your testimony. You cite two-thousandths of a percent or basically one and a half cubic foot per second as the amount which has been authorized by the State of South Dakota. How did the City of Pierre determine that figure, and why do you think the small amount of water is so problematic for the Corps? Once again, we’re talking about one and a half cubic foot per second where the average flow that we’re talking about right now through is 33,000 cubic foot per second. Share with me a little bit, why do you think that’s so problematic? What’s the feedback that you’ve received?

Mayor HARDING. Thank you, Mr. Chairman. We’re only asking to irrigate the green space in our parks along the River. So that—and only between those dates. I believe it was April through November. So it wasn’t even for a year at a time. The amount of—with the natural rainfall and what we would use out of the River, that’s how we determined that, that—and the amount of grass that we would irrigate.

Senator ROUNDS. It wasn’t a large amount.

Mayor HARDING. No.

Senator ROUNDS. Okay. Thank you, Mr. Mayor. Ms. Goodman, in your testimony you discuss how the moratorium on the easements to the Missouri River reservoirs resulted in 90 percent of the River becoming off limits to South Dakotans. Can you explain the impact this has had on the State and, in particular, what impact this has had on the economy in South Dakota?

Ms. GOODMAN. Thank you, Chairman Rounds. To indicate or to give a couple examples of some of the impacts, because we’ve had some operations that have not been able to access the water in the reservoir, they have had to look at other options. An example would be a construction project near the town of Oacoma. They were working on a road project within probably 10 to 15 yards of the Missouri River—or the lake at that point. They wanted to pump water to use for dust control and other things associated with the construction project. They were not able to access or get an access easement to that water for the project so they had to haul in water. That was one example. A very small example. It would impact anyone—for example, the City of Pierre is not able to look at a cost saving measure for irrigating their green space, as we’ve heard and as Mayor Harding has talked about. Those are just two small examples that we’ve had issues with when we issue a water right from the State of South Dakota that they also need to then get access to the River and are not able to do that. What the economic impact is. Senator, I don’t have a number to put to that, but those two small examples are probably an indication of the types of dollars that we could be talking about.

Senator ROUNDS. Thank you. Also in your testimony, Ms. Goodman, you discussed the improvements in communication that have been made between the Corps and stakeholders throughout the flood season, this last flood season. Are there any other areas that can be improved in terms of communication regarding snowpack levels between the Corps and local stakeholders?
Ms. GOODMAN. Thank you, Senator Rounds. As I indicated, we are very appreciative of the increased communication, especially during the flood season or potential flood season. That has been very helpful. The improvements to the website and the information available on the website is very helpful and very useful to us as we look through the spring season and what we can anticipate through spring flows. As I indicated, increased information on plains snowpack, any drought monitoring, could certainly—or is certainly needed, and we support that. That being done by a federal agency and being available via internet and website access to the rest of us would be very, very helpful as we also look at our water use and management of the Missouri River.

Senator ROUNDS. Ms. Goodman, are you aware of the rapidly fluctuating water levels along the Missouri River, and do you or does your Department have any concerns regarding damage to wildlife populations as a result of water levels increasing or decreasing several feet overnight on a consistent basis?

Ms. GOODMAN. Senator Rounds, we are aware of the fluctuating water levels. Obviously since 2011 I think we all in this area have a much heightened awareness of what’s happening in our River here and in Lake Sharpe as well as Lake Oahe. So, yes, we are all attuned to what’s happening. As far as wildlife implications, that’s certainly not within our purview of the Department of Environment and Natural Resources. We work closely with our sister agency in State Government, Department of Game, Fish & Parks, on some of those issues. And I cannot speak to anything on that this morning, Senator Rounds, but if you would like further information, I could certainly look into that for you.

Senator ROUNDS. I would accept that for the record. Thank you. And I'd like to finish just, Ms. Goodman, what's the status of communication between the Corps and State Government regarding the issue of management of the natural flows through the reservoir?

Ms. GOODMAN. Chairman Rounds, the current communication is we certainly communicate with our counterparts in the Corps, both in Omaha as well as the—as our local contacts here with the Corps of Engineers. We have not had any further conversations with them or communications with them since at least a year ago on the—on the Policy Letter No. 26 that you have referred to and the access easements that are related to that, as well as the natural flows. We have indicated to them through the Governor—Governor Daugaard’s letter on the proposed rulemaking regarding our impressions and our intent of looking at natural flows and using our authority under state law to issue permits under natural flows, but we have not had any further conversation recently.

Senator ROUNDS. Thank you. Mr. Lepisto, first of all, thank you very much for coming in and participating in this hearing. In your testimony, sir, you said that the Corps should be looking at the potential benefits of nonstructural alternatives to levees. Can you explain the benefits of nonstructural alternatives and what it would have on fund control?

Mr. LEPISTO. We believe that nonstructural alternatives, Mr. Chairman, will reduce the flood stage on the lower River because the River would, as I mentioned, have room to roam. It would
spread out, thus lessening the height, taking stress off of infra-
structure downstream alleviating some of the pressure on both fed-
eral and private levy systems within those areas. Of course, this
would have to be done in areas with willing landowners and areas
that would be set up to accommodate this. But this would have
great benefits for floodplain conductivity, reestablishment of wet-
lands, the whole natural river bottom, which I mentioned in our tes-
imony this morning, that have been lost or destroyed with all the
changes on the River.

Senator Rounds. Mr. Lepisto, in your testimony you discuss the
changing conditions of the basin and that that may require the
need for a more flexible approach to the day-to-day management of
the River. Can you elaborate on what flexibility should be built into
management of the River and how this allow the Corps to more ef-
effectively respond to events in the basin?

Mr. Lepisto. Well, currently in the master manual, Mr. Chair,
the Corps looks at what water is in storage in early March and
then again on July 1 to set the release rates for navigation flow
support. We feel that a lot can change in the dynamics and the hy-
drology of the Missouri River Basin, since it is so large, between
March and July 1. And without being able to make in-season ad-
justments, which the current master manual does not allow them
to do, they can't react. Their policy is locked in stone because
they’ve set it on March 1 and until July 1. That's it. The master
manual needs to be changed to give them that flexibility in a high
flow year to make adjustments and, more importantly, in a low
flow year to be able to change that flow release rate to conserve
water for all the seven purposes that need that. So that little provi-
sion in the master manual would benefit everybody in the basin.

Senator Rounds. Thank you. Also in your testimony, Mr.
Lepisto, you say that we should undertake a comprehensive review
of the authorized purposes of the River and that this could provide
more savings for taxpayers. Can you explain the benefit of review-
ing the authorized purposes of the River and how this would save
taxpayer dollars?

Mr. Lepisto. Basically the Missouri River, Mr. Chairman, as you
know, is operating on a 70 year old business plan. What business
on Main Street or anywhere else in South Dakota or any of the
other states of the basin is still operating on something that was
drawn up in 1944? Times have changed. Expectations were one
thing when the ’44 Flood Control Act was drafted. Yeah. This will
work. We expect it to do this. And here we are seven decades later,
and some of the authorized purposes haven’t come close to meeting
those 1944 expectations. Navigation is one-tenth of what the frame-
work -or the writers of that ’44 Flood Control Act thought it would
do. Yet it’s the biggest user of Missouri River water year in and
year out. Why? Why hasn’t that -that been looked at, seriously
looked at and reviewed, in seven decades. We’re still operating on
what was expected of the system 70 years ago, and it’s long over-
due, in our opinion, that the authorized purposes go through a
thorough review. That was started several years ago in a program
called the Missouri River Authorized Purpose Study. That was
defunded in an appropriation—eleventh hour appropriation act.
And with each continuing resolution that provision that keeps that
authorized purpose study defunded remains. And we've been under continuing resolutions, as you well know, for years and years and years in the annual budget process. But we would highly encourage that funding to come back so MRAPS can take a serious look and long overdue look at the eight authorized purposes and finally bring Missouri River management into the 21st Century.

Senator ROUNDS. Thank you. Finally, in your testimony you discussed the record high releases in 2011 and the impact that it had on fish in Lake Oahe. Are you aware of the current releases along the Missouri, and do you have concerns that these abnormal fluctuations in water level could impact the fish and wildlife population along the River?

Mr. LEPISTO. That is a concern of ours, Mr. Chair. And I have been in communication with—a—as Ms. Goodman mentioned, South Dakota Game, Fish & Parks, with some of their biologists. And they have been—have had some concerns particularly with water temperatures. When we have high releases where the water is withdrawn from Oahe Reservoir it's very cold water that's coming into the upper end of Lake Sharpe. So biologists have been concerned on what that may do to this year's reproduction of gizzard shad, a primary forage species in Lake Sharpe. They won't know that until they do their fall surveys on the recruitment and what the young of the year population is. So that is yet to be determined probably in late September or October. But there have been both positive and negative impacts to recreation and to anglers this summer because of the high flows. Some boat ramps, particularly downstream of the Pierre/Ft. Pierre area, that are difficult to use under "normal conditions" of Lake Sharpe have been usable this year with the higher flows. But then some shore fishermen in the tailrace area right below Oahe Dam have not had much success because the current—or the discharge is so rapid that it's very difficult for them to fish successfully in that very popular shore fishing opportunity right upstream from your home.

Senator ROUNDS. Very good. I want to thank all of our witnesses today for their participation in this hearing. I would make note that in the back of the room there is a sign-up sheet on the lectern. And just in case anybody that's here in the room is interested in this particular issue or these issues that we've talked about and they'd like to receive updates, please make sure that you've signed in and we'll be happy to put you on our list for updating the information. There are a couple of items that I will include and make note right now, including, for the record, Senator Carper who is the ranking member of the full committee has sent me a statement to be included for the record. Senator Harris, who is the ranking member on this committee, has also sent me a statement which we will accept for the record. And the Great Plains Tribal Chairman's Association Resolution Opposing Any Changes to Corps Policy that Negatively Impact Tribal Water Rights will also be accepted without objection for the record. This concludes our discussion today. I just, once again, want to thank everybody who is participating with us in this hearing. Our goal is to bring back into the—for the local community an opportunity to hear firsthand from the Corps what is happening with regard to the flow of this River that we live with every single day. And I most certainly appreciate all the comments,
thoughts, suggestions of all of our witnesses here today. So, once again, thank you to our witnesses for taking time to be with us today. The record for this meeting will be open for two weeks, which brings us to Tuesday, September 5.

Whereupon, at 11:22 a.m. the committee was adjourned.

[Additional material submitted for the record follows.]

STATEMENT OF SENATOR THOMAS R. CARPER, U.S. SENATOR FROM THE STATE OF SOUTH DAKOTA

Subcommittee Chairman Rounds, thank you for holding an oversight hearing in the Committee. It is extremely important for us to examine how Federal agencies within our Committee’s jurisdiction are implementing legislative direction we have provided, such as the Water Resources Development Acts.

As you know, the President has called for the modernization and rebuilding of America’s aged-out infrastructure, and Democratic Senators released a blueprint for addressing infrastructure challenges earlier this year. I believe that members on both sides of the aisle support legislative actions to address this problem, but before we write legislation, we need to do thorough oversight of problems that may require additional investments such as the flooding issues associated with the Missouri River.

In the winter of 2010 and 2011, a record level of snow fell in the northern United States Rocky Mountains and into the Northern Plains states. In May and early June, the snow, which had not melted earlier in the cool spring, rapidly melted and combined with a huge rainfall throughout Montana and western North Dakota. As a result, extensive flooding occurred in the Missouri and Souris River basins from June through August of that year. Major flooding caused over $2 billion dollars in damages and five fatalities.

At a 2016 EPW Subcommittee hearing, the Committee learned that the Army Corps of Engineers had made little progress toward implementation of a legislatively required snowpack monitoring network because they had not submitted an appropriations request to Congress for the program. Further, the Corps lacked clarity as to which agency should take the lead on implementing the network, as it was a joint effort with other agencies.

In response to the need for program clarity, the most recently passed Water Resources Development Act included language that directs the U.S. Army Corps to be the lead agency for coordinating snow pack monitoring network in the Upper Missouri River Basin.

From today’s testimony, I would like to learn more from the Corps as to whether elements of the Missouri River Management program should be replicated in other areas of the country. While traditional forms of infrastructure, like roads and ports, are essential to our economy, I feel we need more investment to protect our natural infrastructure as well, such as enhancing our shorelines and restoring ecosystems. Without natural infrastructure, storm and flood risks to man-made infrastructure significantly increase and, in many cases, become unmanageable.

I am also interested in learning the latest as to how the Federal Government can be better stewards of taxpayer dollars by increasing the efficiency of our current funding streams to get the most out of every dollar of Federal investment. Infrastructure is a shared responsibility with States, and as a former Governor, I want to help the states and local governments with this shared burden. I also want to learn more about how we can make sure that we are prioritizing the most critical investments in our country’s infrastructure.

There is no one size fits all approach to solving this problem. We must work together, in a constructive and bipartisan way, to really address these concerns and build consensus on a path forward for this shared State-Federal-Local government responsibility to our economy and our citizens. Further, we must also be good stewards of our environment and do everything we can to support and preserve wildlife by developing projects that also restore habitats.

Again, Mr. Chairman, thank you for holding this important hearing and I look forward to learning from our witnesses, who I would also like to thank for taking the time to share their expertise on these pressing issues.