THE IZAAK WALTON LEAGUE OF AMERICA

March 31, 2016

Written Testimony Before
U.S. Senate Committee on Energy and Public Works
Subcommittee on Waste, Superfund and Oversight

The Izaak Walton League of America (League) appreciates the opportunity to provide written testimony on the topic: *"Five Years from the Flood: Oversight of the Army Corps of Engineers' Management of the Missouri River and Suggestions for Improvement."*

The League is one of the nation's most established conservation organizations. Founded in 1922, the League today has over 43,000 members and nearly 240 chapters around the country. Many League members are avid recreationists. They fish, hunt and truly enjoy living in the Missouri River basin. The river plays a major role in many of our member's 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 in 10 states 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. Purposes that 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 in the early 1800s. Today, 35 percent of the river is impounded in six massive main stem reservoirs and 33 percent is artificially channelized in the 735 mile Bank Stabilization and Navigation Project (BSNP) that runs from Sioux City, IA to St. Louis, MO. With creation of the dams and the BSNP, millions of acres of the river's historic aquatic and terrestrial habitat have been lost or destroyed. This includes much of the riverine forest and shrub land vegetation and nearly all of the sandbars and islands and the majority of the river's shallow and slow water habitat. The alternations were so significant the river is now 120 miles shorter between Sioux City and St. Louis.

While habitat recovery and restoration efforts are ongoing, the League believes much more needs to 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 worthy and 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 man-made alterations on the river 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 nine 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 holding water in the reservoir system.

Another vexing management issue for the Corps is the fact that only 53 percent of the Missouri River Basin is regulated by the six mainstem reservoirs. That leaves nearly half the basin 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 about this fact to help educate the public that it doesn't, and can't, control the runoff in the entire basin and 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 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 governments 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 be a positive economic impact and create many more jobs.

The incredible dynamics of the Missouri River Basin have been very evident the last several years. Record runoff in 2011 resulted in prolonged flooding which caused massive damage throughout the basin. That record runoff was quickly replaced with extreme wide-spread drought conditions in 2012. 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 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. 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 only in March and July does not adequately address the needs of residents in the basin. Basin conditions can, and do, change rapidly both wetter and drier. Additional timely reviews throughout the spring and summer months are urgently needed to accurately determine the proper amount of releases from the reservoir system each and every year.

The League would also enthusiastically support a comprehensive review of the eight Missouri River Authorized Purposes as in the FCA. The 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 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 are greatly surpassing 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 it even though little or no barge traffic exists 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 authorized purpose review would be a very wise and 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 today. 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.

Currently, the Corps is working hard to develop a new Missouri River Recovery Management Plan. The plan's Draft Environmental Impact State (DEIS) is scheduled to be released in December. The plan will include a range of alternatives for Missouri River recovery and mitigation. This federal action will include activities designed to recover the Missouri River species protected under the federal Endangered Species Act (ESA) and 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.

The League also 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 a high level of involvement with it. The MRRIC is made up of representatives from a wide variety of basin stakeholder interests and state, tribal, and federal representatives. It provides guidance to the Corps and the U.S. Fish and Wildlife Service on current and future actions of the MRRP for the listed species on the river. 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 management alternatives and adaptive management actions will ensure that all future management decisions and actions are continuously improved. Updating and incorporating what is learned through regular scientific monitoring of the river and of the current recovery efforts 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.

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 restore some of the habitat. Habitat restoration will ensure the long term survival and recovery of the listed and other native species and greatly improve the overall health of the 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 and increase public support of the MRRP by having projects on the ground in multiple states.

The loss of hydrologically connected wetlands along the Missouri River has also impacted the historic migration corridor for waterfowl and other bird species. The League supports restoring the habitat needed to attract and maintain migrating waterfowl populations as the lower river once did. This will return waterfowl hunting and birdwatching opportunities that will provide significant economic benefits throughout the region.

The wetland loss along the river has contributed to increased water quality problems. It 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 to acquire land from willing sellers to develop additional shallow water habitat (SWH). 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 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 U.S. Fish and Wildlife Service and other agencies show that over twice as many fish species are utilizing the created SWH areas compared with the section of the

river in 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 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." In a recent report, the Missouri Department of Conservation and the Nebraska Game and Parks Commission concluded recreational spending provides $68 million in annual economic impact to areas along the Missouri River between Yankton, SD and St. Louis, MO. With more of these projects, even more people will come to spend time on 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 funding for the MRRP the Corps could readily implement more of these important economic and ecological restoration projects.

We also want to see more recreational and educational opportunities in the new recovery 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 and most historic river.

To successfully complete necessary recovery plans, the League supports fee title acquisition of land and, if needed, the use of conservation easements 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 habitat mitigation effort outlined in previous WDRAs for areas in the lower basin.

The League also is in favor 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 alternatives 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 alternatives be developed that will preserve and protect the genetic diversity of the upper basin population of pallid sturgeon?

Recreational Access – Can recovery alternatives 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.

We strongly urge Congress to provide robust re-investment in modern stream gauges that will accurately monitor flows in the Missouri River's tributaries. This will enable the best data possible for forecasting 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. 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 the 1944 Flood Control Act's original expectations for recreation by more than ten times.

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 the reservoirs especially 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 these 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 not just along the river but all across the nation. The recreation industry produces and sustains thousands of year-round 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 when that goal is met.

River Bed Degradation

The League supports efforts to address river bed degradation, or down cutting, of the Missouri River. River bed degradation is having substantial negative impact on public and private infrastructure, fish and wildlife habitat, and recreational opportunities. River bed degradation has also led to a drop in ground water 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. Would that 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 river bed in that reach. Is that activity having an impact on the bridges, utility crossings, water intakes and other infrastructure? What is the impact of that activity on native fish and wildlife habitat?

The League is very concerned about how river bed degradation is impacting the Missouri's tributaries. The beds of the 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 even beyond to the Gulf of Mexico as it historically once traveled.

Invasive Species

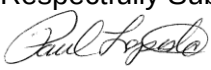
The League requests the Corps take the steps necessary to control the spread of invasive plant and animal species encroaching in and along the Missouri River. Invasive species are crowding out native species and are hurting the overall health of the river. The League strongly encourages Corps to work collaboratively with the state agencies 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. The confirmation of a reproducing population of zebra mussels in Lewis and Clark Lake above Gavins Point Dam last summer was disheartening news. Steps must be implemented to keep this and all other invasive species from being moved to other waters. Invasive species threaten our native fish and plants and disrupt the Missouri River ecosystem. For the future viability of the Missouri River for all of its uses, 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, one we feel is well worth protecting and enhancing for this and future generations. The League believes a healthy Missouri River will provide benefits to everyone in the basin and beyond. It's an incredible economic engine that, if managed correctly and for multiple uses including fish and wildlife and outdoor recreation, would create even more jobs, more 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.

Respectfully Submitted,



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