Testimony of
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On behalf of the
National Water Resources Association and the Idaho Water Users Association

House Natural Resources Committee, Subcommittee on Oversight and Investigations
"The Status of the Reclamation Fund and the Bureau of Reclamation's Future Infrastructure Funding Needs."

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Chairman Cox, Ranking Member Gohmert, members of the Subcommittee,

Thank you for the opportunity to appear before you today and to testify on the importance of water infrastructure.

My name is Paul Arrington. I am Executive Director and General Counsel of the Idaho Water Users Association (IWUA). I am also a member of the National Water Resources Association (NWRA) where I serve as Vice Chairman of the Federal Affairs Committee. I testify today on behalf of both organizations.

Organizational Interests
IWUA is non-profit corporation representing approximately 300 canal companies, irrigation districts, ground water districts, municipal and public water suppliers, hydroelectric companies, aquaculture interests, agri-businesses, professional firms and individuals throughout Idaho. Our purpose is to promote, aid and assist in the development, control, conservation, preservation and utilization of Idaho's water resources.

NWRA is a non-partisan, non-profit association that represents state water associations and agricultural and municipal water providers. Collectively NWRA members provide water to more than 50 million Americans, irrigate millions of acres of farmland, and provide hydropower to millions.

Historical Setting
Since I was a child, I have been amazed at the ingenuity and foresight of those who came before me. I regularly drive through Idaho and travel roads cut through mountains in the early days of statehood. Today, roads, bridges and rail lines crisscross a land that was once referred to as the wild frontier. It is remarkable to consider the legacy that our predecessors left over that vast wilderness by beginning the development of an infrastructure system that now provides the backbone of our nation's livelihood and economy.

Water infrastructure in the west is no different. In the late 1800's and early 1900's, early settlers looked out across the barren desert and saw life. They saw the vitality that water development could bring to the area.

Water development began. With the aid of the Federal Government, in particular, the Bureau of Reclamation (Reclamation), rivers were harnessed with vast reservoir systems. Thousands upon thousands of miles of canals, pipelines and ditches were constructed to carry water throughout the area. Life began to bloom in the desert.

These Reclamation projects transformed the West. So remarkable was this transformation that, in Idaho, once barren desert lands are now referred to as the "Magic Valley" and "Treasure Valley," due in large part to the life that water infrastructure brought to the area. Though this development, some of the most productive agricultural lands came into production – feeding countless individuals around the world.

Importantly, crops weren't the only things to grow as a result of these Reclamation Projects. Throughout the West, major cities and small communities have grown around local Reclamation projects.

The impact of these early developments still ripples through our nation. Today the agricultural lands opened up through reclamation of the desert continue to feed families around the world, and these Western cities and communities are home to tens of millions of people. In other words, these Reclamation Projects continue to be a key part of our nation's economy.

Aging Infrastructure Needs

Our nations water infrastructure is truly a marvel of the modern world – built with the foresight, grit and determination of prior generations. For over a century, our nation has benefited from this infrastructure.

But, this infrastructure is ageing and in need of continued investment. Today, more than 86% of Reclamation managed dams are over 50-years old and a sizeable portion of Reclamation infrastructure is more than a century old.[1] In Reclamation's Pacific Northwest Region, of which Idaho is a part, the average age of dams is 80-years. For infrastructure generally, including dams, pipelines, canals, etc., the average age is 78-years old. In recent years, Reclamation has estimated its maintenance backlog to be as high as $3.2 billion.[2]

Notably, Reclamation is not alone in facing aging infrastructure challenges. More than 50% of the dams operated by the Army Corps of Engineers have reached or exceeded the 50-year service life for which they were designed.[3] According to the Association of State Dam Safety Officials (ASDSO), the number of deficient dams rose by 137% between 1998 and 2015. Today more

[1] Fiscal Year 2019 Department of the Interior Budget in Brief, BH 35
https://edit.doi.gov/sites/doi.gov/files/uploads/2019_highlights_book.pdf
[2] Reclamation Infrastructure Investment Strategy, pg. 6:
https://www.usbr.gov/infrastructure/docs/Infrastructure_Investment_Strategy_Final_Report_1SEP15.pdf
[3] US Army Corps of Engineers, Dam Safety facts and Figures, June 4, 2015
https://www.usace.army.mil/Media/Fact-Sheets/Fact-Sheet-Article-View/Article/590578/dam-safety-facts-and-figures/

than 2,100 dams in the United States are classified as deficient and highly hazardous. Our nation has a significant aging infrastructure challenge.

New Infrastructure is Needed to Meet Future Demands

Aging infrastructure is just one part of the water infrastructure challenge. New water infrastructure is needed. According to combined estimates from the Environmental Protection Agency (EPA), Reclamation, Army Corps of Engineers, U.S. Department of Agriculture (USDA), and Indian Health Service, more than $780 billion of water infrastructure investment is needed in the coming decades for drinking water, wastewater, and irrigation systems.

For these reasons, it is critical that any congressional infrastructure package include water infrastructure funding. Water infrastructure needs affect every corner of our nation, from major metropolitan areas to rural communities. Water is a vital component of our nation's infrastructure network – yet it is often overlooked.

The Reclamation Fund

Addressing our nation's water infrastructure need is a monumental challenge – one that our nation faced and overcame in the early 1900's. I am confident that, with similar fortitude and ingenuity, we are capable of doing so again.

In his first address to Congress delivered on December 3, 1901, President Theodore Roosevelt stated: "water problems are perhaps the most vital internal questions of the United States."

To address these challenges, President Roosevelt established the Bureau of Reclamation in 1902. As part of the Reclamation Act, Congress created the Reclamation Fund.[4]

Originally, moneys in the Reclamation Fund were generated through the sale of western land and timber, as well as project repayment and water contracts.[5] In 1920, Congress directed that 40% of royalties from onshore mineral leasing on public lands (excluding Alaska) be deposited in the Fund.[6] In 1938, revenues from Reclamation project power sales were also added to the Fund.[7] As originally conceived, revenues deposited into the Reclamation Fund were used for Reclamation operations and infrastructure development.

The Fund balance was relatively stable until the early 1990's, when new technologies helped usher in an increase in onshore mineral production. This energy renaissance led to increased revenues being deposited into the Fund. While the balance in the Fund grew, the appropriated dollars allotted to Reclamation water infrastructure remained relatively stable at around $1 billion annually. Importantly, while the funds allotted to water infrastructure from the Fund have not increased, the needs of water infrastructure continue to grow.

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[4] 32 Stat 388; 43 U.S.C. §391. This act is also often referred to as the "Newland Act" or the "National Reclamation Act of 1902."

[5] CRS Report R41844 The Reclamation Fund: A Primer
https://crsreports.congress.gov/product/pdf/R/R41844

[6] 32 Stat 388; 43 U.S.C. §391. This act is also often referred to as the "Newland Act" or the "National Reclamation Act of 1902."

[7] Hayden-O'Mahoney Amendment, enacted on May 9, 1938, 43 USC, §391a-1, 392a.

Today, the Fund has an estimated balance in excess of $16 billion.[8]

Major Infrastructure Work Examples

As I noted earlier in this testimony, Reclamation has estimated that it has a maintenance backlog as high as $3 billion. In addition, there are billions of dollars in new water infrastructure projects including storage, conveyance, efficiency, and recycling.

1. In Idaho's Upper Snake River area, it is estimated that more than $30 million will be needed for identified maintenance needs in the next 5-10 years or 3 of the 9 reservoirs in the area. This includes inevitable repairs to Ririe Reservoir, in eastern Idaho, where an alkali aggregate reaction is causing the concrete to degrade more rapidly than anticipated. This repair is estimated at $12-15 million. Reclamation continuously monitors its facilities throughout the area to identify additional needs.

   These are significant expenses in and of themselves and water users share in the cost by paying the non-Federal share. Importantly, water users must also fund upkeep and maintenance on the non-Federal infrastructure in their projects. In other words, these stakeholders are funding part of the Federal system as well as their privately owned or transferred works.

2. Affecting Arizona and California, the Imperial Dam retains the waters of the Colorado River for diversion into California (Imperial and Coachella Valleys), Arizona (Yuma County) and Mexico. In the next ten years, it is anticipated that more than $50 million will be needed for extraordinary maintenance and capital improvements on this project.

3. In California, the state's complex water management system is facing unprecedented challenges. The Association of California Water Agencies (ACWA), an NWRA member, believes the key to a sustainable water future is the implementation of a broad set of strategies with necessary infrastructure, including water conservation, integrated water management, coequal goals for the Delta, ecosystem protection and restoration, drought management and preparation, storage and groundwater management, safe drinking water for all communities, flood protection, operational and regulatory efficiency and sustainable financing. Examples of ongoing infrastructure needs in California include expansion and safety upgrades at San Luis Reservoir; build out of recycled water facilities such as the Michelson Recycling Plant in Irvine; new water storage projects such as Sites Reservoir to restore operational flexibility to the State Water Project and Central Valley Project; and repairs to ageing conveyance facilities such as the Friant-Kern Canal and Delta Mendota Canal.

4. In Colorado, The Arkansas Valley Conduit is a 130 mile multimillion dollar pipeline that would utilize clean water stored in the Bureau of Reclamation's Pueblo Reservoir to replace groundwater supplies for 50,000 people in rural southeastern Colorado. Those groundwater supplies are contaminated with radionuclides at levels, which violate the Safe Drinking Water Act, and the water providers are under enforcement orders from the

[8] CRS Report IF10042
https://crsreports.congress.gov/product/pdf/IF/IF10042

Colorado Department of Public Health. This regional project is the most efficient and effective way to provide a safe drinking water supply, and it enjoys broad bipartisan support.

In addition to work on water transmission there are multiple ongoing efforts throughout Colorado to develop new surface and groundwater storage as well as increase water recycling and reuse.

5. In Washington State, the Bureau of Reclamation has identified numerous opportunities to improve water infrastructure in the Yakima Basin and the Columbia Basin. This includes completion of projects in the Yakima Basin authorized by Congress in Title VIII, Subtitle C of P.L. 116-9. There is also a need for federal funding to complete the Columbia Basin Project. The importance of Columbia Basin Project has spurred the State of Washington to invest more than $100 million in expanding infrastructure that the federal government will hold title to.

6. In Texas, the 2017 State Water Plan estimates that $63 billion dollar will be needed to build the approximately 2,500 recommended water management strategy projects by 2070. Texas is acting to fill this need through a number of efforts including its State Water Implementation Fund for Texas, but federal dollars would help.

Water Infrastructure – A Sound Investment

Water infrastructure is a sound investment. A total of approximately $20 billion dollars built all of Reclamations current infrastructure.[9] Every year, this infrastructure returns over $62 billion in direct and associated economic activity.[10] Let me emphasize that; each year, our economy recoups its original investment in Reclamation multiple times over.

Creating a New Water Legacy

We are at a similar crossroad today. Existing infrastructure is aging and in need of repair. New infrastructure is needed to ensure a safe, reliable, and affordable supply of water for future generations. Now is our opportunity to build on the legacies of President Roosevelt and our predecessors and create an even stronger water legacy for future generations of Americans.

In an address to IWUA members in Sun Valley, Idaho in June, 2018, The Hon. Brenda Burman, Commission of the Bureau of Reclamation, summed our opportunity up perfectly when she stated: "We need to think ahead 20, 40, 50 years and enhance water infrastructure for reliable water supplies in the future."

The answer to our Nation's water infrastructure needs will require an "all-of-the-above" approach, including:

- Responsive infrastructure that can deal with challenges posed by climate variability;

[9] CRS Report R41844 The Reclamation Fund: A Primer
https://crsreports.congress.gov/product/pdf/R/R41844
[10] Department of the Interior Economic Report, FY 2017, p 13
https://www.doi.gov/sites/doi.gov/files/uploads/fy_2017_econ_report_final_11_1_18.pdf

- New surface water storage in response to changing precipitation patterns;
- Additional groundwater storage and aquifer recharge;
- Major water transmission systems that can bring sustainable surface water supplies to areas with declining aquifers or degraded water quality;
- Greater utilization of water recycling and desalination;
- Access to safe drinking water for disadvantaged communities;
- Enhanced investment in water use efficiency and conservation efforts for both agricultural and municipal water users;
- Pursuit of new and innovative ideas and technologies; and
- Recognition that increased investment in simple time-proven projects like canal lining, utilization of smart irrigation gates, and metering systems can provide vast water infrastructure efficiencies.

The discussion cannot be limited to identifying needs – it must include strategies and actions to accomplish the task before us. Our nation has a strong infrastructure foundation. Through innovation and engineering, we can build upon that foundation and create the next generation of water infrastructure.

Infrastructure Funding

One of the primary obstacles in meeting water infrastructure needs is access to financing options that meet the diverse demands and circumstances of local communities. We believe there are several existing financing options that are critical, which should be retained and enhanced, as well as potential new financing options that should be considered.

Municipal Bonds

We understand that the Committee does not have jurisdiction over municipal bonds. However, it is important to mention their value. They are one of the most important sources of funding for local water agencies. We ask Congress to maintain the tax-exempt status of municipal bonds. Municipal bonds are easily the most often used method of financing for water and other infrastructure projects. Nearly two-thirds of all U.S. infrastructure, including water, roads, hospitals, schools, is financed with municipal bonds. In addition to maintaining the current tax-exemption for municipal bonds we believe that Congress should also reinstate the advanced refunding of bonds. Advanced refunding allows water agencies to "refinance" existing bonds and realize savings that can be reinvested in other infrastructure projects.

Tax Credit Bonds

We support the use of tax credit bonds, similar to the "Build America Bonds" briefly authorized in 2009, to provide an effective and flexible method for the federal government to encourage the mobilization of private capital to assist in financing public infrastructure projects, including water and sanitation, without relying on congressionally appropriated dollars. In authorizing the use of tax credit bonds Congress could set aside a specific allocation of such bonds for new water supply projects and the rehabilitation of aging water systems. The use of tax credit bonds should be done without impacting local governments' access to tax exempt municipal bonds.

Appropriations
Throughout the last two Administrations, Congress has consistently increased appropriations for Reclamation and the U.S. Army Corps of Engineers over the President's requests. The 2019 enacted budget for Reclamation is over $1.5 billion. We are extremely grateful to Congress for increasing appropriations for water infrastructure and strongly encourage you to continue this trend. Numerous Reclamation programs, like WaterSMART, have direct on the ground impacts that improve water management efficiencies and increase water supply resiliency.

WIFIA / RIFIA
Congress has also recently authorized new water financing programs like the Water Infrastructure Finance and Innovation Act (WIFIA), which is helping local water agencies realize the completion of important water supply projects. Moreover, the 2018 America's Water Infrastructure Act (AWIA) P.L. 115-270, authorized Reclamation to enter into discussions with the EPA to study the potential creation of a Reclamation Infrastructure Finance and Innovation Act (RIFIA) program to help finance non-federal water projects. There is currently legislation in both the House (H.R. 2473) and the Senate (S.1932) that would expand on this and authorize a full RIFIA program. We greatly appreciate the leadership of members of this Committee in support of this effort. It is a worthy cause that deserves further attention to help provide local agencies with additional funding vehicles for water infrastructure investment.

Reclamation Fund
Dedicated funding from the Reclamation Fund is a tool that should be added to the water infrastructure toolbox. This is the key. It is very difficult for water managers to obtain private financing for the significant costs of rehabilitation projects on federally owned facilities. Almost ten years ago, Congress provided Reclamation the authority to access the Reclamation Fund at $120 million per year without further appropriation to pay for eligible Tribal Water Right Settlements, commencing in 2020. And, legislation has been introduced in the House (H.R. 1904) to permanently extend this authority. We believe a similar authorization should be enacted to allow Reclamation to access similar amounts from the Fund to help cover the huge costs of rehabilitating Reclamation-owned projects.

This funding could include several components:

- **Revolving loan program:** Loans could be dedicated to storage, transmission, and conservation. Many of the projects needing to be updated, struggle to obtain funding because the federal government retains title. This prevents the facilities from being used by the operators as collateral to secure private loans. At the same time, federally appropriated dollars for water infrastructure are becoming more and more scarce. Water managers find themselves caught in a Catch 22 – where they are unable to access private funds and are experiencing declining access to federal resources. We thank the Committee for the recently passed title transfer authorization in S.47. This new authority will help alleviate some of the strain on local districts that are in a position to take title. However, many others will remain in a funding-limbo making a loan program practical and necessary.

The establishment of a revolving loan program would be consistent with Reclamation's history – in that it's vast infrastructure network that was primarily developed through federal loans. Using the Reclamation Fund for a revolving loan program would also resolve a key hurdle to prior Reclamation loan programs by providing a dedicated source of funding. P.L. 111-11 provides Reclamation the authority to make direct loans to eligible local water agencies to cover their share of the costs of rehabilitating federally owned water infrastructure and to take repayment on these loans for up to a 50-year term, at Treasury interest rates. This is a great program, but it is difficult to implement. In order to provide long-term financing under P.L. 111-11 Reclamation must draw funds from its appropriated budget. In other words, unless funds are specifically made available in their approved budget, Reclamation must pull funds from other areas to provide financing under this program. Incorporating Reclamation Fund into a long-term financing under this program would provide much needed flexibility and provide more stakeholders with the much-needed relief of long-term financing.

- **Matching Grant Program:** There is great value in establishing a matching grant program for Reclamation projects – particularly for rural, economically disadvantaged areas. States, local governments, and water users are committed to water infrastructure investments. However, rural areas with smaller rate bases quickly see the cost of infrastructure outpacing their immediate ability to pay. A matching grant fund would leverage non-federal dollars with federal funds to allow these communities to address their water infrastructure needs.

- **Innovation and Technology**: The water industry's future depends on bridging the gap between old and new technologies. Water users – in both the irrigation and municipal sectors – continue to embrace emerging water management technologies. Yet funding can often be a limiting factor.

  Throughout the country, water managers are installing devices to more accurately measure and meter water, detect leaks, and maximize efficiencies. This work is paying off. According to the USGS, from 1980 to 2015, water used for irrigation declined from almost 150 billion gallons per day[11] to about 118 billion gallons a day.[12] While water use has declined the number of acres irrigated has increased from 49 million in 1982[13] to over 55 million in 2012[14], a 6 million acre increase while using significantly less water. Even with this reduction in water use, agricultural production has skyrocketed. According to recent USDA Economic Research Service data, the U.S. farm output grew by 170% between 1948 and 2015.

[11] United States Geological Survey Water Withdrawals in the United States 1950-1980, p 16 https://pubs.usgs.gov/of/1983/0207/report.pdf
[12] United Sates Geological Survey Esteemed Use of Water in the United States in 2015 p 26 https://pubs.usgs.gov/circ/1441/circ1441.pdf
[13] USDA 1987 Census of Agriculture p 1 http://usda.mannlib.cornell.edu/usda/AgCensusImages/1987/01/51/1987-01-51.pdf
[14] USDA 2012 Census of Agriculture, p 6 figure 1 https://www.nass.usda.gov/Publications/AgCensus/2012/Online_Resources/Farm_and_Ranch_Irrigation_Survey/fris13.pdf

> Meeting our nation's needs with less water is made possible because water users are making significant investments in new water management technologies. Increasing access to new technologies and dedicating funds to the development of merging technologies would further aid the improvement of water system management, project operations, and system efficiencies.

The need to fund water infrastructure construction and improvements is pressing and grows with each passing day. New funding and financing options need to come online as soon as possible. Utilizing the Reclamation Fund for this effort is logical, it was the original intent of the fund and is sound policy.

Future of Infrastructure

An investment in water infrastructure is an investment in our nation, its economy and its future. Funding devoted to water infrastructure is a powerful economic driver and provides a significant return on investment. An investment in water and wastewater infrastructure has a six-fold return[15] – proving that, investing in water infrastructure is sound fiscal policy. As members of this Committee know, investing in water is not just about economic return. It is also about the health and wellbeing of communities across this nation. The future of our nation's economy is directly tied to safe and reliable water infrastructure. I appreciate your commitment and the commitment of the Subcommittee to ensuring that water is a key consideration in the infrastructure dialogue. It is critical that any infrastructure package developed by Congress must contain water infrastructure as a major component

Thank you again for your work and the opportunity to testify. IWUA, NWRA and the entire water supply community stand ready to assist you in this vitally important effort. I would be happy to answer any questions that you may have.

[15] U.S. Chamber of Commerce, *Why Water Infrastructure Investment Would Make A Big Splash* https://www.uschamber.com/series/above-the-fold/why-water-infrastructure-investments-would-make-big-splash