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"Perspectives on New and Existing US Army Corps of Engineers Authorities to Respond to Water Management Issues including Drought and Water Conservation"

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Good afternoon, Chairman Kelly, Ranking Member Cramer, and members of the Subcommittee. I appreciate the opportunity to represent the Theodore Roosevelt Conservation Partnership (TRCP) at today's hearing. I am Christy Plumer and I serve as the Chief Conservation Officer of the Theodore Roosevelt Conservation Partnership, a coalition of 63 hunting, fishing, outdoor recreation, landowner, and scientific organizations that was founded in 2002. At the TRCP, we are dedicated to ensuring the places Americans love to hunt and fish are conserved and the species upon which we depend as hunters and anglers are managed at sustainable levels. Water conservation and federal and state authorities related to water quantity and quality are therefore core to our mission and we work closely with federal, state, tribal and regional partners to accelerate the pace and scale of aquatic restoration. As a part of this effort, we host working groups through the TRCP Policy Council that bring together our organizational partners to develop, respond to, and advance water and natural infrastructure policy and we engage with Congress on the biennial Water Resources Development Act (WRDA) and with the U.S. Army Corps of Engineers (USACE; Corps) to implement aquatic restoration programs and authorities.

Today, I will touch on the Corps' growing water management challenges, particularly in the West, and the opportunities we believe the Corps has to advance solutions that benefit fish and wildlife.

Growing Water Management Challenges for the U.S. Army Corps of Engineers

The USACE has a central role to play in responding to the variety of water management challenges in the United States. The USACE has 136 multi-purpose reservoirs that store water supplies in 26 states. These projects provide nearly 10-million acre-feet of water supply storage for municipal and industrial use, sufficient to meet the indoor household needs of 101 million people. The USACE also provides irrigation water to western farmers who steward millions of acres of land, with approximately 480,000 acre-feet of storage in 24 projects in the western United States. Aside from water management, USACE-owned facilities also provide access to a wide variety of hunting, fishing, and outdoor recreation opportunities.

Steadily increasing demands for limited supplies of water, interstate conflicts over water use, pressures from drought and wildfire, and aging infrastructure all present growing challenges to water management at Corps reservoirs and facilities. In the western United States, the increasing severity and duration of drought and wildfire are already having significant impacts on USACE infrastructure, assets, and the people and places that rely upon them. Wildfires damage

watersheds in part by reducing infiltration rates and increasing runoff, thereby destabilizing stream channels and increasing sedimentation, which in turn reduces storage capacity. For example, the 2011 Las Conchas wildfire in New Mexico resulted in rapid and massive flooding in the burned areas directly upstream of Cochiti Reservoir, which is managed by the USACE for flood control, sediment control, recreation, and wildlife. As a result, the reservoir experienced increased sedimentation rates far above its historical averages, affecting reservoir operations and increasing costs. Climate change compounds many of these water management challenges. For example, hotter and drier conditions slow the re-establishment of vegetation on burn scars, extending the post-fire sediment and flood impacts.

With days and weeks at a time spent afield, hunters and anglers are often the first to witness the impacts that climate change has on our natural resources, including changes in migration patterns, altered breeding seasons, shifts in home ranges, and loss of habitat from sea level rise, drought, or invasive species encroachment. Recent polling by the TRCP suggests most hunters and anglers think that climate change is happening and, further, that human activity is affecting our climate. They also believe human activity can be a part of the solution. This is why the TRCP is working on nature-based solutions that deliver climate resilience while enabling our lands and waters to adapt to our changing climate.

The Role of Nature-Based Solutions and Natural Infrastructure

Nature-based solutions, or natural infrastructure approaches, can help address many water management challenges. Simply put, natural infrastructure is a natural or man-made system that is intentionally managed or restored to provide multiple co-benefits for people and the environment. Such activities also mitigate the effects of climate change by reducing erosion, reducing wildfire severity, cooling stream temperatures, and improving water quantity and quality. Natural infrastructure approaches lead to healthy habitats that can absorb and store carbon. For example, restored wetlands and floodplains store between 81 to 216 metric tons of carbon per acre, depending on their type and location. Natural infrastructure approaches also generate economic benefits by enhancing outdoor recreation opportunities and creating jobs.

Natural infrastructure can maintain the resilience of built infrastructure, such as reservoirs, as well. For example, forested watersheds are the source water for several major river systems in the country, including the Colorado River, Upper Missouri, Rio Grande, and the Sacramento-San Joaquin. In some cases, forested watersheds have been degraded by human activities, such as fire suppression and a patchwork of development, and can pose a risk to downstream Corps facilities. Restoration and conservation of source watersheds is a natural infrastructure approach and proven tool that can reduce risks from catastrophic wildfire and mitigate damage from sedimentation and flood events.

The USACE itself has recently acknowledged the importance and promise of natural infrastructure solutions. For example, the *USACE Climate Action Plan* recognizes climate change may require solutions beyond traditional approaches, such as the adoption and integration of natural infrastructure. On July 28, 2022, the USACE issued a memorandum on *Army Civil Works Supporting Drought Resilience in America's Communities* that emphasized the need for

the USACE to apply its capabilities to build drought resilience across the nation, including through aquatic ecosystem restoration activities.

Thus, there is a clear opportunity to rapidly accelerate the pace and scale of natural infrastructure deployment at the Corps in the years ahead. While additional research may be needed on design considerations and coordination with reservoir operations, existing USACE authorities and programs are already set up to help and Congress has an opportunity to build on this work in the next WRDA.

Existing Programs and Authorities

The USACE has several programs, authorities, and initiatives that already advance natural infrastructure solutions to address the growing water management challenges across the country.

- The **Sustainable Rivers Program (SRP**), which is a partnership between USACE and the Nature Conservancy (TNC), aims to incorporate environmental objectives, such as environmental flows and habitat, into operating plans for USACE dams and infrastructure. To date, 44 rivers encompassing more than 12,000 river miles have been enrolled in SRP, two of which are in Arizona. In the Bill Williams River, the USACE, TNC, Arizona Game & Fish, and other partners are working to plan releases from Alamo Dam designed to meet a variety of natural resource objectives, including enhancing riparian areas, and reducing flood risk. The SRP in the Gila River at Painted Rock Dam started in FY22, and USACE and state agencies are currently developing plans for wetland features that provide access to water resources for wildlife.

- The **Continuing Authorities Program (CAP)** is a set of nine authorities through which the Corps can provide a streamlined process to support non-federal partners in designing and implementing water resource projects without obtaining project-specific authorizations. Several of the authorities, such as Section 206 Aquatic Ecosystem Restoration projects, provide explicit support for investments in natural infrastructure. CAPs also provide favorable cost-sharing provisions, allowing more types of partners access to Corps' resources.

- The **Engineering With Nature Initiative (EWN)** was established in 2010 to "enable more sustainable delivery of economic, social, and environmental benefits associated with infrastructure." The EWN leverages funding with partners to evaluate natural infrastructure approaches that can reduce natural hazard risks. For example, the use of the EWN in the Missouri River led the Corps to set back a levee to stop the repetitive and costly cycle of repairing certain damaged levees after a major flood event. This led to reduced federal costs, while also reconnecting over 1000 acres of floodplain, providing important habitat in a key migratory bird flyway.

While these programs are valuable, many of the existing USACE natural infrastructure efforts are focused on addressing coastal and inland flooding. Less energy had been invested into how USACE can utilize strategic investments in natural infrastructure to address water supply challenges in the West. Nonetheless, Congress has recognized the value of USACE's involvement and has charged the Corps to take on even greater responsibilities to address drought through recent legislation.

- **Water Resources Development Act of 2022:** The Water Resources Development Act of 2022 (WRDA 2022) included numerous water conservation and drought provisions. For example, it included language on studying managed aquifer recharge at Corps projects (Sec. 8107), updating water control manuals in response to drought (Sec. 8109), facilitating dialogue on western water management (Sec. 8158), and it makes permanent the authority of the Corps to evaluate and approve water supply conservation measures (Sec. 8107). One of the most important provisions to the TRCP is Section 8208, requiring the USACE to study the use of natural infrastructure activities in the South Pacific Division, which contains several major western watersheds. This study is expected to include analysis of the effectiveness of various natural infrastructure activities at or upstream of Corps reservoirs, for the purposes of sustaining operations, mitigating risk, and increasing water supply. The study should provide information on how natural infrastructure may be further integrated into existing agency risk management and operational guidance and highlight areas for further research and demonstration.

- **Bipartisan Infrastructure Law:** The Bipartisan Infrastructure Law (BIL) has also been instrumental for the USACE to continue to tackle water management challenges in the West related to drought and water conservation. Notably, thanks to BIL, the USACE is now working with state and federal agencies to enhance soil moisture monitoring and snowpack monitoring stations in the Upper Missouri River Basin to inform drought planning and response. The USACE has allocated an additional $70 million in FY22 to support water conservation and reuse efforts, including providing funding for a reclaimed water project in Arizona and brackish water desalination in California.

The TRCP and our partners look forward to working with USACE and Congress to implement these programs, authorities, and investments.

Opportunities to Enhance USACE Water Management

The BIL, Inflation Reduction Act (IRA), and WRDA 2022 all provide tools to improve water management to address drought, wildfire, and water conservation. As Congress looks ahead to the next WRDA, annual appropriations, and other legislative vehicles, we believe the following recommendations would build on the good work already taking place at the Corps to build drought resilience, enhance fish and wildlife habitat, and improve access.

1. ***Expand USACE Authorities and Funding for Drought Resilience***

A lack of consistent funding is a significant barrier to accelerating the pace and scale of natural infrastructure and drought resilience projects. The CAP frequently receives significantly less funding than their annual authorizations despite outsized demand for the program. Similarly, while the SRP has recently received increased appropriations, demand outpaces funding with only 40% of district office requests funded last year. Steadily growing funding for both CAP and SRP will help USACE develop new science-based and natural infrastructure solutions for dealing with climate change and drought. Congress should also fully fund Sec. 8208 of WRDA 2022, which will provide a framework for the approval of feasibility studies and projects that implement natural infrastructure approaches to maximize drought benefits.

2. Improve Interagency Partnerships and Planning

Given the USACE's role in managing water, and the role of federal land management agencies in the West, the USACE should engage in interagency efforts to develop and implement source water protection plans when USACE owned reservoirs, dams, and associated recreational facilities may be at risk. For example, the U.S. Forest Service (USFS) is currently investing BIL and IRA dollars in forest and watershed restoration to reduce risks associated with wildfire. The USACE should consider working with the USFS and other land management agencies and Tribes to coordinate BIL and IRA investments in places critical to protecting Corps-owned infrastructure. Such activities should complement other USACE planning efforts, including regional sediment management plans.

Congress should also consider other ways to encourage the USACE to work with non-federal partners. One example is the expansion of Good Neighbor Authority (GNA) to the Corps. While the GNA is currently utilized by the USFS and Bureau of Land Management, no such authority exists for the USACE. WRDA 2022 took a step in this direction by requiring the Corps to determine whether the use of good neighbor agreements on USACE lands for forest, rangeland, and watershed restoration activities would be in the interests of the country.

3. Strengthen Technical Assistance Programs

Entities seeking federal funding have challenges navigating federal opportunities, locating adequate match, and covering pre-project engineering and design costs. These challenges are particularly acute in rural and historically underserved areas. WRDA 2022 included provisions that expanded programs to help Tribes and underserved communities access Corps resources, and Congress should consider building on this work in the future.

One key technical assistance initiative is the USACE's Silver Jackets program, which supports state-led flood risk management teams working at a watershed-scale to advance aquatic ecosystem restoration, floodplain management, vulnerability assessments, and community planning. The TRCP and our partners strongly support this important program and encourage Congress to consider providing dedicated funding and expanding its purposes beyond flooding to encompass a full range of natural hazards, including drought. Congress should also consider directing the Corps to initiate a community navigator program, which could provide funding to non-federal entities to build local capacity by hiring project coordinators to work with communities and water users to build pipelines of multi-benefit natural infrastructure projects and connect these projects to federal and state funding opportunities.

4. Properly Account for Natural Infrastructure Project Costs and Benefits

The Corps' benefit-cost analyses continue to, in many cases, disregard benefits provided by natural systems, leading to benefit-cost ratios (BCR) that do not provide a reliable assessment of whether a project is in the Federal interest. Further, the Corps too often recommends projects for authorization and funding based solely on the project's BCR, rather than utilizing the BCR as one among many decision-making tools. The Corps' utilization of its current benefit-cost structure too often tilts the scales toward large-scale structural projects that leave fish and

wildlife habitat considerations and underserved communities behind. As climate risks increase, it will be imperative for the Corps to ensure its benefit-cost analyses account for the social, economic, and ecosystem benefits of natural and nature-based infrastructure measures to better integrate these solutions into Corps projects moving forward. Therefore, Congress should consider directing the Corps to account for the multiple benefits of natural and nature-based infrastructure through a full-scale update of the Corps' benefit-cost analyses process. This update should, among other things: equitably account for costs and benefits to disadvantaged and low-income communities; count lost ecosystem services as project costs and increases in ecosystem services as project benefits; and include costs associated with full life-cycle project needs including structural project failure over time versus the benefit of natural system integration. These changes will protect taxpayers, help non-federal sponsors, and enable the Corps to fulfill its mission more effectively.

5. Support Recreational Access

The Corps provides hunting and fishing access to millions of Americans across the country and manages recreation infrastructure assets on scale with the National Park Service, U.S. Fish and Wildlife Service, and the USFS. While these other federal agencies can retain a portion of recreation fee revenue to reinvest in recreation infrastructure, the Corps does not have such authority and its recreation program remains historically underfunded. We applaud Ranking Member Cramer's leadership to introduce the bipartisan LAKES Act, which would extend recreation fee retention authority to the Corps and make needed reforms to their existing joint management authority to support our hunting and fishing access, and our outdoor economy.

Access remains a top priority for the TRCP. Last Congress, we worked extensively on the MAPLand Act (P.L. 17-114), which directed several federal agencies including the Corps to digitize information about recreational access on federal lands. That bill, however, did not address the federal rules and regulations that govern the public's ability to access, recreate on, and navigate federal waterways. Congress and the Corps should consider how to create, standardize, and disseminate geospatial information related to waterway restrictions, fishing restrictions, and access locations. Such efforts would improve public access and safety, reduce conflict and resource damage, and lower barriers to entry for water-based recreation.

Conclusion

In closing, I would like to thank Chairman Kelly, Ranking Member Cramer, and the members of the Committee for calling attention to the key role the Corps plays in managing water supplies and addressing drought. The TRCP and the hunting and fishing community stand ready to work with the Corps and Congress to advance fish and wildlife habitat focused solutions to the water supply and drought challenges in the West.