The Nature Conservancy
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Statement of Nat Williams
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Madame Chairwoman and members of the Subcommittee, thank you for the opportunity to testify on Proposals for the Water Resources Development Act (WRDA) of 2008, and in particular, the ecosystem restoration needs of our country. I am Nat Williams, State Director for The Nature Conservancy in Maryland and Acting Director of The Nature Conservancy's US Government Relations Department. My comments today will focus on four areas:

- regional approaches to ecosystem restoration;
- comprehensive management of water resources
- criteria for improving ecosystem restoration authorities
- improving the management of Federal reservoirs

The Nature Conservancy is an international, nonprofit organization dedicated to the conservation of biological diversity. Our mission is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. Our on-the-ground conservation work is carried out in all 50 states and in 30 foreign countries and is supported by approximately one million individual members. The Nature Conservancy has protected more than 117 million acres of land and 5,000 miles of river around the world. Our work also includes more than 100 marine conservation projects in 21 countries and 22 US states.

The Conservancy owns and manages approximately 1,400 preserves throughout the United States—the largest private system of nature sanctuaries in the world. We recognize, however, that our mission cannot be achieved by core protected areas alone. Therefore, our projects increasingly seek to accommodate compatible human uses, and especially in the developing world, to address sustained human well-being.

As the Conservancy has increased its engagement in a variety of restoration projects ranging from large-scale efforts in the Upper Mississippi River and Everglades to smaller scale projects under continuing authority programs, the Corps has become an important conservation partner. By number of projects, the Conservancy is now the Corps' largest non-federal sponsor of ecosystem restoration projects. This expanding partnership is reflected in our Sustainable Rivers Project, a joint effort focusing on dam re-operations in 8 ecologically significant river systems across the country. At another 39 sites we are collaborating with the Corps under the sections 1135 and 206 Continuing Authority Programs (CAPs), and other Corps authorities, to protect and restore areas of critical ecological concern.

The past century has witnessed a decline in the ecological health of many of our nation's rivers and streams. Much of this decline is the unintended consequence of federal water development projects designed to provide public benefits such as flood control, electricity and irrigation. As a result, ecosystem restoration has become a critical component of the Corps' Civil Works mission. Drawing on the Conservancy's growing experience with ecosystem restoration, I will share with you some recommendations on how we can meet some of the nation's most challenging environmental problems while continuing to provide for water resource needs such as flood control, irrigation and navigation.

Before providing our recommendations on WRDA 2008, I would like to applaud the Committee's efforts to complete WRDA 2007 last year. This long-awaited and important legislation will help advance many critical ecosystem restoration efforts around the country and provides important authority to enable NGOs to work with the Corps to improve the management and restoration of our water resources. We also appreciate the Committee's commitment to returning to a regular, bi-annual schedule for reauthorizing WRDA.

I. Regional Science-based Approach to Restoration

Many federal agencies, states and other non-profits have joined with The Nature Conservancy in completing comprehensive science-based conservation plans for the US. These plans, called ecoregional assessments, are intended to provide foundational data and information that allows agencies and organizations to make better resource allocation decisions on restoration projects and other conservation projects. Often stretching across multiple states, these collaborative ecoregional assessments bring together information needed to support effective large-scale, regional conservation strategies. Integration of data on habitats, species and water resource use can reveal unexpected connections, providing fresh insight into long-standing problems.

Based on our experience with ecoregional planning, we believe similar approaches must be employed if we are to maximize the Federal investment in ecosystem restoration. With limited Federal dollars and extensive restoration needs, no longer can we settle for an isolated project by project approach. Instead, we must invest in efforts to determine how multiple needs in a watershed, river basin or coastal area can be met while protecting our natural resources.

There are already successful authorities to draw on in developing regional approaches to ecosystem restoration. For example, the **Puget Sound and Adjacent Waters Program** was designed to implement critical projects for the protection and restoration of ecological processes, habitats and functions in the Puget Sound basin. Selection of projects is informed by ongoing basin-wide studies and through engagement of regional stakeholders with scientific and restoration expertise. Similarly, the **Upper Mississippi River Environmental Management Program**, which was first authorized in the Water Resources Development Act of 1986, has been implementing ecosystem restoration projects across the Upper Mississippi River System for over 20 years. Through the Environmental Management Program, a unique federal-state partnership was formed to identify, plan and implement projects that has resulted in the restoration of over 72,000 acres of habitat to date.

If we are to maximize our investment in ecosystem restoration, replicating regional approaches that are informed by sound science and that engage appropriate stakeholders like the examples described above will be critical.

Recommendation: Authorize regional restoration authorities that allow the Corps to engage stakeholders across watersheds, river basins and coastal areas to set priorities and implement projects that will result in the most ecological return on Federal dollars invested.

II. Comprehensive Management of Water Resources

In addition to providing authority for the Corps to undertake regional or watershed approaches to restoration, we must also ensure that the Corps has the appropriate authority to balance multiple demands on our water resources. Planners must be able to incorporate disparate interests such as navigation, flood control, water supply and protection of the environment into all projects. In particular, we must integrate the role of healthy and functioning ecosystems into our river management. For example, restoring natural floodplain areas for the purpose of storing floodwaters is one important strategy for meeting flood control needs and increasing the flexibility in the management of our reservoirs and other water infrastructure. By allocating flood storage to the floodplain instead of the reservoir, space currently allocated to flood control can be converted into storing water to supply cities and farms, generating hydro-electric power, and releasing improved environmental flows into downstream ecosystems. Moreover, floods that are allowed to return to their natural floodplains recharge underlying aquifers, which slowly release groundwater back to the river as cool, steady baseflows. Similar approaches are needed that evaluate all needs in a watershed or river basin and seek to incorporate the value of intact ecosystems into meeting human needs.

One key example of a comprehensive and integrated approach to river management that builds on the principles of comprehensive river management is the **Navigation and Ecosystem Sustainability Program for the Upper Mississippi River**. The Upper Mississippi River System (UMRS) is a large floodplain river ecosystem that has been greatly altered by navigation, flood control, and land use. In particular, the construction and operation of eight dams on the Illinois and 29 on the Mississippi have altered the river's natural hydrology, resulting in the loss of forest floodplain, aquatic marsh and island habitats while contributing to increased sedimentation and degraded water quality. Moreover, about 40 percent of the UMRS floodplain is isolated from the river by levees, causing the loss of habitat for many flood dependent plants and animals. At the same time, people rely on the river for transportation and commerce, and maintaining a functioning navigation system is important to both the U.S. and regional economies.

Fortunately, these rivers can be restored without compromising the use of the navigation system or flood protection. The Navigation and Ecosystem Sustainability Program (NESP) as authorized under the Upper Mississippi River and Illinois Waterway system in WRDA 2007 is a long-term (50-year), dual purpose program of navigation improvements and ecological restoration that will engage a broad array of federal agencies, industry and non-governmental stakeholders to ensure the economic and environmental sustainability of the UMRS. The framework for the first 15 years of NESP lays out more than 225 restoration projects that include island building, fish passage, floodplain restoration, water level management, side channel and backwater restoration, wing dam/dike alteration, and shoreline protection. If implemented, these projects would restore over 100,000 acres of habitat.

NESP is the first dual purpose authority that brings together both navigation and environmental interests to create and implement a shared vision for the Mississippi River. It is a critical addition to the Corps' authority because it allows the Corps to manage the system for two purposes and to evaluate river-wide processes and functions as projects are selected and implemented. Furthermore, the process for identifying and selecting projects is built on a strong foundation of scientific input and stakeholder involvement. NESP offers a model for how ecosystem restoration and infrastructure improvement can and should be done in the future.

Another project I would like to highlight is the **Hamilton City Flood Damage Reduction and Ecosystem Restoration project in California**, which also serves as a model for achieving multiple water resources goals. Hamilton City is located on the Sacramento River--the largest river in California, draining approximately 24,000 square miles and supplying 80 percent of the freshwater flowing into the Sacramento-San Joaquin Delta. Historically, the river was lined by 800,000 acres of riparian habitat. Over 95 percent of this habitat has been lost.

Hamilton City and surrounding agricultural lands are only marginally protected from flooding by a degraded private levee (circa 1904) called the "J" Levee. The "J" Levee does not meet any formal engineering standards and provides only a 66 percent chance of passing a 10-year flood. As a result, Hamilton City has mounted flood fights and has been evacuated due to flooding six times in the last 20 years. After 25 years of unsuccessful efforts to secure federal engagement in their efforts to reduce the risk of flooding, project partners, including the city, the Conservancy, and the state of California, collaborated to develop a project that would both reduce the town's flood risk and restore the river floodplain by constructing a new set-back levee and reconnecting 1,500 acres of floodplain to the river.

This dual purpose project has the potential to be a true "win-win"--by meeting the flood-control needs of the local community while restoring riparian habitats and natural river processes. Unfortunately, the project has run into multiple hurdles because it does not fit into the traditional single-purpose project model. For projects like this to become the norm instead of the exception, the Corps would benefit from specific authority enabling them to more easily implement non-traditional projects that truly meet multiple goals.

> **Recommendation:** Authorize regional authorities that allow the Corps to balance multiple needs, e.g. flood control, ecosystem restoration, and navigation, and implement projects across a basin to meet multiple water resource goals.

III. Improving Restoration Authorities

As one of the Corps' largest cost-share partners, the Conservancy has worked extensively with the Corps under the Section 1135, Project Modifications for Improvement of the Environment, and Section 206, Aquatic Ecosystem Restoration programs. Under the Section 1135 and 206 Continuing Authority Programs (CAP), the Conservancy has been the lead non-federal sponsor on 17 projects. These projects seek to achieve an array of ecosystem restoration goals ranging from coastal shoreline stabilization to fish passage and floodplain reconnection. For example, the Conservancy and the Corps have completed the removal of dams on the Cahaba River in Alabama and Neversink River in New York opening up important habitat for fish and other aquatic species. We have also completed a project on the Green River in Kentucky to restore hydrology and floodplain habitat.

CAP 1135 and 206 projects are producing many success stories around the country, and as a result, demand far exceeds the annual authorized limits for these programs. Unfortunately, the oversubscription of these programs has halted a number of projects that enjoy strong support from the local community and Corps District. In an attempt to address this problem, the Appropriations committees have implemented various prioritization schemes focused on funding only projects currently in the construction phase, but these measures have left many projects languishing without funding despite significant investment of both Federal and non-Federal resources in feasibility studies and project design.

In some cases, the size of the backlog and the inability to secure funding has forced the Conservancy's state chapters to either abandon work on the projects or seek other funding outside of the Corps budget. One good illustration of this problem is the **Chain Bridge Flats restoration project** just up the Potomac River from Washington, DC in the C&O Canal National Park. This project, which would modify a 1920s era Corps facility to restore natural hydrology and benefit multiple Federally endangered species, has attempted to get funding through the Section 1135 program for over four fiscal years. Despite the immense ecological benefit, relatively low cost, and support from the Corps District, other federal agencies and members of the Maryland Congressional delegation, the project has yet to receive any funding.

When funding is inconsistent and when projects experience chronic funding shortfalls, overall costs increase, partnerships fall apart and past investments can often be wasted because the momentum cannot be maintained for a project to reach completion. Parsing out funding in a piecemeal fashion to all projects currently in the pipeline will result in increased costs and lost investment as projects fail to reach fruition. We are seeing these challenges realized in two projects designed to reconnect thousands of acres of floodplain on the Illinois River –the **Spunky Bottoms** and **Emiquon** floodplain restoration projects. The Conservancy has been able to help bring state, private and other Federal dollars to leverage the investment by the Corps in these projects. In fact, the USDA Wetlands Reserve Program Easement used to secure the land at Emiquon is one of the largest easements in the program's history. Furthermore, both projects build on past and current conservation investments on adjacent National Wildlife Refuge lands. Unfortunately, a lack of Corps funding and other hurdles have resulted in rising costs, the loss of state and other federal funding, and uncertainty as to the prospects for completion of these projects.

In light of this situation and in light of the fact that demand for Corps restoration dollars will always exceed available funding, it is important that the 1135 and 206 programs are administered in a way that focuses on the projects resulting in the highest return, both ecologically and financially, for the Federal dollars invested. To do this, there must be strong science-based ecological criteria used for allocating scarce resources. A number of other Corps programmatic authorities, like the Navigation and Ecosystem Sustainability Program for the Upper Mississippi River and the Estuary Restoration Program, are already doing this by setting objective and transparent ecological criteria to evaluate projects that are proposed for funding. Existing plans that identify ecological and restoration priorities can also be useful tools for determining where to spend restoration dollars.

Recommendation: In carrying out the Continuing Authority Programs, emphasize those projects that result in the greatest ecological return on the dollar invested by setting clear science-based ecological criteria for allocating program funds.

At multiple sites where the Conservancy works, we are able to bring other Federal, state and private dollars that exceed the mandated non-Federal cost-share. For example, on the **Spunky Bottoms** restoration project in IL, the Conservancy contributed a net amount of $740,000 in privately fundraised dollars to acquire land; was able to work with the Natural Resource Conservation Service and the Fish and Wildlife Service to attract an additional $1.4 million in Federal investment for the project; applied for and received $286,000 in private foundation grants, and worked with the Illinois Department of Natural Resources to apply $1.875 million in state funding for acquisition. Together, these investments, which total $4.3 million in state, private and other Federal funding, far exceed the $2.4 million non-Federal cost share for the project.

Spunky Bottoms is a good demonstration of the ability of NGOs to bring multiple partners to the table and leverage other funding. Projects like these bring significant state and private dollars to the table, often exceeding the required cost-share. Therefore, to maximize limited Federal dollars for restoration, it is important that we make it a priority fund those projects most likely to bring other resources to bear beyond the required cost-share, as they will result in more restoration for the same dollar invested.

Recommendation: In carrying out the Continuing Authority Programs, emphasize those projects that bring multiple partners and funding sources to the table by giving priority to those projects able to leverage non-Corps funding beyond the required cost-share.

As the committee evaluates proposals for administering restoration projects, is important to maintain the same standard cost-share for all non-Federal sponsors. As demonstrated at Spunky Bottoms, NGOs in particular have the ability to bring a variety of resources to the table and can often be much more nimble than units of government, which is why government agencies often ask NGOs to help advance conservation and restoration projects by securing private funding and investing private capital to acquire land. Because of the unique and valuable role NGOs can play, it would be unwise to require higher cost-share for non-governmental entities.

Recommendation: Maintain the standard cost-share for all non-Federal sponsors regardless of whether they are a governmental or non-governmental entity.

IV. Improving Management of Federal Dams

While the construction and operation of reservoirs has benefited the nation by providing water supply, flood damage reduction, and electricity production, dams have also caused serious impairment to the health of the nation's rivers, floodplains, and estuaries. In fact, dams are a leading cause of aquatic species endangerment and they have undermined a spectrum of benefits and services provided by naturally functioning ecosystems. These impacts include degrading freshwater and estuary fisheries that have considerable economic value, impairing water quality, and interrupting the natural nutrient and sediment processes critical for sustaining floodplain and wetland productivity that benefits people as much as wildlife.

The operating procedures for the hundreds of dams that the Corps owns and operates often seek to optimize inexpensive water supply, power, and flood control, but have largely ignored environmental flow needs downstream of these facilities. Moreover, many of the water control plans that govern the operation of these facilities have not been significantly updated in many years. For this reason, one of the Conservancy's top ecosystem restoration priorities is to work cooperatively with the Corps to quantify environmental flow needs and improve reservoir management.

Fortunately, our work with the Corps to date through the Sustainable Rivers Project has already demonstrated at several sites that modest adjustments to existing dam operations can yield substantial improvements in ecosystem health by improving environmental flow releases from the dams. These improvements have been achieved while only minimally affecting other dam functions and keeping operational changes within the project's authorized purposes. In fact, work through the Sustainable Rivers Project has resulted in some changes in reservoir operations that are not only better for downstream ecosystems, but they also have improved performance for original project purposes such as flood control and recreation.

Updating operating instructions by specifically incorporating flow releases that benefit the river ecosystem at the more than 600 dams under federal control is essential for restoring thousands of impaired river miles across the country and increasing their resiliency to future changes associated with climate change. Following the example set working with the Corps on the Sustainable Rivers Project, the Conservancy supports incorporating environmental flow needs into all Corps reservoir operations nationwide and encourages the Committee to work with the Corps to enable this important work to move forward.

While the Corps has been an excellent and willing partner on many of our joint partnership efforts, policy and funding constraints threaten the success of many important restoration efforts. In my testimony today, I have suggested a couple of ways Congress can support and improve ongoing restoration efforts and build upon the good work already taking place. We urge Congress to make the restoration of ecosystems that contribute to the safety, welfare and livelihoods of local communities one of the nation's top water resource priorities. The Corps and its partners are developing remarkable projects that achieve significant economic and environmental gains and are highly responsive to local interests, and we appreciate the continued support of these efforts.

I would like to thank the Chairwoman and the entire Subcommittee for the opportunity to share this testimony with you today.