Smarter Water Management for Today's Needs

The Water Resources Development Act

America's water resources supply drinking water, underpin our economy and sustain a healthy environment. These irreplaceable resources need smart management. The Water Resources Development Act can encourage natural solutions and modernize water infrastructure.

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There is broad agreement that improvements are needed in America's investments in water resource projects—to provide deeper harbors, upgraded navigation locks and increase the amount of energy we get from hydropower. We now have the knowledge and ability to achieve these goals while also improving of the health of our freshwater ecosystems that provide valuable social and recreational benefits.

Congress has a great opportunity in the next Water Resources Development Act (WRDA) to encourage cost-effective, nature-based solutions to water problems and modernize our water infrastructure. Achieving those goals will help better meet the needs of today and prepare for the needs of tomorrow, while fostering environmental sustainability and economic prosperity.

The Bill Williams River in Arizona is involved in a partnership between the U.S. Army Corps of Engineers and the Conservancy to improve the health of rivers by changing the operations of Corps dams. The river's corridor contains the last remaining native woodland habitat of any size along the lower Colorado River. Credit: © Tana Kappel/TNC 2011

A modernized water resource management system will take a watershed-wide approach and work to balance the multiple demands on our water resources. Incorporating nature and the benefits nature provides into water management and infrastructure projects is often a cost-effective means to achieve those objectives.

Guiding Principles for Effective Water Resource Management

Use an integrated, watershed-based approach to design, plan and manage our water resource infrastructure to optimize the multiple benefits, and consider natural, social and built systems as a whole. Often, projects are planned and carried out with a singular focus rather than designed to achieve multiple benefits. We need to plan, manage and set funding priorities on a watershed basis to meet and achieve our collective needs.

Utilize natural infrastructure as part of the long-term solution for meeting our flood protection, water quality and water supply needs. Natural infrastructure can provide a cost effective means to help meet our water resource needs and be a tool for reducing risk from flood events, providing other benefits to communities, such as improved water quality, habitat enhancement and recreational opportunities. These investments should consider likely future extreme events and should be based on reducing long-term vulnerabilities.

Re-align existing funding and find new ways to finance water resources projects that allow a wide range of partners to participate in developing and building these projects. Inadequate investments in water and flood protection-related infrastructure put our economy at risk and people in harm's way. We must realign current funding and find new ways to finance projects that promote both traditional and natural infrastructure.

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Specific Recommendations

A USACE biologist inspects a fish trap used to help count juvenile salmon migrating below Lookout Point Dam in the Willamette Valley. Adjusting the operations of dams can improve water quality and habitat for fish and wildlife and meet ongoing human needs. Credit: ©Bridget Besaw 2008

1. **Optimize the use of U.S. Army Corps of Engineers (USACE) dams** and other water control structures to maximize benefits for society and nature. Most of our existing dams, locks and other infrastructure were built decades ago and are operated to meet the needs of those times. Clear direction should be provided to USACE to optimize use of existing infrastructure to improve environmental conditions and achieve other socio-economic benefits.

2. **Improve USACE mitigation practices** to contribute to long-term water resource sustainability. Ensure USACE is able to fully participate in watershed-level planning for advanced mitigation, funded through general O&M budgets not tied to specific projects or locations. The Corps should also apply the mitigation approaches specified in its 2008 rule implementing section 404 of the Clean Water Act.

3. **Begin to implement alternative finance approaches** similar to the tools used in the recent transportation bill, allowing revenues to fund long-term public and private financing of projects. USACE should be authorized to implement a series of pilot projects using alternative financing approaches.

4. **Improve ability to work with non-profits.** Existing statutory framework, regulations, policy, practices and agreements are not conducive to effective and efficient collaboration between USACE and non-governmental organizations on ecosystem restoration projects. Changes related to liability, allowable cost-shares, cost over-run responsibilities, regulatory responsibilities and operation and maintenance are needed.

5. **Enhance the ability for USACE to participate with interagency federal or international organizations and foreign governments** to address problems of international significance related to water resources, infrastructure development and environmental protection.

6. **Increase authorization levels for continuing authority programs.** Current authorization levels under USACE programs such as Aquatic Ecosystem Restoration and Project Modifications for the Improvement of the Environment are not adequate to meet the needs of small projects. Increased per-project funding levels will provide an opportunity to deliver enhanced benefits and invite more private sector participation.

7. **Budget based on watershed analysis** of the most critical infrastructure that meets its highest priority needs, ranked across business lines rather than within one (navigation, hydropower, flood risk reduction, etc.). USACE should also budget for funding to help develop and update these watershed budget analyses.

8. **Modernize flood and coastal storm recovery options**. USACE emergency funding programs currently promote restoring damaged flood risk reduction and hurricane/shore protection structures to their pre-storm condition without evaluating options to make them more resilient and less susceptible to future damages. Allowing USACE to consider set-backs and re-alignments of levees and including non-structural approaches will help promote a more sustainable and resilient future.