

Streamlining the Federal Water Research Portfolio

Author: SPONBERG, ADRIENNE FROELICH

Source: BioScience, 55(10) : 834

Published By: American Institute of Biological Sciences

URL: [https://doi.org/10.1641/0006-3568\(2005\)055\[0834:STFWRP\]2.0.CO;2](https://doi.org/10.1641/0006-3568(2005)055[0834:STFWRP]2.0.CO;2)

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.



Streamlining the Federal Water Research Portfolio

ADRIENNE FROELICH SPONBERG

In the United States, vicious battles over water were once viewed as the sole domain of the American Southwest. But today, conflicts over water are brewing all over the country. In 2002, the *New York Times* reported on water conflicts in 29 different states. Even as more states are faced with water problems, those with a history of water problems are facing new challenges: according to the Public Policy Institute of California, California's demand for water could increase by as much as 40 percent by 2030.

As the geography of water conflicts expands, the complexity of the issues grows. Robert Hirsch, associate director for water at the US Geological Survey, notes that water allocation has traditionally been viewed in terms of how much was needed for agricultural, urban, and industrial uses, with little consideration for the needs of aquatic habitats. "Now, due to changes in public values and laws such as the Endangered Species Act, the allocation has to be reconsidered; the biota now have a seat at the negotiating table." As a result, the question water managers are faced with has shifted from "How much can we take?" to "How much do we need to leave?"

Traditional water users have practice in quantifying their needs, but calculating the needs of the environment is trickier. Water quantity is important, Hirsch notes, but factors such as temperature, timing, and chemistry also have to be considered. "It is a much more complicated situation than what was perceived a few decades ago. Traditionally when biology was considered,

we looked at minimum flow. Now, we must consider the whole hydrograph—highs and lows alike." Hirsch adds, "It will be a major challenge for science to quantify what the biota need."

Trends in federal funding for water research present another challenge for scientists. In its report *Confronting the Nation's Water Problems: The Role of Research*, the National Research Council (NRC) found that the federal investment in water research has been stagnant for 30 years. Worse, per capita spending on water resources research has fallen, from \$3.33 in 1973 to \$2.40 in 2001.

The NRC suggests that funding alone may not improve the situation. Currently, nearly 20 federal agencies have some sort of jurisdiction over water issues; however, no single entity is charged with coordinating the federal research portfolio. The NRC blames this lack of coordination for "the topical and operational gaps apparent in the current water resources research portfolio." The report suggests that a logical body for such coordination would be the National Science and Technology Council's Subcommittee on Water Availability and Quality (SWAQ), although the NRC has expressed some concern that SWAQ has been "invisible" to the research community as well as to the public at large.

But SWAQ is rapidly becoming more visible. In February 2005, it released its first report, *Science and Technology to Support Fresh Water Availability in the United States* (www.ostp.gov/NSTC/html/swaqreport_2-1-05.pdf), which summarizes the state of water

resource research. As a follow-up, SWAQ is preparing a strategic framework for water research that will lay out how the government should go about answering the questions identified in the February report. SWAQ will offer a public comment period on the proposed strategic framework when the report is released in fall 2005.

Freshwater researchers are anxiously awaiting the final report. Gene Likens, director of the Institute of Ecosystem Studies and current president of the International Association of Theoretical and Applied Limnology, says he is "delighted to learn that SWAQ has taken a real interest in the critical need for funding to study and protect aquatic resources." Likens hopes the strategic framework for research will include some recommendations for the funding of basic research, particularly in the field of limnology. "Limnology, the study of all inland waters, is a critical field capable of providing new and unbiased scientific information needed for managing the nation's freshwaters," he notes.

Will Congress provide the funds for such research? Interest in water research is definitely running high, but if this year's budget is any indication, scientists should be prepared for a battle over making the money flow.

Adrienne Froelich Sponberg (e-mail: asponberg@aslo.org) is director of public affairs for the American Society of Limnology and Oceanography.