



Water Policy & The National Wildlife Refuge System

DOI Transition Recommendations

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The National Wildlife Refuge System currently faces many challenges, many of which are associated with inadequate funding. The Cooperative Alliance for Refuge Enhancement recently recommended an increase in funding for the Refuge System to \$514 million in FY 2009, and identified a backlog in funding necessary to achieve the Refuge System's core conservation mission of \$3.5 billion.¹

Key to the System's conservation mission is access to adequate water supply and quality – essential elements to ensuring successful management of Refuge ecosystems, including preserving threatened and endangered species, biodiversity, and habitats, and providing educational and recreational opportunities.

However, in many cases, baseline information about current and projected future water needs at Refuges – especially in the eastern states – has not been collected. This lack of information hampers efforts to make the case for Refuge water rights, especially in the face of increased competition over dwindling water resources in the face of increased development, population growth, and climate change.

This briefing focuses on the need for improved water policy across the Refuge System – effective policies to manage for water supply and water quality are necessary in order to for the overall US Fish and Wildlife Service's (USFWS') conservation mission, including protecting fish and wildlife and their habitats. A recent independent evaluation of the Refuge System found that out of 12 evaluated strategic outcome goals, the only one to receive a rating of “unable to evaluate” was the goal to “provide quality environments with adequate water”.²

To improve water policy at our Refuges, three key challenges must be addressed:

- 1) Adequate funding for/access to hydrologists, water quality scientists, and water law specialists to collect adequate baseline water need data, project future water needs in the face of population growth and climate change, and to represent Refuges in negotiations over water rights.
- 2) Establishment of watershed scale water management plans rather than focusing on water issues on a refuge-by-refuge basis. Development of these watershed scale plans will require inter-agency effort within the Department of the Interior as well as with other federal, state, tribal, and other agencies and interested parties.
- 3) Incorporation of water considerations in conservation and land acquisition plans as well as into Refuge performance measures.

¹ Restoring America's Wildlife Refuges 2008: A Plan to Solve the Refuge System Funding Crisis. Cooperative Alliance for Refuge Enhancement.

² An Independent Evaluation of the Effectiveness of the US Fish and Wildlife Service's National Wildlife Refuge System, Summary Overview (June 2008), Management Systems International



In 2008, the USFWS formed a Water Resources Team to make recommendations for improved water management policy, especially in the face of climate change. The Team has come out with a set of 6 policy recommendations to improve water resource policy across USFWS, including the Refuge System.³ The discussion of recommendations for improving water policy draws heavily on these recommendations as well as recommendations from Mike Daulton, Director of Conservation Policy at the National Audubon Society.

The first step to designing effective water policy within the Refuge System is having access to accurate hydrologic and water quality monitoring data as well as access to water law specialists. Unfortunately, many Refuges, especially in the eastern United States, do not have adequate access to hydrologists or water quality scientists. Now that the eastern US is experiencing increasing problems with water shortages, the Refuge System must place as much attention on water needs in the east as in the west, where water rights have long been a key issue. Without baseline monitoring information, establishing current and future Refuge water needs is difficult, and this information is essential for Refuge health. Only once adequate data is available to establish need can the Refuge System effectively participate in negotiations to secure long-term access to adequate water supply under existing water regulations.

To address this current shortfall, the following steps could be taken:

- 1) The USFWS should complete a consistent, comprehensive water resource assessment at each Refuge. The assessments should follow a standard protocol and assess the adequacy of current water supply, current water use, water rights, water management practices, and future water needs. Water quality issues should also be addressed. A standardized database should also be developed to store this data which can then be analyzed to develop water management plans and actions.
- 2) Many Regions do not have adequate water resources expertise, and Water Resource Assessments and other analyses will require additional resources in excess of \$1 million per year.
- 3) Competition for a limited water supply is increasing. To meet current and future water resource management and protection needs, USFWS should institute in-house water resources programs that have competencies in hydrology, water management, water measurement, water quality, water law, and database management. Programs should also have standardized computer and geospatial resources.
- 4) The USFWS should develop a system for identifying, prioritizing, and addressing water quality issues on service refuges. This should include expanding an existing pilot collaboration with the US Environmental Protection Agency and the US Geological Survey to look at the relationship of impaired (polluted) waters and management operations with the Refuge System to comply with Total Daily Maximum Load (TMDL) regulations.

³ Policy Initiative: Water Resources (2008), U.S. Fish and Wildlife Service



- 5) A funding mechanism for water quality problems should be identified to cover costs associated with studying impaired waters associated with Service lands and trust resources and determining causes and remedies of impaired waters.

Establishing effective, long-term water resource policy in the Refuge System also requires assessing water needs and management at a watershed level, rather than on a refuge-by-refuge basis. Historically the Fish and Wildlife Service (USFWS) has not collaborated with other federal and state agencies or outside organizations on the development of water resource policy.⁴ This strategy has been more effective in the western United States in the acquiring of water rights for refuges, but has left Refuges vulnerable to negative water resources impacts, especially in the eastern United States where water law is less clearly defined than in the west.

To address this shortfall, the following steps could be taken:

- 1) The USFWS should provide consistent, Service-wide guidance for managing water resources. Currently water management is addressed in several places within the Service Manual, but nowhere in a holistic manner.
- 2) This guidance should include recommendations on the development of watershed-scale water management plans, including recommendations for inter-agency efforts within the Department of the Interior as well as efforts with other federal, state, tribal, and other agencies and interested parties.

In order to protect and improve water quantity and quality for fish and wildlife resources in an era of increasing human development and rapid climate change, water resources must be included in conservation and land acquisition plans as well as into Refuge performance measures.

To ensure this action, the following steps could be taken:

- 1) Land acquisition policies and practices should be revised to prioritize water. For example the Land Acquisition Priority System (LAPS) should accommodate water rights priorities – currently LAPS does not recognize water in the scoring system. Additionally, the USFWS Land and Water Conservation Fund rarely includes water acquisition in its priorities – this should be changed.
- 2) A new water policy should specify how Refuge planning will consistently incorporate water resources issues and climate change impacts on water availability and water quality. Comprehensive Conservation Plans must adequately consider water issues, especially the impacts of climate change on future water availability. This is standard procedure in some Regions, but identification of water resources as an issue is non-existent in some parts of the Refuge System.
- 3) Meaningful performance measures for determining progress in protecting USFWS water resources should be developed and used to provide useful information regarding the status of water resource management in the USFWS.

⁴ Policy Initiative: Water Resources (2008), U.S. Fish and Wildlife Service



Sidebar: Case Study of Successful Implementation of Water Policy at Bitter Lake National Wildlife Refuge

The following example demonstrates how the implementation of a water supply monitoring program at a specific Refuge helped establish water rights.

In 1996 the State of New Mexico (State) and the United States stipulated to the Federally Reserved water rights for Bitter Lake National Wildlife Refuge (Service). This stipulation agreed to the reserved rights of the Refuge as being for; a) open surface acres of managed wetlands on the Middle Unit of the Refuge, and b) flows in Bitter Creek. The Refuge and the State agreed to protect existing conditions of these features and have this as the basis for quantification. At the time of signing, specific quantities were not known for the existing conditions and so the parties agreed to monitor for 5 years as a means of quantification, ending in October 2001. After 7 years of legal negotiation between the Service and the State, the consent order for the right was signed by both parties and entered into the courts in June of 2008.

The Service and the State are both pleased with this right since it protects spring habitats on the Refuge in a means that poses no immediate threat to local water users or inter-state compact water delivery requirements. In fact, the right institutionalizes a natural flow regime for the managed springs of the Refuge resulting in better habitat and considerable water savings from previous Refuge water management strategies. This water right is representative of how societal water demand and aquatic habitat protection can find a mutually beneficial solution towards allocating a limited resource. Hydrologic monitoring, including open water surfaces on the Refuge and flows in Bitter Creek, were essential for the quantification and successful adjudication of this right. Hydrologic monitoring will continue to play a key role in the protection of these resources since it is necessary for assuring that Refuge water management stays within the agreed to quantities, and as a means of assuring adequate supply in the future.