



Water Resource Inventory and Assessment (WRIA) Effort

Natural Resource Program Center

The National Wildlife Refuge System, administered by the U.S. Fish & Wildlife Service (FWS), is the world's premier system of public lands and waters set aside to conserve America's fish, wildlife, and plants. The Refuge System includes 556 National Wildlife Refuges and 38 Wetland Management Districts.

Background

Water is a vital component of the National Wildlife Refuge System (NWRS), and nearly every aspect of our society, including agriculture, manufacturing, energy production, and municipal drinking supplies. A limited resource, freshwater is increasingly the focus of competition and dispute. Climate change and increasing human populations will only heighten the demand for clean, fresh water in the future.

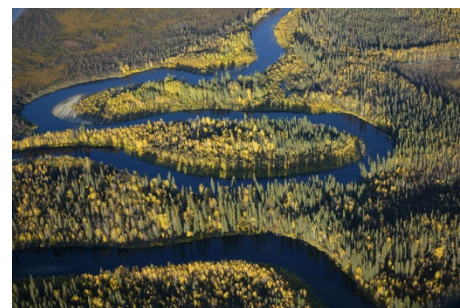


Lee Metcalf NWR, Credit: USFWS

What is needed?

The challenge for the Service in light of growing competition for water is to ensure that sufficient quantities of good quality water are available for fish, wildlife, and plants. There is an old adage, "you can't manage what you don't measure". Additionally, you can't measure if you don't know what you have. An accurate reconnaissance-level water resources inventory and assessment (WRIA) of water quantity and quality on NWRS lands is essential to identify needs and threats, prioritize work, and take prescriptive actions.

WRIAs are the first and crucial step to understanding the informational needs for a targeted water monitoring and management effort.



Kanuti NWR, Credit: USFWS

What is a WRIA?

The WRIA effort comprises a centralized database, a GIS function, and a web application that collects, stores, and retrieves water resource information for the entire NWRS.

A WRIA is an Inventory

The inventory component of a WRIA collects a standardized set of existing baseline information—including geospatial data—on water rights, water quantity, water quality, water management, threats to water supplies (including potential climate change impacts), and other water resource issues for each field station. This information will be stored in a centralized database that can be queried to answer specific questions about NWRS water resources at refuge, regional, or national scales.

A WRIA is an Assessment

The assessment component provides an evaluation of inventory data by hydrologists and other water resource professionals to identify station-specific water resource needs and issues, and make recommendations for addressing these. The assessment will aid refuge management operations, and assist Regional and national planning and prioritization efforts.



Credit: USFWS



Fort Niobrara NWR, Credit: USFWS

Who is doing it?

The WRIA effort is a coordinated activity among the NRPC, Regional Inventory & Monitoring offices, and Regional Water Resource branches, with cooperation from individual refuges. Water resource informational needs for the WRIAs have been identified by a team of hydrologists, ecologists, GIS specialists, environmental contaminants specialists, and other water resource professionals from all Service Regions and the Washington Office.

The WRIA Process

Data collection has begun in most Regions, overseen by Regional Water Resource staff. The inventory component gathers existing information about each refuge's water features, supply, water quality, water rights, water-related infrastructure, needs and threats. A centralized WRIA database will store water resource information from every refuge in the System. Each assessment is a narrative document with relevant station-specific information that will guide water resource management for that individual refuge.

For more information:

Mike Higgins
NWRS Water Resources Coordinator
Mike_J_Higgins@fws.gov
(970) 266-2924

<http://www.fws.gov/refuges>

January 2012

Summary

The WRIAs are designed to provide valuable information to multiple stakeholders: from individual refuges up to the Department of the Interior. In addition to providing baseline water resource data to all Service regions, the WRIA effort will deliver information to identify trends, track needs and threats, prioritize work, and plan for future impacts to NWRS water resources.