



# Data Management System

## *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

The National Wildlife Refuge System (Refuge System) has made a strong commitment to data management and has provided resources to streamline data entry and storage and, when appropriate, increase the availability of data.

The Refuge System "Strategic Plan for Inventories and Monitoring on National Wildlife Refuges: Adapting to Environmental Change" that was completed in 2010 envisioned a system that would be widely used and populated with data from every refuge. The plan values both historic and new monitoring: "The Refuge System must not allow valuable legacy data to sit isolated in file cabinets or stand-alone database systems while Landscape Conservation Cooperatives are assembling datasets to be used for biological planning and conservation design... Refuge System

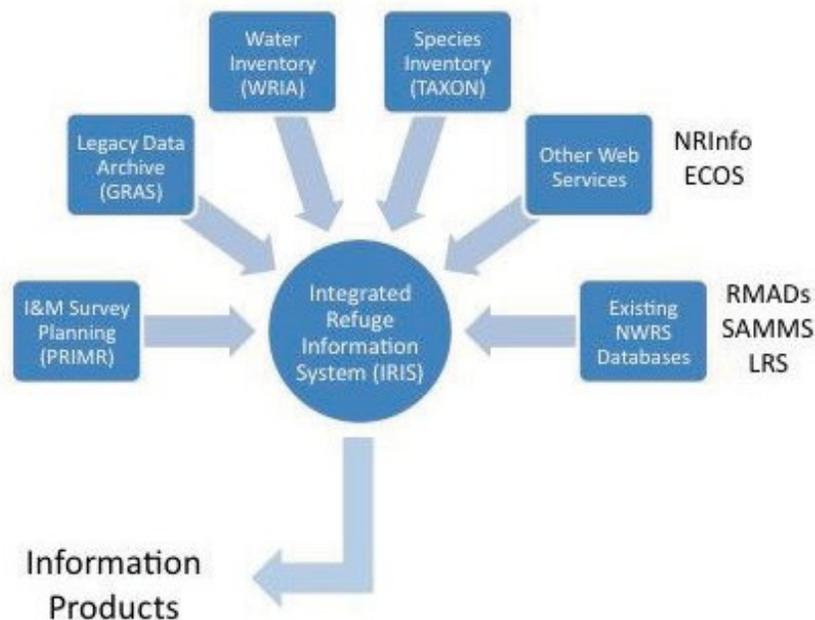
information will be shared and leveraged in as many ways as possible in order to maximize its value while diminishing its overall cost."

As part of the Refuge System, the Natural Resource Program Center (Center) directly supports science-based management through the collection and synthesis of information at multiple geographic scales that is used to inform management decisions at all levels.

The Center has been strategically co-located with the National Park Service Inventory and Monitoring Program to facilitate collaboration and ensure compatible systems that can be linked to, and searchable from, each agency. This will reduce data information storage redundancies and promote data sharing for more efficient use of public funds.



# Integrated Refuge Information System



## Framework

The Center is now designing the Integrated Refuge Information System (IRIS) in collaboration with Refuge System staff, external and internal partners.

The underlining architecture will unite complex, stand-alone enterprise systems to output useful information products. For example: existing Service databases such as the Refuge Management Action Database (RMADS) to translate science data into useable management information products.

## Implementation

The primary focus for Phase 1 implementation is to design and deliver the core systems and infrastructures necessary to support future modules. Phase 2 will include final development of the IRIS portal and creation of Web services that will allow one-stop data entry and retrieval for the end user.

Two primary database products have been identified for implementation in Phase 1:

1) Geospatially Referenced Archive Service (GRAS): a centralized repository for compiling, organizing, archiving and retrieving information, such as reports, protocols, datasets and geospatial data, and

2) Planning and Review of Inventory and Monitoring of Refuges (PRIMR): a mechanism to support the efficient management of refuge I&M data.

Additionally, the Center is researching the structure of existing species databases to determine which one would best serve the Refuge System needs to document the status and trends of species on refuges. The next step in the process is to pilot implementation of two of the databases to be used for comparative analysis.

## Status

Phase 1 implementation is underway. The Center is working with FWS' Environmental Conservation Online System (ECOS) to house the various modules and provide much of the necessary infrastructure. Development of the PRIMR and GRAS databases has been completed, with regional implementation of PRIMR currently underway. Field testing of GRAS will occur during the fall of 2011.

Phase 2 implementation will begin in FY2012. Centralization and national roll-out of both databases is expected early during this period. Development of the IRIS portal and creation of Web-based services will be ongoing during this time.

## For more information:

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