








Enhancing Technology Use through Collaboration: Geospatial Decision Support for the Missouri River Ecological System

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Introduction

- Operation of the Missouri River Mainstem Reservoir System to adequately provide for flood control, navigation, irrigation, hydropower, water supply, water quality, recreation, and fish and wildlife requirements is an ongoing challenge for the the Corps
- Revision of the Missouri River Master Water Control Manual in 2004 addresses requirements set by USFWS to restore the Missouri River ecosystem and to protect and recover threatened and endangered species
- To facilitate a comprehensive approach to recovery implementation, the Missouri River Recovery Implementation Committee (MRRIC) has been established

Introduction

- The strategy defined and implemented by the MRRIC will generate volumes of research data on the ecological habitat needs, physiological endpoints and population modes of species
- To address these requirements, and to encourage a collaborative approach to restoration activities, a web portal is being developed that provides access to associated data and information about the shallow water habitat restoration on the Missouri River
- The web portal will integrate the data, tools, and utilities into a comprehensive system to facilitate stakeholder collaboration, data sharing, and sound decision-making



What Is Needed

- Mechanism for communication
- Technology infrastructure and awareness
 - Hardware/software
 - Knowledge Resources
 - Technology Transfer
- Tangible interface for communication where stakeholders can load, view, modify, and share data, documentation, and information
- Demonstration applications to serve as incentive for stakeholders to collect and distribute data in a standard and systematic way



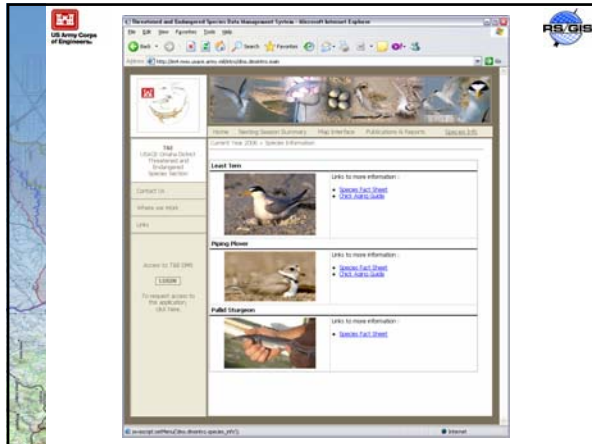

Early Demonstration Applications

- Missouri River Fish and Wildlife Recovery Plan
 - Corps-focused
 - Initial demonstration of the benefits of standardized data collection between NWK and NOW
 - Simple decision support tools to illustrate interactive tools in collaborative decision support
- Spring Pulse Interior Drainage Monitoring
 - Cross-district database development
 - First evaluation of standardized data collection and reporting
- NWO T&E Data Management System
 - Production application
 - Semi-mature database model with external review
 - Currently addressing an identified need within the Basin

One Approach for Application Development

- Oracle 10gr2 with spatial
- ESRI SDE
- Support for distributed databases
- PL/SQL web development
- Apex web development
- XML DB for document management capabilities
- Oracle role-based security to ensure appropriate access to data and applications



Segment Name	Total Bands	Active Bands	All Bands	Total Recaptured	Total Unrecaptured	Unbandaged
Least Tern - 2006						
East Grand Island	1	0	0	1	0	0
East Grand Island	25	0	0	14	9	2
East Grand Island	3	0	0	2	1	0
East Grand Island	206	2	0	118	90	10
East Grand Island	4	0	0	2	2	0
Madison Rock Reef	6	0	0	1	2	0
Madison Rock Reef	5	0	0	0	0	0
Total	252	2	0	137	114	12
Least Tern - 2005						
East Grand Island	1	0	0	1	0	0
East Grand Island	25	0	0	14	9	2

- ### Ongoing Database Development
- Other efforts are looking to create comprehensive databases to integrate within the MRRP framework
 - Pallid sturgeon monitoring
 - Freshwater Mussels
 - Shallow Water Habitat
 - Continued focus on:
 - New Programs and Teaming
 - Enhance Data Sharing
 - Generating new resources to empower stakeholders
 - Pass the word!

Comments/Questions?

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