

**Coordination in Gulf Water Quality  
Monitoring:  
Strategies for Improving Monitoring  
Information Sharing**

2nd Annual Monitoring Forum  
April 7-8, 2009  
New Orleans, LA



# Oceans Council

- Created in 2005 by House Bill 1855
- Result of US Oceans Commission – Florida's response
- Purpose: Each year, to provide priorities for funding coastal research in Florida
- Initial project priority: *information sharing*

# Integrated Data Management (IDM) Project

## IDM Metadata Elements

Descriptors of scientific research or monitoring projects/studies/investigations, etc.

Project purpose: to identify a core or minimal set of metadata elements that would provide a user to assess whether or not the project 's data might be suitable for the user's interests.

# IDM Metadata– Why?

Cross-program data usability and sharing to conserve costs and maximize benefits was identified by both the Oceans Council members and members of legislative committees reviewing the Oceans Council's Research Plan as high priority critical concerns.

# IDM Metadata Definition Strategy

- Use the newly-established Florida Water Resources Monitoring Council (FWRMC)
- FWRMC:
  - Advisory group to DEP – by statute
  - 10 members plus 1 ex-officio chairperson
  - Membership:
    - Environmental Protection - 1 representative
    - Fish & Wildlife – 1 representative
    - Agriculture – 1 representative
    - Health – 1 representative
    - 5 Water Management Districts – 1 rep representative each
    - Local Government - 1 representative

# IDM Metadata Definition Strategy

- Research and monitoring investigations – diverse set of scientific disciplines generate data
- Organized strategy around scientific disciplines
- Examples:
  - Aerial based remote sensing
  - Biological
  - Laboratory analytical
  - Field sampling
  - Groundwater

# IDM Metadata Definition Strategy

- Tiered system:
  - Tier 1 = Common metadata to all disciplines  
(who/what/where/when/how elements)
  - Tier 2 = “true” scientific discipline specific  
elements
- Each discipline plus the common group –  
hold a workshop to develop those  
independent sets of candidate metadata
- Eventually come together and resolve  
duplication of elements and gaps

# IDM Metadata “Post” Strategy

- After reconciling duplication/gaps in elements – represents first draft of metadata standard
- Next, design and conduct a state survey to solicit input on current use of metadata & metadata standards
- Analyze survey results, compare with draft standard from the disciplines
- Next - Reconciliation process
- Next - Public workshops & Ocean Council presentations
- Next - Final Draft metadata standard to present to the legislature

## IDM Metadata Project Status:

- ✓ • Tier 2 Discipline-level IDM metadata workshops to draft elements (95%)
- ✓ • Tier 1 Common-level IDM metadata workshop
- ✓ • Final Reconciliation workshop for all IDM metadata elements
- Design and conduct statewide survey on current use of metadata
- Analyze survey results and compare with IDM list
- Reconcile gaps and duplication
- Hold public workshops
- Present results to legislature

## Action Steps (Governors' APII):

1. Increase data comparability across the Gulf of Mexico by improving standardization of water quality data collection and reporting.
2. *Coordinate the collection and management of information about water quality programs across the Gulf and improve communications with resource managers.*
3. Design a framework for a water quality monitoring network for the Gulf of Mexico.
4. Improve the knowledge base needed to properly manage water quality in coastal waters including a means to track trends in the waters designated as impaired.

## Results at the end of 5 years:

- Water quality data collected around the Gulf is of documented quality.
- *There is greater accessibility and use of existing water quality information Gulf-wide resulting in cost savings to monitoring programs and increased public awareness.*
- There is increase collaboration and cooperation among agencies and organizations monitoring water quality as well as increased communication to the public regarding the status of water quality conditions in the Gulf.
- New data-dissemination tools are available to help coastal resource managers' access and interpret water quality data and models.

## Why do this?

*A region-wide framework for water quality monitoring in the Gulf will provide an abundance of information to address both local and Gulf-wide issues, such as land-use decisions, water quality criteria, nutrient loading, mercury source tracking, etc. With a searchable catalog of monitoring program information available, an increased number of potential users will know where to access Gulf region water quality data, allowing issues to be addressed more efficiently. Agencies being aware of potential additional sources of water quality data should result in more appropriate total maximum daily load assessments.*

## Monitoring Workgroup's Action Plan II

Reference :

### Action Step WQ-4.2

*Coordinate the collection and management of information about monitoring programs across the Gulf of Mexico and improve data dissemination tools to deliver information to resource managers.*

## Action Items:

**WQ-4.2.1** *Establish monitoring program metadata elements necessary to describe monitoring programs across the Gulf* and promote adoption of these elements.

**Task 1** Send out list developed by Florida to other Gulf states for them to review and comment.

**Task 2** Identify additional types of information needed.

**Task 3** Decide on final list of metadata elements.

# Selected Scientific Disciplines for Florida IDM Metadata Project:

Aerial Remote Sensing

Ocean Observing

Laboratory Analytical

Geospatial

Groundwater

Biological

Field Sampling

(Plus the Tier 1 Common Elements –  
Who/What/Etc.)

Additional Disciplines  
Oceans Council Requested:

Satellite Remote Sensing  
Acoustic Sensing  
Meteorological

# IDM System Design

