

Florida Water Resources Monitoring Council

Monitoring – Coordination Action Plan Review



Action Steps

- **Improve Knowledge** of monitoring activities
- **Increase Consistency** of monitoring strategies & data comparability
- **Improve Coordination** among monitoring entities
- **Support:**
 - **Coordinate Stewardship** among Local, State, & Federal Monitoring Programs
 - **Increase Funding** for monitoring efforts



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ACTION ISSUE 1:

IMPROVE KNOWLEDGE OF MONITORING ACTIVITIES



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ACTION ITEM 1-1:

DEVELOP & POPULATE MONITORING CATALOG

- Catalog database will contain monitoring station locations and associated metadata (who/what/where/when)
- Database can link stations & metadata to data portal where data can be viewed and/or downloaded (STORET, WQX, etc.)
- Database can be structured similarly to regional or national catalogs to facilitate sharing FL monitoring information
- Online mapping application development can be coordinated with other existing applications (Map Direct, other catalogs, etc.)
- Application development can include data entry/upload module for organizations to input station information



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ACTION ITEM 1-1:

DEVELOP & POPULATE MONITORING CATALOG

Existing Online Mapping Applications - Catalogs & Data Portals (part 1 of 2)

- **GOMA Catalog of Monitoring Programs -**
(catalog - in development)
- **NOAA GOM Digital Atlas** (data atlas - in development)
- **EPA My Environment -**
<http://www.epa.gov/myenvironment/>
- **USGS Water Data Discovery -**
<http://water.usgs.gov/data/>
- **USGS SOFIA (South Florida Information Access) -**
<http://sofia.usgs.gov/>
- **Gulf of Mexico Ecosystem Portal -**
<http://ecowatch.ncddc.noaa.gov/catalog/gom>
- **SECOORA Biological and Habitat GIS -**
http://ocean.floridamarine.org/biohab_gis/



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ACTION ITEM 1-1:

DEVELOP & POPULATE MONITORING CATALOG

Existing Online Mapping Applications - Catalogs & Data Portals (part 2 of 2)

- **FWC GAME** (Geospatial Assessment of Marine Resources) -
<http://ocean.floridamarine.org/GAME/Viewer.htm>
- **FWC Marine Resource Geographic Information System** -
<http://ocean.floridamarine.org/mrgis/>
- **DEP MapDirect** (STORET focus) -
<http://ca.dep.state.fl.us/mapdirect/?focus=storet>
- **SRWMD Water Data Portal** -
<http://www.mysuwanneeriver.com/index.aspx?NID=345>
- **Water Atlas** (FL Center for Community Design & USF) -
<http://www.wateratlas.usf.edu/>
- **Comprehensive Everglades Restoration Plan (CERP)** -
http://www.evergladesplan.org/pm/projects/cerp_gis.aspx



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ACTION ITEM 1-1:
DEVELOP & POPULATE MONITORING CATALOG

REQUEST for Next Meeting:

- Council Members – gather information on your organization's **online mapping efforts** and **data portals** related to water resources monitoring
- Consider formation of workgroup for Monitoring Catalog Development



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ACTION ITEM 1-2:

MAKE CATALOG ACCESSIBLE

- Find organization / website to serve data and host online mapping application
- FWRMC Website can feature link to Catalog
- Other online data atlases can link to catalog



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ACTION ITEM 1-3: **MAINTAIN CATALOG**

- Monitoring information can be uploaded by individual organizations once data entry/upload module is developed
- Development of QA Plan & SOPs for Maintenance are needed
- Staff/resources are needed for QA & database maintenance



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ACTION ISSUE 2:

IMPROVE COORDINATION AMONG MONITORING ENTITIES



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ACTION ITEM 2-1:

CREATE COORDINATION - OVERSITE ORGANIZATION

- FWRMC (State Council & Regional Councils)
- Coordinate with National Water Quality Monitoring Council



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ACTION ITEM 2-2:

INCREASE COMMUNICATION WITH MONITORING COMMUNITIES IN FLORIDA & IN ADJACENT STATES

- Regional Councils will be critical for increasing communication within Florida
- Gulf of Mexico Alliance (GOMA)
- South Atlantic Alliance
- Regional Freshwater or Marine Monitoring Alliances



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ACTION ITEM 2-3:

INCREASE COORDINATION FOR STATE, REGIONAL, AND EVENT-SPECIFIC MONITORING

- Catalog can be used to identify duplication, overlap, and gaps in monitoring efforts
- Organization / participation in planning workshops
- Coordinate with regulatory agencies
- Coordinate freshwater & coastal monitoring efforts
- Assist in developing monitoring networks



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ACTION ITEM 2-4:

INCREASE INTEGRATION OF FRESHWATER & COASTAL MONITORING

- Evaluate tools for measuring surface and ground water interactions in the coastal zone
- Evaluate minimum flows and levels projects' techniques
- Evaluate compatibility / comparability of tools used to measure fresh and salt water parameters
- Identify appropriate tools for assessing factors common to both fresh & salt water condition, or meaningful to fresh/salt transition
- Synchronize timing of fresh and salt water sampling
- Identify linked factors between fresh and salt waters - design monitoring across transition areas



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ACTION ITEM 2-5:

CREATE / SUSTAIN COLLABORATION AMONG MONITORING ENTITIES

- Encourage agreements among appropriate organizations
- Assist in sustaining collaborations



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ACTION ISSUE 3:

INCREASE DATA COMPARABILITY & INCREASE CONSISTENCY OF MONITORING STRATEGIES



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ACTION ITEM 3-1:

AGREE ON CORE SET OF MONITORING VARIABLES

- Develop general & discipline-specific metadata standards
- Identify key variables needed to assess status & trends of Florida's water resources



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ACTION ITEM 3-1:

AGREE ON CORE SET OF MONITORING VARIABLES

The Comprehensive List of Draft Metadata
Elements

Integrated Data Management
(IDM) Project

September 10, 2008

Integrated Data Management (IDM) initiative

- Collaboration w/ FL Oceans & Coastal Council
- **Finished** Metadata Elements for:
 - Common (who/what/where/when)
 - Aerial Remote Sensing
 - Laboratory Analytical
 - Geospatial
 - Ocean Observing
 - Groundwater
 - Field Activities
 - Biology
- **Unfinished** Metadata Elements for:
 - Meteorology
 - Acoustic Remote Sensing



<http://www.floridaoceanscouncil.org/reports/idm.htm>

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ACTION ITEM 3-2:

SUPPORT DEVELOPMENT & IMPLEMENTATION OF IMPROVED MONITORING CONCEPTS

- Review literature and report on new technologies, indicators, & methods to improve monitoring efforts
- Locate funding to assist monitoring entities to incorporate new techniques & methods



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ACTION ITEM 3-3: **ENCOURAGE RESEARCH**

- Seek out, validate, standardize, & promote research methods for use in monitoring
- Form a workgroup to evaluate promising technologies, indicators, & methods
- Review recent publications and identify techniques to consider for validation / development
- Promote developed techniques through workshops & website
- Provide funding to aid the transition of new methods into techniques useful to resource managers



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ACTION ITEM 3-4:

ENCOURAGE ADOPTION OF DATA QUALITY OBJECTIVES

- Form a workgroup to develop guidance documents & aid organizations in implementing data quality objectives



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ACTION ITEM 3-5:

ENCOURAGE USE OF STANDARDIZED & CONTEMPORARY MONITORING DESIGNS

- Conduct intra- and inter-agency review of monitoring to facilitate coordination
- Conduct workshops to aid in developing standardized and complementary monitoring designs among FL agencies & monitoring entities



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SUPPORT ISSUE 1:

PROMOTE AND COORDINATE STEWARDSHIP AMONG LOCAL, STATE & FEDERAL MONITORING PROGRAMS



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SUPPORT ITEM 1-1:

ENCOURAGE WATER RESOURCE STEWARDSHIP

- Coordinate / support outreach efforts
- Promote education & outreach activities



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SUPPORT ISSUE 2:

PROVIDE FUNDING FOR ACTION PLAN IMPLEMENTATION



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SUPPORT ITEM 2-1:

IDENTIFY COSTS TO IMPLEMENT PLAN

- Define specific projects
- Define associated operational costs



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SUPPORT ITEM 2-2: **PRIORITIZE PROJECTS**

- Prioritize Action Items
 - Use cost-benefit analysis
 - Consider potential opportunities for collaboration with other organizations
- Develop specific project plans
- Create funding-allocation strategy



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SUPPORT ITEM 2-3: **DEVELOP A BUDGET**

- Review, approve, and use funding-allocation strategy



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SUPPORT ITEM 2-4:

PURSUE FUNDING OPPORTUNITIES

- Potential Funding Options
 - Grants
 - Private Funds
 - Legislative Budget Sources
 - In-Kind Sources
 - Intergovernmental Agreements
 - Other Funding Mechanisms

