

Florida Water Resources Monitoring Council (FWRMC)
Public Meeting of Monitoring Catalog Workgroup – April 11, 2012

Attendees:

Agency	Name
DEP	Kate Muldoon
DEP	Gail Sloane
DEP	Stephanie Sunderman
DEP	Joe North
DOH	Charlie Donahue
SJRWMD	Aiša Cerić
SWFWMD	Carol Kraft
SFWMD	Julianne LaRock
SFWMD	Brian Turcotte
Miami-Dade Co.	Susan Markley
USGS	Marian Berndt
USF	Jim Griffin

Introduction

Kate Muldoon (KM) welcomed everyone to the Monitoring Catalog Workgroup meeting and gave a brief overview of the meeting agenda. The meeting will include discussion of presenting the Water Atlas to DEP upper management, an update on the Gulf of Mexico Alliance (GOMA) Catalog of Monitoring Programs, discussion of several of the catalog projects that the workgroup has reviewed with the intent to identify which project would be best to collaborate with for the FWRMC effort, an overview of the South Atlantic Alliance monitoring catalog effort, and reviewing a proposed update to the FWRMC website to provide links to the existing catalogs and data portals that have been reviewed.

Discussion:

Review of Presenting Water Atlas to DEP Upper management

KM indicated that Jim Griffin and Bridgette Froeschke presented an overview of the Water Atlas to DEP upper management in the Division of Environmental Assessment and Restoration (DEAR) on April 3, 2012. The Water Atlas project was well received, and KM and Gail Sloane (GS) received guidance that the FWRMC Monitoring Catalog effort did not need to be tied to the DEP's need for an online portal for statewide water quality monitoring data. Instead, KM and GS were advised to move forward with the FWRMC monitoring catalog effort by identifying the existing project that the FWRMC effort will collaborate with.

GOMA Catalog of Monitoring Programs

KM suggested that the GOMA Catalog of Monitoring Programs be included in the list of potential collaborators, and gave a brief overview of the project.

- Application is currently in development. Beta release is anticipated for June 2012.
- Purpose of the GOMA Catalog is to answer the question, "Who is doing what monitoring where, when, why and how." This will be accomplished through a searchable database of metadata about monitoring projects and their associated stations.
- In 2009, the GOMA Water Quality Team put together a document describing the functional requirements for the Catalog of Monitoring Programs. In 2011, this document was used by the University of Miami contractors to develop their proposal and scope of work statement.
- Database/application will have three user types:

- o Central Administrative User (CAU) – a dedicated GOMA staff member who will create and maintain all data provider accounts and maintain and approve all information contained in the database.
- o Data Provider Administration User (DPA) – members of organizations conducting monitoring activities, who wish to enter information about their projects into the Catalog. DPAs will request access (password protected) by providing their name, organization, title, email, and phone number. DPAs will be responsible for entering/uploading and maintaining the metadata for their organization's or program's projects.
- o Anonymous User – anyone from the public who wishes to access the information contained in the Catalog website. These users don't require a login or approval to access information, and cannot add or edit information.
- Types of information contained in the Catalog of Monitoring Programs database:
 - o Organization level: organization name, type (federal, state, county, city, academic, non-profit, private corporation, other), website, and description
 - o Program level: organization name (links program to existing organization), program name, status (active or inactive), program manager contact information, website, description
 - o Project level: program name (links project to existing program), project name, status (active or inactive), start & end dates, purpose category (regulatory, event specific, experimental, seasonal, baseline, trend, benchmark, etc.), purpose text, data quality objective, project boundary (geographic coordinates), project manager contact information, data distributor contact information, website, limitations to usage, availability (publically available, conditionally available, not available), proprietary restrictions, link to data, and description.
 - o Station level: project name (links station to existing project), station name, station ID, status (active / inactive), geometry type (point, line, polygon), location (geographic coordinates), start & end dates, website, description, and observation details (see below).
 - o Observation Details: medium (e.g. water), category (e.g. nutrients), type (e.g. nitrate), method (e.g. EPA 353.4), frequency, start & end dates, depth.
- All users can search for stations by combining any of the following methods / filters:
 - o Free text search
 - o Geographic zone search (select predefined zone, draw area of interest on map, enter coordinates for area of interest, or upload a shapefile)
 - o Organization / Program / Project information search (select any combination of organization/program/project name, organization type, organization/program/project/station status, data availability, and purpose category)
 - o Observation detail search (select any combination of observation medium, category, type, method, sampling frequency, start & end dates, depth)
- Search Results can be viewed online using the mapping application or in tabular or text format. Results can also be downloaded in KML, CSV, or shapefile format.

GS commented that once the GOMA Catalog of Monitoring Programs is released, it will be incorporated into other data portals, such as the NOAA Gulf of Mexico Data Atlas.

Identifying Potential Collaborators for FWRMC Monitoring Catalog effort

GS and KM reiterated that it is an opportune time to start formulating a recommendation for how to proceed with the FWRMC Monitoring Catalog effort, and noted that it does not need to be tied to another initiative currently underway at DEP, where the goal is to represent statewide water quality data with an application that allows users to view monitoring results by water body.

KM suggested that the Workgroup consider collaborating with one of the existing catalog/data portal projects that has been reviewed, and presented a comparison of three options that seem best suited for incorporating the FWRMC Monitoring Catalog effort.

	Design/infrastructure	Portability/server locations	Cost	Schedule	On site assistance
USF Water Atlas	Designed to provide spatial depiction of station information, including analyte categories, but not DQO.	Hosted at USF; uses ESRI products and .NET	\$50,000 Startup? Maintenance fees?	6 months or less due to dedicated staff	Available through Atlas
GOMA Catalog of Monitoring Programs (in development)	Designed to provide spatial depiction of station information, including analyte categories, analytes, methods, & DQO	Uses open source software that conflicts with state contracts; would have to be hosted outside FDEP	Additional funding (\$<20,000) to improve functionality	6 months or less due to dedicated staff	Available through GOMA Central Administrative User (CAU)
FDEP Map Direct	Can depict spatial station information. Can access station info and analytes from existing databases (e.g. STORET), or new DB can be designed to include DQO	Uses ESRI products due to state agency contract; Hosted at FDEP	Dedicated funding, + Salaries & benefits <i>(haven't heard back regarding more specific cost estimate)</i>	If internal IT resources have other priorities for the next 6-12 months, design of user entry interface would be delayed	If FWRMC wants monitoring entities to enter own data, must have a QA/gatekeeper; would need to hire a dedicated position

Additional assessment of database and data entry application needs:

- Water Atlas: FWRMC effort would need to request database changes to add metadata fields (such as sampling frequency and DQO), and additional features to enable searches based on metadata information. Existing application for uploading information will likely satisfy FWRMC effort needs.
- GOMA Catalog of Monitoring Programs: Existing database should satisfy needs of FWRMC effort, therefore no changes to database structure required. Existing application for uploading information will satisfy FWRMC effort needs.
- FDEP Map Direct: FWRMC effort would need to request design of a new database of monitoring program metadata and a new application allowing users to upload their own information.

KM suggested that Workgroup members discuss the options presented, with goal being to select the project to pursue for development of the FWRMC Monitoring Catalog effort.

GS clarified that the FWRMC effort will include fresh water, marine, and groundwater monitoring efforts, regardless of which project the Workgroup chooses to collaborate with.

Julie LaRock (JL) asked for clarification on who the QA/gatekeeper would be if FDEP Map Direct was chosen. KM indicated that it would be a dedicated staff member at DEP, and that funding / approval would be needed to hire that person.

JL asked what the cost would be to the data providers. KM indicated that the only cost to the data providers would be the time required to enter information about their monitoring projects into the database. The central administrator / QA gatekeeper would perform much of the system maintenance, and only contact the data providers to update their information twice a year, or after any major programmatic changes.

Susan Markley (SM) asked for clarification on whether the FWRMC Monitoring Catalog would contain the data (analytical results) or just the program metadata. KM clarified that the scope of the catalog effort is limited to program and station metadata, but data providers will be able to provide links to locations where the data is available for downloading.

JL expressed concern about the amount of resources required for the data providers to participate by entering their information in the catalog, and asked if data providers will still need to upload their data into STORET. GS indicated that the two efforts will remain separate because STORET is focused on the data and analytical results, while the FWRMC Catalog would be focused on the program metadata; however, there is a possibility of linking the FWRMC Catalog and WIN (the STORET replacement, in development) in the future. GS also indicated that the FWRMC Catalog effort also hopes to reach out to many entities that do not currently enter their data into STORET, to find out basic information about their projects.

Carol Kraft (CK) asked if all three of the options presented had the ability to connect to existing external databases for the purposes of mining station information. KM indicated that the Water Atlas and Map Direct are capable of displaying data from external databases, and the GOMA effort will mine existing databases for information that can be entered into the Catalog's database.

SM asked for clarification regarding the role of the data providers. If the Water Atlas is selected, will DEP provide the funding and contract with the chosen project to expand the platform to include the features requested for the FWRMC Catalog effort, or will the individual counties need to develop separate contracts with the Water Atlas? KM indicated that DEP would manage a central contract if the Water Atlas effort was selected.

Aiša Cerić (AC) asked if DEP would definitely be able to provide funding for this effort, if the Water Atlas was selected. KM and GS indicated that funding is not certain, but they will work to ask for funding because Council efforts are strongly supported by upper management.

AC asked if there are any maintenance costs associated with the GOMA Catalog of Monitoring Programs. KM indicated that currently there are no maintenance costs. The Catalog will be moved to the Texas A&M server after its release, and it is anticipated that GOMA will fund any maintenance costs that arise. KM also clarified that GOMA is funding the additional \$20,000 included in the estimated cost for expanding the functionality of the GOMA Catalog, and there is no anticipated additional cost to the FWRMC if the GOMA Catalog is selected.

Jim Griffin suggested that the Council develop a statement of needs for the FWRMC Catalog, and ask each of the potential collaborators to give a more detailed cost estimate. AC and CK agreed.

KM agreed to look into what would be required, in terms of DEP RFP guidelines, to obtain a cost estimate from the potential collaborators. GS volunteered to assist KM in creating a concise summary of the desired features for the Catalog.

KM suggested that the Workgroup meet again before the next statewide FWRMC meeting in June, with the intention of preparing a recommendation to present to the statewide Council, regarding which project to collaborate with.

**Continued Review of Existing Catalogs and Data Portals:
Southeast Coastal Water Quality Monitoring Metadata Project**

KM and Stephanie Sunderman (SS) presented a brief overview of the Southeast coastal Water Quality Monitoring Metadata Project, which can be accessed at <http://www.gcrc.uga.edu/wqmeta/>.

- Original project developed by GA Coastal Research Council and the National Park Service (NPS)
- South Atlantic Alliance (SAA) will be using this database to develop a coastal and marine spatial planning project
- SAA and GOMA are looking to answer similar questions about monitoring program metadata, and have agreed to share information contained in their respective databases with each other
- Site search tool allows users to search using any combination of the following attributes: program, site name, site type (groundwater, meteorological, nutrient, shellfish contaminants, streamflow, water quality), fixed vs. probabilistic sites, parameters, date range, hydrologic unit (8-digit HUC), or geographic bounding box
- Results can be viewed online in tabular format or downloaded in spreadsheet, KML, or XML format
- Markers visible when viewing results in Google Earth (KML format) vary in shape and color according to the organization responsible for data collection

KM asked how the information is updated. SS indicated that the main project page has a user login link, where data providers may be able to update their information.

Compiling List of Existing Online Catalogs and Data Portals

SS compiled a list of existing online catalogs and data portals that the Workgroup has discussed. The proposed location for this list is on the FWRMC website, as part of the "Monitoring Resources" subpage (http://www.dep.state.fl.us/water/monitoring/council/monitoring_resources.htm). The intent is to acknowledge these existing data sharing efforts and increase awareness and use of these tools by the monitoring community. ***After the meeting had concluded, SS sent the list to the FWRMC Monitoring Catalog Workgroup email distribution list, and asked that members review the information and submit comments and suggested edits or additions to her by close of business on Tuesday April 24, 2012.***