

Florida Water Resources Monitoring Council (FWRMC)
Public Meeting of Monitoring Catalog Workgroup – August 26, 2013

Attendees:

Agency	Name
Florida Department of Environmental Protection (DEP)	Kate Muldoon
DEP	Lisa Van Houdt
DEP	Stephanie Sunderman
DEP	Jay Silvanima
DEP	Andy Woeber
Florida Department of Health (DOH)	Charlie Donahue
St. Johns River Water Management District (SJRWMD)	Aiša Cerić
St. Johns River Water Management District (SJRWMD)	Tom Mirti
Suwannee River Water Management District (SRWMD)	Erich Marzolf
Southwest Florida Water Management District (SWFWMD)	Carol Kraft
South Florida Water Management District (SFWMD)	Brian Turcotte
Miami-Dade County	Susan Markley
University of South FL (USF)	Jim Griffin
USF	Jan Allyn
USF	Keith Bornhorst
USF	Jason Scolaro
FL Lakes Management Society (FLMS) / McGlynn Laboratories Inc.	Sean McGlynn
SWFWMD	Catherine Wolden
DEP	Denise Miller
South Florida Water Management District (SFWMD)	Julianne LaRock

Introduction

Kate Muldoon (KM) welcomed everyone to the Monitoring Catalog Workgroup (MCW) meeting and reviewed the agenda. KM reviewed the purpose of the Catalog of Monitoring Networks, and the Functional Requirements Document. The meeting will include a review of metadata elements which were agreed upon by the workgroup in December 2012 in an effort to increase the alignment with the Watershed Information Network (WIN), to address metadata element additions or modifications requested by the Coastal Monitoring Network Workgroup and to minimize data provider fatigue.

Discussion of Metadata Elements to be Amended

KM explained the color coordination of the Metadata Elements; the fields in yellow/ orange are to be **modified**, the fields in pink are to be **eliminated**, and the fields in green are **proposed to be added**.

METADATA ELEMENT NAME	REQUIRED (Y/N)	DEFINITION	DATA TYPE	DOMAIN LIMITED (Y/N)	DATA SIZE	POPULATED BY	INFORMATION LEVEL
UNIQUE_STATION_ID	Y	Primary key identifier for stations within the Monitoring Catalog database. Automatically generated by Water Atlas staff – likely to be a combination of the ORGANIZATION_NAME and STATION_ID.	VARCHAR 2	N	170	Water Atlas Staff	Station

KM explained that it is proposed to expand the UNIQUE_STATION_ID data size from 150 to 170 to align with WIN. Jan Allyn (JA) inquired if the change in size to be more compatible with WIN also insinuates that the UNIQUE_STATION_ID will be the same for that station in WIN. KM clarified that the UNIQUE_STATION_ID will not necessarily be the same as it is in WIN. **Conclusion: *Expand data size to 170 to align with WIN.***

METADATA ELEMENT NAME	REQUIRED (Y/N)	DEFINITION	DATA TYPE	DOMAI N LIMITE D (Y/N)	DATA SIZE	POPULATED BY	INFORMATIO N LEVEL
ORGANIZATION – NAME	Y	Organization overseeing monitoring project collecting information at the station.	VARCHA R2	Y	150	Data Providers	Project

KM explained that it is proposed to expand ORGANIZATION_NAME data size from 100 to 150 to align with WIN. BT suggested that because UNIQUE_STATION_ID and ORGANIZATION_NAME are both required that ORGANIZATION_NAME should be concatenation of the UNIQUE_STATION_ID.

Conclusion: ***Expand data size to 150 to align with WIN.***

METADATA ELEMENT NAME	REQUIRE D (Y/N)	DEFINITION	DA TA TYP E	DOMAIN LIMITED (Y/N)	DATA SIZE	POPULATE D BY	INFORMAT ION LEVEL
PROJECT_ NAME	Y	Monitoring project collecting information at the station. A station can belong to many projects overseen by the same organization, or other projects overseen by other organizations. A single project can be coordinated by multiple organizations.	VA RC HA R2	N	250	Data Providers	Project

KM explained that many projects in the Catalog are coordinated by multiple organizations, and it is proposed to expand definition to include one project-> multiple organizations. Jason Scolaro (JSc)

confirmed that adding this information is feasible. **Conclusion:** *Expand definition to include one project-> multiple organizations.*

METADATA ELEMENT NAME	REQUIRED (Y/N)	DEFINITION	DATA TYPE	DOMAIN LIMITED (Y/N)	DATA SIZE	POPULATED BY	INFORMATION LEVEL
PROJECT_URL	N	Address (URL) for a web page describing the project.	VARCHAR 2	N	250	Data Providers	Project

KM explained that is PROJECT_URL is proposed to be eliminated because most projects do not have their own unique URL. The Workgroup determined that this element does not make it easier to find data or data quality objectives to warrant retention. **Conclusion:** *PROJECT_URL will be removed.*

METADATA ELEMENT NAME	REQUIRED (Y/N)	DEFINITION	DATA TYPE	DOMAIN LIMITED (Y/N)	DATA SIZE	POPULATED BY	INFORMATION LEVEL
PROJECT_DESCRIPTION	Y	Brief summary of the project, Reason for information collection. Includes data quality objectives (DQOs).	VARCHAR 2	N	4000	Data Providers	Project

KM explained that the PROJECT_ABSTRACT and PROJECT_PURPOSE are required to meet ISO and FDEP requirements. It has been recommended to eliminate the need for two fields by raising them to the level of Catalog metadata. In lieu of these two fields, the PROJECT_DESCRIPTION (brief summary of the project, reason for information collection, and data quality objectives) would be a compendium of both, and would align with WIN. **Conclusion:** *Substitute PROJECT_DESCRIPTION for PROJECT_ABSTRACT and PROJECT_PURPOSE. PROJECT_ABSTRACT and PROJECT_PURPOSE will be raised to the level of catalog metadata.*

METADATA ELEMENT NAME	REQUIRE D (Y/N)	DEFINITIO N	DATA TYPE	DOMAI N LIMITED (Y/N)	DAT A SIZE	POPULATE D BY	INFORMATIO N LEVEL
STATION_NAM E	Y	Full name of the site or station.	VARCHAR 2	N	255	Data Providers	Station

KM explained that it is proposed to expand data size from STATION_NAME 50 to 255 to align with WIN.

Conclusion: *Expand data size to 255 to align with WIN.*

METADATA ELEMENT NAME	REQUIRED (Y/N)	DEFINITION	DATA TYPE	DOMAIN LIMITED (Y/N)	DATA SIZE	POPULATED BY	INFORMATION LEVEL
STATION_ID	Y	Code or identifier used as the station identifier within the data provider's internal database.	VARCHAR2	N	35	Data Providers	Station

KM explained that it is proposed to reduce STATION_NAME data size 50 to 35 characters to align with WIN and WQX. Jay Silvanima (JSi) inquired if the data has been assessed to determine how many STATION_IDS this would affect. JSc confirmed that this data has been assessed and there are STATION_IDS with more than 35 characters; reducing the data size would result in truncating the data and making it less searchable. A proposed strategy would be to keep the data size at 50, but flag data exceeding 35 characters as “non-WIN compliant”. **Conclusion:** *Keep data size at 50, but flag any data exceeding 35 as “non-WIN compliant”.*

METADATA ELEMENT NAME	REQUIRED (Y/N)	DEFINITIO N	DATA TYPE	DOMAIN LIMITED (Y/N)	DATA SIZE	POPULATE D BY	INFORMAT ION LEVEL
STATION_ DESCRIPTI ON	N	Description of the site or station. Information such as the address or parcel number associated with a station may be entered here.	VARCHAR 2	N	1999	Data Providers	Station

KM explained that it is proposed to expand STATION_ DESCRIPTION data size from 250 to 1999 characters to align with WIN. JSc clarified that it would not pose a storage problem; BT suggested rounding to 2000. **Conclusion:** ***Expand data size to 2000 to align with WIN.***

METADATA ELEMENT NAME	REQUIRED (Y/N)	DEFINITIO N	DATA TYPE	DOMAIN LIMITED (Y/N)	DATA SIZE	POPULATE D BY	INFORMAT ION LEVEL
STATION_ URL	N	Address (URL) for a web page describing the station.	VARCHAR 2	N	250	Data Providers	Station

KM explained that the field STATION_URL is proposed to be eliminated because most stations do not have their own unique URL. The workgroup determined that this element does not make it easier to find data or data quality objectives to warrant retention. **Conclusion:** ***STATION_URL will be removed.***

METADATA ELEMENT NAME	REQUIRED (Y/N)	DEFINITION	DAT A TYP E	DOMAI N LIMITE D (Y/N)	DATA SIZE	POPULATE D BY	INFORMAT ION LEVEL
PROXIMIT Y_TO_ SAMPLING _ACTIVITY	Y	How close the LATITUDE and LONGITUDE are to the actual point where sampling activity occurred. Domain: <i>EXACT</i> - Exact sampling location; <i>APPRX</i> - Approximate sampling location; <i>VICIN</i> - Vicinity of sampling location; <i>OFFST</i> - Offset to exact sampling location; <i>START</i> – Beginning vertex of a linear sampling location (e.g. transect); <i>BNDRY</i> – One of a set of points used to describe the boundary of a polygon sampling location <i>CENTR</i> - Center of polygon containing sampling location(s); <i>ADMIN</i> - Administrative center of site or facility containing sampling location; <i>OTHER</i> – Coordinates given represent a scenario not listed; <i>UNKNO</i> – Relationship between the coordinates given and the sampling location is unknown; <i>NOREP</i> – Information is not reported regarding the relationship between the coordinates given and the sampling location.	VAR CH AR2	Y	5	Data Providers	Station

KM explained that it is recommended by WIN to use approximate (APPRX) as the default for the field PROXIMITY_TO_SAMPLING_ACTIVITY. Currently, the proximity field in WIN does not contain the other domains. Susan Markley (SM) explained that this discussion began with the understanding that multiple sample locations were taken within a polygon, and therefore these domains would explain the difference in accuracy. Andy Woeber (AW) explained that in the field, GPS coordinates may be a

location near to the sample, but not exactly where that sample was taken due to access limitations. However, there are definite distinctions between these domains and grouping them together would take away the significance of where the sampler estimated the sampling point to be located. **Conclusion:**
Retain PROXIMITY_TO_SAMPLING_ACTIVITY and all of the domains listed.

METADATA ELEMENT NAME	REQUIRED (Y/N)	DEFINITION	DATA TYPE	DOMAIN LIMITED (Y/N)	DATA SIZE	POPULATED BY	INFORMATION LEVEL
STATION_ TYPE	Y	The type of station that data collection occurs at / in. Domain: Atmosphere Bay Canal Cave Channelized Stream Combined Sewer Constructed Wetland Estuary Facility Lake Land Land Runoff Landfill Mine / Mine Discharge Ocean Pass/Inlet Reservoir River / Stream Riverine Impoundment Spring Storm Sewer Tidal Fresh Tidal Brackish Waste Pit Waste Sewer Well–Non-potable Well (includes monitoring wells) Well–Potable Well Wetland Other Not Applicable	VARC HAR2	Y	25	Data Providers	Station

KM explained that it is proposed by the Coastal Monitoring Network workgroup to expand the domain list of STATION_TYPE to include “Pass/Inlet”. BT suggested that since most stations are currently coded to follow DEP classifications, he would need guidance to reclassify any Ocean domains to Pass/Inlet. KM suggested further research to this list based on previous iterations to determine whether or not Pass/Inlet can be subsumed into the Ocean distinction. The Coastal Monitoring Network explained this Pass/Inlet distinction to reflect a more high energy system than an estuary would be considered. AW inquired whether a Riverine Impoundment is a natural feature or a man-made feature. Stephanie Sunderman (SS) explained that since this list was based on STORET domains, a STORET representative would be the best source to answer AW’s inquiry.

Conclusion: *Retain STATION_TYPE and all domains listed. More research and discussion with Catalog Workgroup and the Coastal Monitoring Network to determine whether or not Pass/ Inlet can be subsumed into the Ocean distinction or should be separate.*

SAMPLING_FREQUENCY	Y	The time interval between sampling events at the station. Domain: <i>Continuous (sampled more frequently than daily)</i> <i>Discrete - Sampled Tidally</i> <i>Discrete - Sampled Daily</i> <i>Discrete - Sampled Weekly</i> <i>Discrete - Sampled Monthly</i> <i>Discrete - Sampled Quarterly</i> <i>Discrete - Sampled Semi-Annually</i> <i>Discrete - Sampled Annually</i> <i>Discrete - Triggered</i> <i>Discrete - Varied</i> <i>Discrete - Other</i>	VARCHAR2	Y	250	Data Providers	Station
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KM explained that it is proposed by Coastal Monitoring Network workgroup to expand the SAMPLING_FREQUENCY domain list to include “Discrete - Sampled Tidally”. SM explained that while a site may be visited monthly, it does not mean that every analyte or parameter is sampled at the same frequency. If a user was to query by frequency, they may get an incorrect impression on the metadata level as the frequency of sampling for a specific analyte at that site. CW explained that SWFWMD has wells with continuous recording sondes, however they are sampled for other parameters three times a year. The only way to make the distinction of the two frequencies would be to enter this well into the system twice. KM adds that the confusion with this domain would also be compounded when multiple agencies sample the same well at varying frequencies and for varying parameters. SM reiterates that, because of the number of wells and varying projects, parameters, and monitoring entities, unless there is a second field distinguishing that parameter with the specific frequency, this domain would be ineffective. JS explained that this data could be represented in a table from where the user could associate the frequency with each parameter as opposed to a drop-down list. However, that would require the data provider to enter the sampling frequency with each parameter which could cause provider fatigue. SM concurs that data provider fatigue would be inevitable in this scenario; or, the user would have to find the frequency and contact the agency for further information on which parameter that frequency is associated with. Carol Kraft (CK) concurs that asking the data providers to include frequencies of each parameter would be taxing and still not entirely accurate. However, including a link to contact information would further facilitate getting the information to the user. JSi suggested that the workgroup consider whether this element should be retained at all. SM Suggested that this element not be retained. SS interjected that before this element is eliminated it should be discussed with Gail Sloane (GS) as it was recommended by her as a request from the Division. **Conclusion: *This item is tabled pending further discussion with Gail Sloane. Update: This element will be retained.***

CONTACT_EMAIL	Y	Email address of contact person affiliated with data source.	VARCHAR2	N	120	Data Providers	Project
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KM explained that it is proposed by WIN to expand the data characters from 100 to 120 characters due to lengthy email addresses. **Conclusion: *CONTACT_EMAIL data will be expanded from 100 to 120 characters.***

ACCESS_	Y	Limitations for obtaining all or part of the data.	VARCHAR2	N	250	Data Providers	Project
CONSTRAINTS							
USE_	Y	Disclaimer or cautionary guidance to facilitate secondary use of the data.	VARCHAR2	N	250	Data Providers	Project
CONSTRAINTS							

KM explained that in order to prevent data provider fatigue, it is proposed that ACCESS_CONSTRAINTS and USE_CONSTRAINTS be elevated to the Catalog metadata and not searchable. CW agreed that this information would be of most use at the Catalog level; however any disclaimer verbiage should be reviewed by the workgroup. **Conclusion: *This information will be raised to the Catalog level and any disclaimer verbiage will be reviewed by the workgroup.***

KEYWORDS	Y	Set of keywords to help in free-text searches. Must include at least one International Standards Organization (ISO) Topic Category. Default value will be set to "Environment (007)." Domain for ISO Categories: <i>Farming (001) - rearing of animals and/or cultivation of plants, irrigation</i> <i>Biota (002) - flora and/or fauna in natural environments, ecology</i> <i>Boundaries (003) - legal land descriptions, political & administrative boundaries</i> <i>ClimateMeteorologyAtmpsphere (004) - processes and phenomena of the atmosphere</i> <i>Economy (005) – economic activity, conditions, and employment, forestry, fisheries</i> <i>Environment (007) – environmental resources, protection, and conservation, impact assessment, monitoring, water quality</i> <i>GeoscientificInformation (008) – information pertaining to the earth sciences, geophysics, geology, hydrogeology</i> <i>Health (009) – health, health services, human ecology, and safety</i> <i>ImageryBaseMapsEarthCover (010) – base maps, land cover, topographic maps, imagery, annotations</i> <i>IntelligenceMilitary (011) – military bases, structures, activities</i> <i>InlandWaters (012) – inland water</i>	VARCHAR2	N	1000	Data Providers	Project
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		features, drainage systems and their characteristics, rivers, lakes, water use plans, dams, currents, floods, water quality, hydrographic charts Location (013) – positional information and services, geodetic networks (continued on next page) Oceans (014) –features and characteristics of salt water bodies PlanningCadastre (015) – information used for appropriate actions for future use of the land Society (016) –characteristics of society and culture, archeology, religion, demographics, crime and justice, recreation Structure (017) – man-made construction Transportation (018) – means and aids for conveying persons and/or goods, roads, nautical charts, railways UtilitiesCommunication (019) – energy, water and waste systems, and communications infrastructure					
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KM explained that the field KEYWORDS is required to meet ISO requirements. It is proposed that the default value be set to “Environment (007) and raised to the level of Catalog metadata unless the workgroup decides other keywords should be considered. **Conclusion: *The default will be set to “Environment (007)” and this information will be raised to the level of the Catalog metadata.***

MATRIX	?	Matrix/material from which the sample is taken Domain: Water Sediment Air Rock Hardbottom biota	VARCHAR2	Y	25	Data Providers	Station
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KM explained that it is proposed by Coastal Monitoring Network Workgroup to include the field MATRIX to metadata elements to specify media sampled. AW inquired about also adding “other” to the list of proposed media to in the case the media sampled is mixed. **Conclusion: *The field MATRIX will be added to the catalog, with the domains Water, Sediment, Air, Rock, Hardbottom, and Other.***

OBJECT_OF_INTEREST	?	Biological object of study at the station location. To be completed only when STATION_TYPE = Bay OR Cave OR Channelized Stream OR Constructed Wetland OR Estuary OR Lake OR Ocean OR Reservoir, OR River / stream OR Riverine Impoundment OR Spring OR Tidal Fresh OR Tidal Brackish OR Pass/Inlet OR Wetland. Domain: Plankton Algae Seagrasses Corals Fish Invertebrates Coastal wetlands (mangroves, salt marshes) Algae Marine reptiles	VARCHAR2	Y	25	Data Providers	Station
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		Marine mammals Aquatic insects					
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KM explained the field OBJECT_OF_INTEREST allows for a description of a sample other than water chemistry. It is being proposed to add OBJECT_OF_INTEREST and a domain list to detail which type of flora or fauna sample was collected (Plankton, Algae, Seagrasses, Corals, Fish, Invertebrates, Coastal wetlands (mangroves, salt marshes), Marine reptiles, Marine mammals, and Aquatic insects). Tom Mirti (TM) inquired whether the OBJECT_OF_INTEREST would be captured in the project description. KM clarified that this may be captured in a project description, but having this field separate would be more easily searchable by the user. JSc contributes that the search field could have options to search “exact match”, “starts with”, or “ends with”. Also, that the data character size would have to be increased as “Coastal wetlands (mangroves, salt marshes)” exceeds the 25 character maximum. TM prepositioned that the OBJECT_OF_INTEREST domains should include more than biotic features. BT explained that this field may only be relevant when MATRIX = Biota. SS suggested that OBJECT_OF_INTEREST could be combined with MATRIX (i.e. MATRIX = seagrasses). BT suggested adding “other” to the list of biota. **Conclusion: *The workgroup recommends that the field OBJECT_OF_INTEREST be removed and this information be embedded in the PROJECT_DESCRIPTION field. Also, Biotic Samples are to be added to the PARAMATERS domain.***

CAPTURED_DEPTH	Y	Conveys whether depth of waterbody at monitoring location has been documented in data. Domain: Yes, No, Not Reported	VARCHAR2	Y	12	Data Providers	Project
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KM explained that it is proposed by the Coastal Monitoring Network workgroup to add the field CAPTURED_DEPTH to metadata list to indicate whether data contain surface water depth. BT iterates that the title CAPTURED_DEPTH is misleading, and should be changed. KM clarified that unlike TOTAL_DEPTH which is the total depth of a potable or non-potable ground water well and is a required field, CAPTURED_DEPTH is a recorded depth while sampling (not a sample depth) which is not required and may not reflect the total depth of a body of water. TM inquired whether this information could be captured in the TOTAL_DEPTH field. **Conclusion: *The workgroup will adapt the TOTAL_DEPTH elements definition to include surface water depths.***

Concluding Remarks

KM reiterated all decisions made by the workgroup during this meeting to ensure agreement. KM thanked the workgroup for their participation, and indicated that there will be an update on both the Catalog effort and WIN at the next statewide FWRMC meeting on October 9th, 2013.