

FWRMC Metadata Element List

- “Straw-man” proposal drafted and distributed to workgroup participants on 11/2/2012
- Workgroup discussed many of those elements at 11/14/2012 & 12/05/2012 meetings.
- Comments received and discussion compiled in the following slides for discussion.

At 11/14/2012 and 12/05/2012 Workgroup meetings, recommendation complete for the following elements:

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.	VARCHAR2	N	150	Water Atlas Staff	Station
ORGANIZATION_NAME	Y	Organization overseeing monitoring project collecting information at the station.	VARCHAR2	Y	100	Data Providers	Project
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.	VARCHAR2	N	250	Data Providers	Project
PROJECT_URL	N	Address (URL) for a web page describing the project.	VARCHAR2	N	250	Data Providers	Project
PROJECT_DESIGN_METHODODOLOGY	N	Strategy to meet the goals and objectives of the project. Domain: <i>Deterministic; Probabilistic; Other; Unknown; Not Reported</i>	VARCHAR2	Y	25	Data Providers	Project
PROJECT_ABSTRACT	Y	Brief summary of the project.	VARCHAR2	N	4000	Data Providers	Project
PROJECT_PURPOSE	Y	Reason for information collection. Includes data quality objectives (DQOs).	VARCHAR2	N	4000	Data Providers	Project
PROJECT_DATA_QUALITY_OBJECTIVES	Y	Conveys whether documented data quality objectives (DQOs) are available. Domain: <i>Yes; No; Not Reported</i>	VARCHAR2	Y	12	Data Providers	Project
STATION_NAME	Y	Full name of the site or station.	VARCHAR2	N	50	Data Providers	Station
STATION_ID	Y	Code or identifier used as the station identifier within the data provider's internal database.	VARCHAR2	N	50	Data Providers	Station
STATION_DESCRIPTION	N	Description of the site or station. Information such as the address or parcel number associated with a station may be entered here.	VARCHAR2	N	250	Data Providers	Station

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METADATA ELEMENT NAME	REQUIRED (Y/N)	DEFINITION	DATA TYPE	DOMAIN LIMITED (Y/N)	DATA SIZE	POPULATED BY	INFORMATION LEVEL
STATION_URL	N	Address (URL) for a web page describing the station.	VARCHAR2	N	250	Data Providers	Station
LATITUDE	Y	The decimal degree latitude.	FLOAT	N	14,8	Data Providers	Station
LONGITUDE	Y	The decimal degree longitude.	FLOAT	N	14,8	Data Providers	Station
PROXIMITY_TO_SAMPLING_ACTIVITY	Y	How close the LATITUDE and LONGITUDE are to the actual point where sampling activity occurred. Domain: <i>EXACT - Exact sampling location;</i> <i>APPRX - Approximate sampling location;</i> <i>VICIN - Vicinity of sampling location;</i> <i>OFFST - Offset to exact sampling location;</i> <i>START – Beginning vertex of a linear sampling location (e.g. transect);</i> <i>BNDRY – One of a set of points used to describe the boundary of a polygon sampling location</i> <i>CENTR - Center of polygon containing sampling location(s);</i> <i>ADMIN - Administrative center of site or facility containing sampling location;</i> <i>OTHER – Coordinates given represent a scenario not listed;</i> <i>UNKNO – Relationship between the coordinates given and the sampling location is unknown;</i> <i>NOREP – Information is not reported regarding the relationship between the coordinates given and the sampling location.</i>	VARCHAR2	Y	5	Data Providers	Station
XY_DATUM	Y	The horizontal reference for measuring locations on the Earth's surface. Domain: <i>CAC – Cape Canaveral,</i> <i>HARN – High Accuracy Reference Network,</i> <i>HPGN – High Precision GIS Network / High Precision Geodetic Reference,</i> <i>NAD27 – North American Datum of 1927,</i> <i>NAD83 – North American Datum of 1983,</i> <i>WGS84 – World Geodetic Survey of 1984,</i>	VARCHAR2	Y	10	Data Providers	Station

At 11/14/2012 and 12/05/2012 Workgroup meetings, recommendation complete for the following elements:

METADATA ELEMENT NAME	REQUIRED (Y/N)	DEFINITION	DATA TYPE	DOMAIN LIMITED (Y/N)	DATA SIZE	POPULATED BY	INFORMATION LEVEL
LOCATION_COLLECTION_METHOD	Y	The method or mechanism used to derive the location measurements. Domain: ADDM – Address Matching, AGPS – Autonomous GPS, CALC – Calculated by GIS Software, CSUR – Cadastral Survey, DGPS – Differentially Corrected GPS (USGS coordinate datum code “D”), DMAP – Digital Map Interpolation (USGS coordinate datum code “N”), DPHO – Digital Aerial Photography With Ground Control, GGPS – Geodetic Quality GPS, LORN – LORAN-C Navigational Device (USGS coordinate datum code “L”), MMAP – Manual Map Interpolation (USGS coordinate datum code “M”), MPHO – Manual Aerial Photography With Ground Control, OTHR – A Method Not Listed, PARC – Parcel Matching SATI – Satellite Imagery With Ground Control, T- Transit, theodolite, or other surveying method, TOWN – Township / Range Matching WGPS – GPS with Wide-Area Augmentation Service Correction, UNKN – Unknown Method, ZIP2 – ZIP Code + 2 Segment Centroid, ZIP4 – ZIP Code + 4 Segment Centroid, ZIPC – Zip Code Centroid	VARCHAR2	Y	4	Data Providers	Station
COUNTY	Y	The name of the FL county station is located in. Domain will include the names of all 67 counties and “Not Applicable”.	VARCHAR2	Y	50	Data Providers	Station
DRAINAGE_BASIN	Y	The name of the 8-digit USGS HUC station is located in. Domain will include all 8-digit USGS HUCs in FL and “Not Applicable”.	VARCHAR2	Y	14	Water Atlas Staff	Station
WATER_RESOURCE_NAME	Y	The name of the waterbody that the station is located in. For groundwater wells, this should include the aquifer tapped. (Note: “Unknown” is permitted if aquifer tapped is not known.)	VARCHAR2	N	100	Data Providers	Station

At 11/14/2012 and 12/05/2012 Workgroup meetings, recommendation complete for the following elements:

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; Reservoir; River / Stream; Riverine Impoundment; Spring; Storm Sewer; Tidal Fresh; Tidal Brackish; Waste Pit; Waste Sewer; Well – Non-potable Well ; Well – Potable Well; Wetland; Other; Not Applicable	VARCHAR2	Y	25	Data Providers	Station
START_DATE	Y	Date monitoring activity started at the station.	DATE	N		Data Providers	Station
END_DATE	N	Date the monitoring activity ended or is anticipated to end at the station (enter “active” for stations with ongoing monitoring with no anticipated end date).		N		Data Providers	Station
SAMPLING_ FREQUENCY	Y	The time interval between sampling events at the station. Domain: Continuous (sampled more frequently than daily) Discrete - Sampled Daily Discrete - Sampled Weekly Discrete - Sampled Monthly Discrete - Sampled Quarterly Discrete - Sampled Semi-Annually Discrete - Sampled Annually Discrete – Triggered Discrete – Varied Discrete - Other	VARCHAR2	Y	250	Data Providers	Station

New Straw-Man Proposal Requested for PARAMETERS

METADATA ELEMENT NAME	REQUIRED (Y/N)	DEFINITION	DATA TYPE	DOMAIN LIMITED (Y/N)	DATA SIZE	POPULATED BY	INFORMATION LEVEL
PARAMETERS	Y	Parameters / variables / information collected at the station, including STORET/WQX names when possible.		?		Data Providers (Water Atlas Staff will assist with formatting)	Station

Comments:

- Further clarification needed for definition of “parameters / variables / information collected at the station”?
- What is the target level of detail?
 1. Groups of analytes (e.g. nutrients)
 2. Individual analytes (e.g. dissolved oxygen)
 3. Individual analytes with sample fraction (e.g. phosphorus, dissolved)

As of the 12/05/2012 Workgroup meeting, no recommendations have been completed for the following elements. These elements have not yet been discussed at workgroup meetings.

METADATA ELEMENT NAME	REQUIRED (Y/N)	DEFINITION	DATA TYPE	DOMAIN LIMITED (Y/N)	DATA SIZE	POPULATED BY	INFORMATION LEVEL
DATA_URL	N	Address (URL) for a web page or FTP site for obtaining data from the site or station	VARCHAR2	N	250	Data Providers	Station

Comments:

- Increase data size.....proposed change to 500
- Required = Y

METADATA ELEMENT NAME	REQUIRED (Y/N)	DEFINITION	DATA TYPE	DOMAIN LIMITED (Y/N)	DATA SIZE	POPULATED BY	INFORMATION LEVEL
DATA_SOURCE_NAME	Y	Name of data source or providers of data to the Monitoring Catalog, whether within or outside the organization conducting monitoring at the station.	VARCHAR2	Y	100	Data Providers	Project

Comments:

- Increase data size.....proposed change to 250
- Does this field need to be required, especially if the data source is the same as the information listed in such columns as “Organization_Name”?
- Could this be generated by the Water Atlas folks?

METADATA ELEMENT NAME	REQUIRED (Y/N)	DEFINITION	DATA TYPE	DOMAIN LIMITED (Y/N)	DATA SIZE	POPULATED BY	INFORMATION LEVEL
DATA_SOURCE_DESCRIPTION	N	Description of data source.	VARCHAR2	N	250	Data Providers	Project

Comments:

- Eliminate this field – this seems very similar to information contained in PROJECT_ABSTRACT
- Increase data size.....proposed change to 500
- Required = Y

METADATA ELEMENT NAME	REQUIRED (Y/N)	DEFINITION	DATA TYPE	DOMAIN LIMITED (Y/N)	DATA SIZE	POPULATED BY	INFORMATION LEVEL
PUBLICATION_ DATE	Y	Date station was first added to the Monitoring Catalog.	DATE	N		Water Atlas Staff	Station
DATE_LAST_ UPDATED	Y	Date station information was last updated in Monitoring Catalog.	DATE	N		Water Atlas Staff	Station

Comments:

- Is this something that could be automatically generated by the Water Atlas folks?

METADATA ELEMENT NAME	REQUIRED (Y/N)	DEFINITION	DATA TYPE	DOMAIN LIMITED (Y/N)	DATA SIZE	POPULATED BY	INFORMATION LEVEL
DATA_ TRANSFER_ METHOD	Y	Method of transferring information to the Monitoring Catalog	VARCHAR2	N	250	Water Atlas Staff	Station

Comments:

- Increase data size.....proposed change to 4000
- Low priority
- Is it necessary for this to be a required field?
- Could this be generated by the Water Atlas folks?

METADATA ELEMENT NAME	REQUIRED (Y/N)	DEFINITION	DATA TYPE	DOMAIN LIMITED (Y/N)	DATA SIZE	POPULATED BY	INFORMATION LEVEL
CONTACT_ NAME	Y	Name of contact person affiliated with data source.	VARCHAR2	N	100	Data Providers	Project
CONTACT_ ADDRESS	Y	Mailing address of contact person affiliated with data source (including city, state, zip code).	VARCHAR2	N	250	Data Providers	Project
CONTACT_ PHONE	Y	Phone number of contact person affiliated with data source.	VARCHAR2	N	25	Data Providers	Project
CONTACT_ EMAIL	Y	Email address of contact person affiliated with data source.	VARCHAR2	N	100	Data Providers	Project

Comments:

- Increase data sizes: CONTACT_NAME (250), CONTACT_ADDRESS (500), CONTACT_EMAIL (100)
- Low priority

METADATA ELEMENT NAME	REQUIRED (Y/N)	DEFINITION	DATA TYPE	DOMAIN LIMITED (Y/N)	DATA SIZE	POPULATED BY	INFORMATION LEVEL
ACCESS_ CONSTRAINTS	Y	Limitations for obtaining all or part of the data.	VARCHAR2	N	250	Data Providers	Project
USE_ CONSTRAINTS	Y	Disclaimer or Cautionary guidance to facilitate secondary use of the data.	VARCHAR2	N	250	Data Providers	Project

Comments:

- Increase data size.....proposed change to 4000 (for both)
- Low priority
- Is it necessary for this to be a required field?
(answer) Both fields are required per DEP / FGDC guidelines.
- Clarification needed for ACCESS_CONSTRAINTS: Obtaining all or part of the data from where?

METADATA ELEMENT NAME	REQUIRED (Y/N)	DEFINITION	DATA TYPE	DOMAIN LIMITED (Y/N)	DATA SIZE	POPULATED BY	INFORMATION LEVEL
KEYWORDS	Y	Set of keywords to help in free-text searches. Must include at least one International Standards Organization (ISO) Topic Category. 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 features, drainage systems and their characteristics, rivers, lakes, water use plans, dams, currents, floods, water quality, hydrographic charts</i> <i>Location (013) – positional information and services, geodetic networks</i> <i>Oceans (014) –features and characteristics of salt water bodies</i> <i>PlanningCadastre (015) – information used for appropriate actions for future use of the land</i> <i>Society (016) –characteristics of society and culture, archeology, religion, demographics, crime and justice, recreation</i> <i>Structure (017) – man-made construction</i> <i>Transportation (018) – means and aids for conveying persons and/or goods, roads, nautical charts, railways</i> <i>UtilitiesCommunication (019) – energy, water and waste systems, and communications infrastructure</i>	VARCHAR2	N	250	Data Providers	Project

Comments:

- Increase data size.....proposed change to 4000
- Low priority
- This is a nice feature but just adds one more layer for data suppliers to populate. Is it necessary for this to be a required field?
- Set default value to “Environment (007)”.

Additional Elements?

- For this to be more fully utilized by groundwater efforts then it may be beneficial to include more columns to capture groundwater attributes.
- Suggestions include:
 - Total depth of well
 - Casing depth of well
 - Case Diameter of well
 - Hydrogeology of open interval
 - Geology of open interval
 - Aquifer Tapped (*currently included in WATER_RESOURCE_NAME*)

Review –

Desired List of Metadata Elements

- UNIQUE_STATION_ID
- ORGANIZATION_NAME
- PROJECT_NAME
- PROJECT_URL
- PROJECT_DESIGN_METHODODOLOGY
- PROJECT_ABSTRACT
- PROJECT_PURPOSE
- PROJECT_DATA_QUALITY_OBJECTIVES
- STATION_NAME
- STATION_ID
- STATION_DESCRIPTION
- STATION_URL
- LATITUDE
- LONGITUDE
- PROXIMITY_TO_SAMPLING_ACTIVITY
- XY_DATUM
- LOCATION_COLLECTION_METHOD
- COUNTY
- DRAINAGE_BASIN
- WATERBODY_NAME
- STATION_TYPE
- START_DATE
- END_DATE
- SAMPLING_FREQUENCY
- PARAMETERS
- DATA_URL
- DATA_SOURCE_NAME
- PUBLICATION_DATE
- DATE_LAST_UPDATED
- DATA_TRANSFER_METHOD
- CONTACT_NAME
- CONTACT_ADDRESS
- CONTACT_PHONE
- CONTACT_EMAIL
- ACCESS_CONSTRAINTS
- USE_CONSTRAINTS
- KEYWORDS
- TOTAL_DEPTH (GW only)
- CASING_DEPTH (GW only)