

The Comprehensive List of Draft Metadata Elements

**Integrated Data Management
(IDM) Project**

September 10, 2008

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1. About this Document

This document conveys the metadata elements that were produced as a result of the Integrated Data Management (IDM) Metadata Workshops and a final IDM Reconciliation Workshop (where all the metadata elements from the previous workshops were reviewed under the IDM metadata criteria). The IDM Metadata Workshops consisted of a series of workshops aimed at covering a core set of assessment metadata for various scientific disciplines. This document will be used by individuals involved with vetting the final set of IDM metadata elements.

1.1. Purpose and Scope

The purpose of this document is to facilitate the creation of an IDM metadata standard. This document provides metadata elements and their rudimentary attributes. It does not, however, provide a data dictionary, data exchange standard, or system design.

1.2. The IDM Metadata Workshops (Metadata Standards) Overview

The goal of the IDM Metadata Workshops is:

To identify a core set of metadata elements (the minimum amount of metadata elements) that describes a project's dataset(s) and allows others to make judgments about whether or not the dataset(s) would be useful for their purposes.

The strategy to accomplish this work uses the concept of scientific disciplines to identify metadata for types of data that must be assessed differently. For example, the scientific discipline of Aerial Remote Sensing uses instrumentation and measurements that are fundamentally different from those used in the scientific discipline of Laboratory Analytical. Therefore, the metadata for these different disciplines would reflect basic differences in what and how measurements are done, and how one assesses the suitability of that type of data for a potential user's purposes. However, in addition to the discipline-specific metadata, it is expected that all disciplines will share certain common metadata elements.

The discipline groups that were identified for the Integrated Data Management (IDM) Project effort were: Aerial Remote Sensing, Oceans Observing, Laboratory Analytical, Geospatial, Groundwater, Biological Measurements, Field Sampling, and a set of metadata elements common to all scientific efforts referred to as the "Common" or "Tier One" metadata (the Who/What/When/Where/Why aspects). Discipline team leads were selected based on their knowledge of those involved in their respective scientific disciplines. They selected the appropriate members with the goal of representing equally both data users and data generators, and to have representation from the main groups from within their disciplines. Workshop members are those generally knowledgeable about metadata and/or assessment of data in their fields of expertise.

1.3. Metadata Tiers Concept Description

For the purposes of this project, metadata are the descriptors of datasets that are generated by a given project. A metadata element can be thought of as a single piece of metadata, or a single dataset descriptor. Scientific-discipline metadata are dataset descriptors germane to one or more specific scientific disciplines. Common metadata are relevant to all scientific disciplines (for example, the “Who, What, When, Where, and Why” aspects) and represent a high-level set of information (although some Tier One questions and/or metadata are covered in this document).

1.4. About the Metadata Tables

The tables below describe the metadata elements derived during the Integrated Data Management (IDM) Project Metadata Workshops that were reconciled during the IDM Metadata Reconciliation Workshop. The *MID* (Metadata Identification) column gives each metadata element a unique identifier; the *Name* column provides a term for each metadata element; the *Definition/Description* column describes the metadata element and/or its usage; the *MDS Used* (Metadata Standard Used) column lists the standard(s) the metadata element can be found (for example, IDM metadata elements could be borrowed from the Ecological Metadata Language [EML] standard or the Federal Geospatial Data Committee [FGDC] standard); the *Default Value* column provides the system default value for each metadata element; the *Value List* column, if applicable, provides the universal finite set for each metadata element; the *Examples(s)* column, if applicable, denotes possible values for each metadata element. For the Groundwater, Biological Measurements, and Field Sampling metadata tables, there is an additional column named *IWA* (Impaired Waters Applicable) which indicates whether or not the associated metadata element is relevant for the Impaired Waters Rule. Note that the term “system” is used in this context to refer to a future web-based system that will store the metadata and provide a user-friendly application for user searches and various other functions.

Note that during the metadata workshops it was conveyed that the metadata attributes ‘Value List’ and ‘Example’ were mutually exclusive since identifying the value list would cover all of the possible examples (and examples would be given only in the case where there was not value list for a metadata element); in most cases, the tables below reflects this concept. Any text in the tables below in brackets ([]) is explanatory text (for example, text in brackets that are part of a value list may be instructions and is not meant to be conveyed as actual value in the list). Text that follows “Rule:” are considered design considerations (or business rules) that a system would follow.

The *MID* numbers in the tables below will not, in many cases, be listed serially as a result of the IDM Metadata Reconciliation Workshop; for tracking purposes, MID numbers are not recycled. During the IDM Metadata Reconciliation Workshop many of the metadata elements and their corresponding MID numbers (that were created during the previous IDM Metadata Workshops) were removed from the IDM Metadata Standard (that is, they were either deleted or marked as possible candidates for a future data exchange). This occurred as a result of those metadata elements not meeting the criteria for the IDM Metadata Standard: *The core set of metadata elements (the minimum amount of metadata elements) that describes a project’s dataset(s) and allows others to make judgments about whether or not the dataset would be useful for their purposes.*

2. Common Metadata

This section describes the IDM metadata elements that were created during the Common Metadata Workshop and reconciled during the IDM Reconciliation Metadata Workshop.

Common Metadata						
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued
CMN-MD1	Project Name	Name of the endeavor that creates the data set(s).	FGDC 8.4 (Title)	<ul style="list-style-type: none"> • No Default Value • Value is Required 		<ul style="list-style-type: none"> • Comprehensive Water Management • Tampa Bay Habitat Suitability Modeling
CMN-MD2	Project Themes	Subject(s) covered by a project data set(s).	FGDC 1.6.1	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Geospatial • Biology • Sea Grass • Lake Okeechobee • Seasonal • Storm Event • Regulatory • Benchmark • [Etc.] 	
CMN-MD3	Purpose Text	Narrative describing why study was conducted.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 		Determine the acceptable level of phosphate in a South Florida marsh.

Common Metadata						
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued
CMN-MD4	Purpose Category	Reason for which data was collected.	NWQMC (National Water Quality Monitoring Council)	<ul style="list-style-type: none"> • No Default Value • Value is Required 	NWQMC value list and others from workshop. For example: <ul style="list-style-type: none"> • Storm Event • Regulatory • Benchmark 	
CMN-MD6	Responsible Organization's Name	Conveys who performed the collection or sampling effort.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • FWC • NOAA • FDEP • Private • FDEP-CAMA • FDEP-Ambient • FDEP-WAS • NOAA-FSU • Photo Science • Other Rule 1: allow multiple selections from the list. Rule 2: If <i>Other</i> is selected then text should be accepted.	

Common Metadata						
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued
CMN-MD7	Point(s) of Contact	Individual(s) or position in the organization/agency/etc. that will be able to provide direction.		<ul style="list-style-type: none"> No Default Value Value is Required 	<p>Rule 1: allow multiple entries.</p> <p>Rule 2: allow email and contact information to be entered for each individual.</p>	<p>John Doe 3900 Commonwealth Blvd., MS #235, Douglas Building, Tallahassee Florida 32399 (850) 245-2094 John.Doe@dep.state.fl.us</p>
CMN-MD11	Project Start Date	Start date/time of project.	FGDC 9.3.1	<ul style="list-style-type: none"> No Default Value Value is Required 		<p>MM/DD/YYYY hh:mm EST (date, time, time zone) Note: Time and Time Zone are optional</p>
CMN-MD12	Project End Date	End date/time of project.	FGDC 9.3.3	<ul style="list-style-type: none"> No Default Value Value is Required 		<ul style="list-style-type: none"> MM/DD/YYYY hh:mm EST (date, time, time zone) On-going <p>Note: Time and Time Zone are optional</p>
CMN-MD13	Collection Method Category	The method (e.g., direct or indirect) by which the data was collected.	FGDC 2.5	<ul style="list-style-type: none"> No Default Value Value is Required 	<ul style="list-style-type: none"> Observation Measurement Remotely Sensed Direct Sample Other 	

Common Metadata						
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued
CMN-MD14	Parameter Classes	The specific classes (Nutrients, Toxins, etc.) of parameters measured, studied, etc. on a project, observation, monitoring effort, etc.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<p>Value list will be hierarchal. For example:</p> <ul style="list-style-type: none"> • Chemical <ul style="list-style-type: none"> ○ Metals ○ Nutrients • Physical <ul style="list-style-type: none"> ○ Temperature ○ [Etc.] <p>Rule: allow multiple selections from the list.</p>	
CMN-MD15	Parameter Names	The specific names (e.g., Dissolved Oxygen, Nitrogen, Phosphorous, etc.) of parameter classes (e.g., Nutrients) measured, studied, etc. on a project, observation, monitoring effort, etc.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<p>[Value list based on selection(s) for <i>Parameter Classes</i>]</p> <p>Rule: allow multiple selections from the list.</p>	

Common Metadata						
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued
CMN-MD16	Study Design Methodology	Strategy to meet the goals and objectives of the study.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Deterministic • Probabilistic 	
CMN-MD17	Limitation	Cautionary guidance to facilitate secondary use of the data.	FGDC 1.8	<ul style="list-style-type: none"> • No Default Value • Value is Required 		<ul style="list-style-type: none"> • [Free Text] • Not for navigational use • Only use for archaeological purposes • Not for legal description
CMN-MD18	Access Restrictions	Limitations for obtaining all or part of the data.	FGDC 1.7	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Restricted • Not Restricted • Conditionally Available 	

Common Metadata						
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued
CMN-MD20	Place	Text description of the location.	FGDC 1.6.2	<ul style="list-style-type: none"> • No Default Value • Value is Required 		<ul style="list-style-type: none"> • [Free Text] • North side of Guthrie bridge at highway 70 • USF • Billy's well • Lake Lindsay • [Etc.]
CMN-MD21	Geographic/Political Region	General description of the area where the data was collected.	Various	<ul style="list-style-type: none"> • No Default Value • Value is Required 		<ul style="list-style-type: none"> • West Florida Shelf • Tampa Bay • Lake Okeechobee • Pinellas County • SWFWMD
CMN-MD22	Collection Begin Date/Time	Date/Time sample, data, etc. was collected.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 		MM/DD/YYYY hh:mm EST (date, time, time zone) Note: Time and Time Zone are optional
CMN-MD23	Collection End Date/Time	Date/Time sample, data, etc. was collected.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 		MM/DD/YYYY hh:mm EST (date, time, time zone) Note: Time and Time Zone are optional

Common Metadata						
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued
CMN-MD24	Data Quality Objectives	Conveys if documented data quality objectives are available.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Yes • No • Unknown 	
CMN-MD25	Source Medium	Environment medium that is the source of the sample/measurement or observation.	NWQMC	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Air • Biological • Sediment • Soil • Water • Drilling Core • Pore • [Etc.] 	

Common Metadata						
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued
CMN-MD26	Ancillary Information	Lists any ancillary information available.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Laboratory Analytical <ul style="list-style-type: none"> ○ Chain of Custody ○ [Etc.] • Aerial Remote Sensing <ul style="list-style-type: none"> ○ Flight Plan ○ [Etc.] • Geospatial <ul style="list-style-type: none"> ○ Attribute Accuracy Report ○ Logistical Consistency Report ○ Completeness Report ○ Horizontal Positional Accuracy Report ○ Vertical Positional Accuracy Report ○ [Etc.] • Biological <ul style="list-style-type: none"> ○ Taxonomic Identification References ○ [Etc.] 	<p>[Value List continued:]</p> <ul style="list-style-type: none"> • Oceans Observing <ul style="list-style-type: none"> ○ Sensor Calibration ○ [Etc.] • Groundwater <ul style="list-style-type: none"> ○ Geologic Log ○ Driller’s Log ○ Lithologic Log ○ Geophysical Log ○ Well Completion Report ○ Sampler’s log ○ Video log ○ [Etc.] • Other <p>Rule 1: Allow Hierarchical selection of Scientific discipline followed by ancillary info type.</p> <p>Rule 2: if “Other” is selected then text should be accepted.</p>

Common Metadata						
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued
CMN-MD27	Geometry Type	The geometry type of the data.	FGDC 3.3.1.1 or 3.3.2.2	<ul style="list-style-type: none"> • No Default Value • Value is Required 		<ul style="list-style-type: none"> • Raster • Grid • Vector-line • Vector-poly • Vector-point
CMN-MD28	Bounding Box	Minimum and maximum coordinates of the data expressed as latitude and longitude to the nearest 1/10 th of a minute (600ft).	FGDC 1.5.1.1 and 1.5.1.2 and 1.5.1.3 AND 1.5.1.4	<ul style="list-style-type: none"> • No Default Value • Value is Required 		Min Lat, Min Lon/Max Lat, Max Lon)

3. Satellite or Aerial Remote Sensing Metadata

This section describes the IDM metadata elements that were created during the Aerial Remote Sensing Metadata Workshop and reconciled during the IDM Reconciliation Metadata Workshop.

Aerial Remote Sensing Metadata						
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued
AER-MD3	Mosaiced	Conveys if image(s) have been mosaiced.	None	No Default Value	<ul style="list-style-type: none"> • Yes • No • Unknown 	
AER-MD4	Color Balanced	Conveys if there are matching color histograms from one image to another.	None	No Default Value	<ul style="list-style-type: none"> • Yes • No 	
AER-MD6	Geo Referenced	Flag indicating whether or not the image was georeferenced.	None	No Default Value	<ul style="list-style-type: none"> • Yes • No • Not Applicable 	
AER-MD10	Image File Format	Digital format of data provided.	FGDC?	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • TIFF Uncompressed • JPEG • SID 	
AER-MD15	Unprocessed Image Data Available	The raw data capture format.	None	No Default Value	<ul style="list-style-type: none"> • Film • Diapositive • Level 0 	

Aerial Remote Sensing Metadata						
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued
AER-MD16	Bit Depth	Bit depth of data.	None	No Default Value	<ul style="list-style-type: none"> • 8 • 12 • 16 • 32 • 48 • 64 • Other <p>Rule: if <i>Other</i> is selected then text should be accepted.</p>	
AER-MD17	Spatial Resolution	Spatial resolution of the data. The minimum size object that can be seen.	FGDC	No Default Value		1 Meter
AER-MD24	Remote Sensor	Type of satellite or airborne sensor.	None	No Default Value	<ul style="list-style-type: none"> • ADS40. • [List of sensors to be determined] • Unknown • Other <p>Rule: if <i>Other</i> is selected then text should be accepted.</p>	

Aerial Remote Sensing Metadata						
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued
AER-MD25	Spectral Range	Spectral wave lengths of the image.	FGDC	No Default Value	<ul style="list-style-type: none"> • RGB • CIR • RADAR • Hyper spectral • Black and white • Multispectral • [Etc.] • Not Available • Other <p>Rule: if <i>Other</i> is selected then text should be accepted.</p>	
AER-MD26	Stereo Acquisition	Conveys if there is sufficient overlap of images to allow the collection of vertical features.	None (amount of end-lap and side-lap is in FGDC)	No Default Value	<ul style="list-style-type: none"> • Yes • No 	

Aerial Remote Sensing Metadata						
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued
AER-MD31	Environmental Constraints	Atmospheric impacts on data acquisition.	None	No Default Value		<ul style="list-style-type: none"> • Sun Glint (< 25%) • Long Shadows • Clouds (< 10%) • Smoke (0%) • Shadow (<10%Z) • Haze (0%) • Turbidity
AER-MD32	Imagery Tidal Datum	Describes the tidal stage when the image was collected.	None	No Default Value	<ul style="list-style-type: none"> • Mean Low Water • Mean High Water • Not Applicable 	

4. Oceans Observing Metadata

This section describes the IDM metadata elements that were created during the Oceans Observing Metadata Workshop and reconciled during the IDM Reconciliation Metadata Workshop.

Oceans Observing Metadata						
MID	Name	Definition/Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued
OCN-MD4	Sensor Calibration	Value to determine if the sensor was calibrated.	None	No Default Value	<ul style="list-style-type: none"> • Yes • No • Unknown 	
OCN-MD11	Field Sampling Method	Technique used to collect samples in the field and/or conducting measurements.	Various	<ul style="list-style-type: none"> • No Default Value • Value is Required 		<ul style="list-style-type: none"> • XBT • CTD • SWMP • SOP • FS-1000 • FT 2400
OCN-MD15	File Format	Identifies the file format of the data.	None	No Default Value		<ul style="list-style-type: none"> • CSV • TXT • DBF • KM2 • XLS
OCN-MD18	Data State	Conveys the distinction between raw and processed data.	Various	No Default Value	<ul style="list-style-type: none"> • Raw • Processed • Unknown 	

Oceans Observing Metadata						
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued
OCN-MD27	Platform Type	Conveys the type of structure(s) from which the sample was taken.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Mobile • Fixed 	

5. Laboratory Analytical Metadata

This section describes the IDM metadata elements that were created during the Laboratory Analytical Metadata Workshop and reconciled during the IDM Reconciliation Metadata Workshop.

Laboratory Analytical Metadata						
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued
LAB-MD17	Data Validation Method	The protocol used to validate the data.	None	No Default Value		EPA Level 1
LAB-MD22	PQL Reported	Conveys if the dataset contains PQLs.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Yes • No 	
LAB-MD23	MDL Reported	Conveys if the dataset contains MDLs.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Yes • No 	
LAB-MD25	Lab Result Qualifier	Indicates whether or not lab qualifiers are reported in the dataset.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Yes • No • Unknown • Not Applicable 	

Laboratory Analytical Metadata						
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued
LAB-MD35	Field Sampling Method	Technique used to collect samples in the field and/or conducting measurements.	Various	<ul style="list-style-type: none"> • No Default Value • Value is Required 		<ul style="list-style-type: none"> • XBT • CTD • SWMP • SOP • FS-1000 • FT 2400
LAB-MD41	Entity Accreditation	A list of entities that provided accreditation to the entity that did the analysis.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 		FDOH

6. Geospatial Metadata

This section describes the IDM metadata elements that were created during the Geospatial Metadata Workshop and reconciled during the IDM Reconciliation Metadata Workshop.

Geospatial Metadata						
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued
GEO-MD10	Feature Attribute Definition	Descriptive information of the feature attribute.	FGDC 5.1.2.2	<ul style="list-style-type: none"> No Default Value Value is Required 		Brownfield Type
GEO-MD12	Update Schedule	Frequency that the data is revised.	FGDC 1.4.2	<ul style="list-style-type: none"> No Default Value Value is Required 		<ul style="list-style-type: none"> Never Yearly 5-years Monthly As planned/funded [Etc.]
GEO-MD13	Use Constraints	Restrictions and legal prerequisites for using the dataset after access is granted.	FGDC 1.8	<ul style="list-style-type: none"> No Default Value Value is Required 		<ul style="list-style-type: none"> [Free Text] None For planning purposes only

Geospatial Metadata						
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued
GEO-MD20	Progress Status	The progress state of the dataset.	FGDC 1.4.1	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Complete • Ongoing • Planned 	
GEO-MD21	Source Scale Denominator	The denominator of the representative fraction on a map (for example, on a 1:24,000 scale map, the source scale denominator is 24,000).	FGDC 2.5.1.2	No Default Value		<ul style="list-style-type: none"> • 24,000 • 100,000

7. Groundwater Metadata

This section describes the IDM metadata elements that were created during the Groundwater Metadata Workshop and reconciled during the IDM Reconciliation Metadata Workshop.

Groundwater Metadata							
MID	Name	Definition/Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued	IWA
GRD-MD7	Well Total Depth Range	The range of total well depth in the project dataset(s) below the land surface.	None	<ul style="list-style-type: none"> No Default Value Value is Required 		<ul style="list-style-type: none"> 10m.–20m. <p>During design the details of representing the ranges from shallowest to deepest should be worked out.</p>	Yes
GRD-MD20	Measuring Point Validity Date Range	Date Range of a valid measuring point (<i>Established Measuring Point</i>).	None	<ul style="list-style-type: none"> No Default Value Requires a value if the <i>Water Level Collection Flag</i> equals “Yes.” 		<ul style="list-style-type: none"> [This is a date range] 06/01/1973 to 07/16/1991 07/17/2008 to Current <p>Rule 1: format date as MM/DD/YYYY</p> <p>Rule 2: accept “Current” as a valid end date.</p>	No

Groundwater Metadata							
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued	IWA
GRD-MD24	Lithology of Production Zone	Lithology of the screened/open hole interval.	USGS	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Limestone • Dolostone • Sand • Gravel • Shell • Silt • Clay • Peat • Other • Unknown <p>Rule 1: if “Other” is selected then text should be accepted.</p> <p>Rule 2: allow multiple selections from the list.</p>		Yes

Groundwater Metadata							
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued	IWA
GRD-MD25	Lithostratigraphy	Stratigraphy of the open interval.	FGS	No Default Value	See section called <i>Lithostratigraphic Names</i> in the appendix at the end of this document. Rule: allow multiple selections from the list.		No

Groundwater Metadata							
MID	Name	Definition/Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued	IWA
GRD-MD26	Hydrostratigraphy	Hydrostratigraphy of the open interval.	FGS NFWFMD	No Default Value	<ul style="list-style-type: none"> • Surficial Aquifer System (undifferentiated) • Sand-and-Gravel Aquifer • “Surficial Zone (S&G)” • “Low Permeability Zone (S&G)” • “Main Producing Zone (S&G)” • Biscayne aquifer • Intermediate aquifer system or intermediate confining unit • Floridan aquifer System (undiff) 	<p>[Value List continued:]</p> <ul style="list-style-type: none"> • Upper Floridan aquifer • Middle Floridan confining unit • Lower Floridan aquifer • Undifferentiated aquifer systems and confining units • “Claiborne aquifer” • “Clayton aquifer” • Undifferentiated aquifer systems and confining units <p>Rule: allow multiple selections from the list.</p>	Yes
GRD-MD28	Aquifer Confinement	Describes the aquifer confinement of the open interval of the well.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Confined • Unconfined • Semi-confined • Unknown 		Yes

Groundwater Metadata							
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued	IWA
GRD-MD30	Sampling Equipment	Type of equipment, device, or instrument used to collect the sample.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Biology <ul style="list-style-type: none"> ○ Van Dorn ○ Seine Net ○ Peristaltic Pump ○ Ekman ○ Dip Net ○ Bailer ○ Dredge 0.5m² ○ Petite Ponar ○ Quadrate 0.25m² ○ Two Inch Cylindrical Core ○ Hester-Dendy m² ○ 500µm-zooplanktion net ○ 25m Otter Trawl ○ [Etc.] 	[Value List Continued:] <ul style="list-style-type: none"> • Groundwater <ul style="list-style-type: none"> ○ Bailer ○ Peristaltic Pump ○ Submersible Pump ○ Turbine Pump ○ Pump ○ Other ○ Unknown • Centrifugal • [Add FL STORET values for sampling equipment] Rule 1: if <i>Other</i> is selected then text should be accepted. Rule 2: allow multiple selections from the list.	Yes

Groundwater Metadata							
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued	IWA
GRD-MD34	Well Use	Describes the historical and current well purpose.	GWSI (USGS) or NFWWMD	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Withdrawal • Test well • Monitor/ observation Well • Drainage • AC Return Well • Oil/Gas • Waste disposal / injection • Standby • Emergency supply Geothermal • Seismic • Heat reservoir 	<p>[Value List continued:]</p> <ul style="list-style-type: none"> • Mine • Observation • Recharge • Repressurize • Test hole • Unused site • Withdrawal/ Return • Destroyed • Unknown <p>Rule: allow multiple selections from the list.</p>	Yes

Groundwater Metadata							
MID	Name	Definition/Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued	IWA
GRD-MD35	Water Use	Describes the use of the water.	GWSI (USGS) or NFWFMD	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Public Supply • Irrigation Agricultural • Irrigation Industrial • Aquaculture • Aquifer Recharge • Aesthetic • Commercial • Diversion/ Impoundment • Domestic • Desalination • Dewatering • Essential Service • Freeze Protection • Golf Course Irrigation • Industrial • Landscape Irrigation • Livestock • Medicinal • Mining • Navigation • Nursery Irrigation 	<p>[Value List continued:]</p> <ul style="list-style-type: none"> • Limited Use Public Supply • Other Outside Use • Public Supply • Power Production • Recreational Irrigation • Soil Flooding • Sanitation • Water-based Recreation • Domestic/ Multiple Family • Fire • Heat Pump Recharge • Heat Pump Supply • Institutional • Restoration • Well • Unknown <p>Rule: allow multiple selections from the list.</p>	Yes

Groundwater Metadata							
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued	IWA
GRD-MD38	Spring Magnitude	Weighted median value of all discharge measurements for the period of record.	SP52	No Default Value	<ul style="list-style-type: none"> • Unknown • 1st Magnitude • 2nd Magnitude • 3rd Magnitude • 4th Magnitude • 5th Magnitude • 6th Magnitude • 7th Magnitude • 8th Magnitude 		Yes
GRD-MD39	Historical Spring Magnitude Source	Source of the information.	SP52	No Default Value	<ul style="list-style-type: none"> • FGS Bulletin 66 • FGS Bulletin 31 • Unknown 		Yes
GRD-MD40	Spring Magnitude Date	Source Publication Date.	SP52	No Default Value		<ul style="list-style-type: none"> • Unknown • [Date] • 07/17/2008 Rule: format date as MM/DD/YYYY	Yes

Groundwater Metadata							
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued	IWA
GRD-MD41	Historical Spring Magnitude	A special spring classification category based on the median volume of flow from a spring per unit time, based on discharge data obtained prior to the year 2001 (FSNC, 2005).	<ul style="list-style-type: none"> • SP52 • FGS Bulletin 66 	No Default Value	<ul style="list-style-type: none"> • Unknown • 1st Magnitude • 2nd Magnitude • 3rd Magnitude • 4th Magnitude • 5th Magnitude • 6th Magnitude • 7th Magnitude • 8th Magnitude 		Yes

8. Biological Measurements Metadata

This section describes the IDM metadata elements that were created during the Biological Measurements Metadata Workshop and reconciled during the IDM Reconciliation Metadata Workshop.

Biological Measurements Metadata							
MID	Name	Definition/Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued	IWA
BIO-MD1	Biological Discipline	The specialized field(s) of biological study.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Behavioral • Physiological • Ecological <p>[Value list may be completed by checking accreditation listing]</p> <p>Rule: allow multiple selections from the list.</p>		No
BIO-MD2	Biological Assemblage	The biological assemblage sampled.	Integrated Taxonomic Information System (ITIS)	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Terrestrial Plants • Aquatic Plants • Other [Text] • [List from IT IS] <p>Rule: allow multiple selections from the list.</p>		???

Biological Measurements Metadata							
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Val ue List Continued	IWA
BIO-MD3	Life Cycle Stage	The phase in the taxonomic life cycle.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required if <i>Biological Assemblage</i> is populated 	<ul style="list-style-type: none"> • [Based on the Biological Assemblage] • Not Applicable <p>Rule: a selection list will be provided based on the value for <i>Biological Assemblage</i>.</p>		Yes (for Hg)
BIO-MD8	Assessed Ecological Hierarchy	Ecological level that is being assessed.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Population • Community • Ecosystem • Biome • Region • Landscape • Other 		Yes
BIO-MD9	Biological Hierarchy	Biological scale level sampled.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Community • Population • Individual • System • Cellular • Genetic • Clone <p>Rule: allow multiple selections from the list.</p>		No

Biological Measurements Metadata							
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Val ue List Continued	IWA
BIO-MD10	Habitat Type	Describes the habitat(s) where the data was collected.	EML	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Freshwater • Marine • Estuarine • Wetland • Upland • Pelagic • Mangrove • Corals • Soft Bottom • Intertidal • Muck • Sand <p>Rule: allow multiple selections from the list.</p>		Yes
BIO-MD13	Sample Type	Describes the nature of the sample collection.	None	<ul style="list-style-type: none"> • “Discrete” • Value is Required 	<ul style="list-style-type: none"> • Discrete • Series • Composite 		Yes

9. Field Sampling Metadata

This section describes the IDM metadata elements that were created during the Field Sampling Metadata Workshop and reconciled during the IDM Reconciliation Metadata Workshop.

Field Sampling Metadata							
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued	IWA
FLD-MD1	Sampling Equipment	Type of equipment, device, or instrument used to collect the sample.	EML	No Default Value	<ul style="list-style-type: none"> • Biology <ul style="list-style-type: none"> ○ Van Dorn ○ Seine Net ○ Peristaltic Pump ○ Ekman ○ Dip Net ○ Bailer ○ Dredge 0.5m² ○ Petite Ponar ○ Quadrate 0.25m² ○ Two Inch Cylindrical Core ○ Hester-Dendy m² ○ 500µm-zooplanktion net ○ 25m Otter Trawl ○ [Etc.] 	<p>[Value List Continued:]</p> <ul style="list-style-type: none"> • Groundwater <ul style="list-style-type: none"> ○ Bailer ○ Peristaltic Pump ○ Submersible Pump ○ Turbine Pump ○ Pump ○ Other ○ Unknown • Centrifugal • [Add FL STORET values for sampling equipment] <p>Rule 1: if <i>Other</i> is selected then text should be accepted.</p> <p>Rule 2: allow multiple selections from the list.</p>	Yes

Field Sampling Metadata							
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued	IWA
FLD-MD2	Measurement Equipment	Device(s) or instrument(s) used to make the field observation or measurement.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Biological <ul style="list-style-type: none"> ○ [Then expand the selection] ○ [List to be determined] • Physical <ul style="list-style-type: none"> ○ [Then expand the selection] ○ [List to be determined] • Chemical <ul style="list-style-type: none"> ○ [Then expand the selection] ○ [List to be determined] 	<p>[Value List continued:]</p> <p>Rule 1: First select by Biological, and/or Physical, and/or Chemical; then allow selection for specific type of measurement equipment.</p> <p>Rule 2: allow multiple selections from the list.</p> <p>Note 1: The list above should represent the technology used, and not solely the brand name.</p> <p>Note 2: it is recommended that all programs submit an equipment list.</p>	Yes

Field Sampling Metadata							
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued	IWA
FLD-MD5	Field Analytical Method	Documented reference method or SOP used for field analysis or measurement.	EML	<ul style="list-style-type: none"> • No Default Value • Value is Required 		<ul style="list-style-type: none"> • SOP FT 1000 • HACH Method • SM4500 HB • ASTM • DEP SOP • XBT • CTD • SWMP • FS-1000 • FT 2400 • Internal • Methods uploaded from agency standards (includes version and date) • Other <p>Rule: if <i>Other</i> is selected then text should be accepted.</p>	Yes

Field Sampling Metadata							
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued	IWA
FLD-MD6	Field Preservation Method	Technique of field sample preservation (for the dataset).	EML	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Acid • Chilling • Drying • Freezing • Ice • [Etc.] • None • Not Applicable <p>Rule: allow multiple selections from the list.</p>		Yes
FLD-MD11	Source Matrix	Specific Type of <i>Field Source Medium</i> .	GGWIS	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Surface Water • Groundwater • Spring Water • Freshwater • Ocean Water • Marine • Estuarine • Storm Water • Drinking Water • Wastewater • Tissue • [Etc.] 		Yes
FLD-MD17	Sample Type	Describes the nature of the sample collection.	None	<ul style="list-style-type: none"> • “Discrete” • Value is Required 	<ul style="list-style-type: none"> • Discrete • Series • Composite 		Yes

Field Sampling Metadata							
MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued	IWA
FLD-MD20	Field Result Qualifiers	Indicates whether or not field qualifiers were used.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Yes • No • Unknown • Not Applicable 		Yes

10. Alphabetized List of IDM Metadata Elements

This section present an alphabetical sort of all of the IDM metadata created for all of the scientific disciplines and the common metadata.

Alphabetized List of IDM Metadata Elements								
Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued	IWA
1	CMN- MD18	Access Restrictions	Limitations for obtaining all or part of the data.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Restricted • Not Restricted • Conditionally Available 		

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued	IWA
2	CMN- MD26	Ancillary Information	Lists any ancillary information available.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Laboratory Analytical <ul style="list-style-type: none"> ○ Chain of Custody ○ [Etc.] • Aerial Remote Sensing <ul style="list-style-type: none"> ○ Flight Plan ○ [Etc.] • Geospatial <ul style="list-style-type: none"> ○ Attribute Accuracy Report ○ Logistical Consistency Report ○ Completeness Report ○ Horizontal Positional Accuracy Report ○ Vertical Positional Accuracy Report ○ [Etc.] • Biological <ul style="list-style-type: none"> ○ Taxonomic Identification References ○ [Etc.] 	<p>[Value List continued:]</p> <ul style="list-style-type: none"> • Oceans Observing <ul style="list-style-type: none"> ○ Sensor Calibration ○ [Etc.] • Groundwater <ul style="list-style-type: none"> ○ Geologic Log ○ Driller’s Log ○ Lithologic Log ○ Geophysical Log ○ Well Completion Report ○ Sampler’s log ○ Video log ○ [Etc.] • Other <p>Rule 1: Allow Hierarchical selection of Scientific discipline followed by ancillary info type.</p> <p>Rule 2: if “Other” is selected then text should be accepted.</p>	

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)/Value List Continued	IWA
3	GRD- MD28	Aquifer Confinement	Describes the aquifer confinement of the open interval of the well.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Confined • Unconfined • Semi-confined • Unknown 		Yes
4	BIO- MD8	Assessed Ecological Hierarchy	Ecological level that is being assessed.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Population • Community • Ecosystem • Biome • Region • Landscape Other 		Yes

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
5	BIO- MD2	Biological Assemblage	The biological assemblage sampled.	Integrated Taxonomic Information System (ITIS)	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Terrestrial Plants • Aquatic Plants • Other [Text] • [List from IT IS] <p>Rule: allow multiple selections from the list.</p>		???
6	BIO- MD1	Biological Discipline	The specialized field(s) of biological study.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Behavioral • Physiological • Ecological <p>[Value list may be completed by checking accreditation listing]</p> <p>Rule: allow multiple selections from the list.</p>		No

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
7	BIO- MD9	Biological Hierarchy	Biological scale level sampled.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Community • Population • Individual • System • Cellular • Genetic • Clone <p>Rule: allow multiple selections from the list.</p>		No
8	AER- MD16	Bit Depth	Bit depth of data.	None	No Default Value	<ul style="list-style-type: none"> • 8 • 12 • 16 • 32 • 48 • 64 • Other <p>Rule: if <i>Other</i> is selected then text should be accepted.</p>		
9	CMN- MD28	Bounding Box	Minimum and maximum coordinates of the data.	FGDC	<ul style="list-style-type: none"> • No Default Value • Value is Required 		X,Y: X,Y (Min, Max)	

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
10	CMN- MD22	Collection Begin Date/Time	Date/Time sample, data, etc. was collected.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 		MM/DD/YYYY hh:mm EST (date, time, time zone) Note: Time and Time Zone are optional	
11	CMN- MD23	Collection End Date/Time	Date/Time sample, data, etc. was collected.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 		MM/DD/YYYY hh:mm EST (date, time, time zone) Note: Time and Time Zone are optional	
12	CMN- MD13	Collection Method Category	The method (e.g., direct or indirect) by which the data were collected.	FGDC 2.5	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Observation • Measurement • Remotely Sensed • Direct Sample • Other 		
13	AER- MD4	Color Balanced	Conveys if there are matching color histograms from one image to another.	None	No Default Value	<ul style="list-style-type: none"> • Yes • No 		

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
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Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
14	CMN-MD24	Data Quality Objectives	Conveys if documented data quality objectives are available.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Yes • No • Unknown 		
15	OCN-MD18	Data State	Conveys the distinction between raw and processed data.	Various	No Default Value	<ul style="list-style-type: none"> • Raw • Processed • Unknown 		
16	LAB-MD17	Data Validation Method	The protocol used to validate the data.	None	No Default Value		EPA Level 1	

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
17	LAB-MD41	Entity Accreditation	A list of entities that provided accreditation to the entity that did the analysis.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 		FDOH	

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
18	AER- MD31	Environmental Constraints	Atmospheric impacts on data acquisition.	None	No Default Value		<ul style="list-style-type: none"> • Sun Glint (< 25%) • Long Shadows • Clouds (< 10%) • Smoke (0%) • Shadow (<10%Z • Haze (0%) • Turbidity 	

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
19	GEO- MD10	Feature Attribute Definition	Descriptive information of the feature attribute.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 		Brownfield Type	

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
20	FLD- MD5	Field Analytical Method	Documented reference method or SOP used for field analysis or measurement.	EML	<ul style="list-style-type: none"> • No Default Value • Value is Required 		<ul style="list-style-type: none"> • SOP FT 1000 • HACH Method • SM4500 HB • ASTM • DEP SOP • XBT • CTD • SWMP • FS-1000 • FT 2400 • Internal • Methods uploaded from agency standards (includes version and date) • Other <p>Rule: if <i>Other</i> is selected then text should be accepted.</p>	Yes
21	OCN- MD11	Field Method	The procedure used to collect the samples.	Various	<ul style="list-style-type: none"> • No Default Value • Value is Required 		<ul style="list-style-type: none"> • XBT • CTD • SWMP • SOP 	

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
22	FLD- MD6	Field Preservation Method	Technique of field sample preservation.	EML	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Acid • Chilling • Drying • Freezing • Ice • [Etc.] • None • Not Applicable 		Yes
23	FLD- MD20	Field Result Qualifiers	Indicates whether or not field qualifiers were used.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Yes • No • Unknown • Not Applicable 		Yes
24	LAB- MD35	Field Sampling Method	Technique used to collect samples in the field and/or conducting measurements.	Various	<ul style="list-style-type: none"> • No Default Value • Value is Required 		<ul style="list-style-type: none"> • FS-1000 • FT 2400 	
25	OCN- MD15	File Format	Identifies the file format of the data.	None	No Default Value		<ul style="list-style-type: none"> • CSV • TXT • DBF • KM2 • XLS 	

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
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Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
26	AER-MD6	Geo Referenced	Flag indicating whether or not the image was georeferenced.	None	No Default Value	<ul style="list-style-type: none"> • Yes • No • Not Applicable 		
27	CMN-MD21	Geographic Region	General description of the area where the data were collected.	Various	<ul style="list-style-type: none"> • No Default Value • Value is Required 		<ul style="list-style-type: none"> • West Florida Shelf • Tampa Bay • Lake Okeechobee 	
28	CMN-MD27	Geometry Type	The geometry type of the data.	Various	<ul style="list-style-type: none"> • No Default Value • Value is Required 		<ul style="list-style-type: none"> • Raster • Vector-line • Vector-poly • Vector-point 	

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
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Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
29	BIO- MD10	Habitat Type	Describes the habitat(s) where the data were collected.	EML	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Freshwater • Marine • Estuarine • Wetland • Upland • Pelagic • Mangrove • Corals • Soft Bottom • Intertidal • Muck • Sand <p>Rule: allow multiple selections from the list.</p>		Yes
30	GRD- MD41	Historical Spring Magnitude	A special spring classification category based on the median volume of flow from a spring per unit time, based on discharge data obtained prior to the year 2001 (FSNC, 2005).	<ul style="list-style-type: none"> • SP52 • FGS Bulletin 66 	No Default Value	<ul style="list-style-type: none"> • Unknown • 1st Magnitude • 2nd Magnitude • 3rd Magnitude • 4th Magnitude • 5th Magnitude • 6th Magnitude • 7th Magnitude • 8th Magnitude 		Yes

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
31	GRD- MD39	Historical Spring Magnitude Source	Source of the information.	SP52	No Default Value	<ul style="list-style-type: none"> • FGS Bulletin 66 • FGS Bulletin 31 • Unknown 		Yes
32	GRD- MD26	Hydrostratigraphy	Hydrostratigraphy of the open interval.	FGS NFWFMD	No Default Value	<ul style="list-style-type: none"> • Surficial Aquifer System (undifferentiated) • Sand-and-Gravel Aquifer • “Surficial Zone (S&G)” • “Low Permeability Zone (S&G)” • “Main Producing Zone (S&G)” • Biscayne aquifer • Intermediate aquifer system or intermediate confining unit • Floridan aquifer System (undiff) 	[Value List continued:] <ul style="list-style-type: none"> • Upper Floridan aquifer • Middle Floridan confining unit • Lower Floridan aquifer • Undifferentiated aquifer systems and confining units • “Claiborne aquifer” • “Clayton aquifer” • Undifferentiated aquifer systems and confining units Rule: allow multiple selections from the list.	Yes

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
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Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
33	AER- MD10	Image File Format	Digital format of data provided.	FGDC?	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • TIFF • TIFF Uncompressed • JPEG • SID 		
34	AER- MD32	Imagery Tidal Datum	Describes the tidal stage when the image was collected.	None	No Default Value	<ul style="list-style-type: none"> • Mean Low Water • Mean High Water • Not Applicable 		

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
35	LAB- MD25	Lab Result Qualifier	Indicates whether or not lab qualifiers are reported in the dataset.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Yes • No • Unknown • Not Applicable 		
36	BIO- MD3	Life Cycle Stage	The phase in the taxonomic life cycle.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required if <i>Biological Assemblage</i> is populated 	<ul style="list-style-type: none"> • [Based on the Biological Assemblage] • Not Applicable <p>Rule: a selection list will be provided based on the value for <i>Biological Assemblage</i>.</p>		Yes (for Hg)

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
37	CMN- MD17	Limitation	Cautionary guidance to facilitate secondary use of the data.	FGDC 1.8	<ul style="list-style-type: none"> • No Default Value • Value is Required 		<ul style="list-style-type: none"> • [Free Text] • Not for navigational use • Only use for archaeological purposes • Not for legal description 	
38	GRD- MD24	Lithology of Production Zone	Lithology of the screened/open hole interval.	USGS	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Limestone • Dolostone • Sand • Gravel • Shell • Silt • Clay • Peat • Other • Unknown <p>Rule 1: if “Other” is selected then text should be accepted.</p> <p>Rule 2: allow multiple selections from the list.</p>		Yes

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
39	GRD- MD25	Lithostratigraphy	Stratigraphy of the open interval.	FGS	No Default Value	See section called <i>Lithostratigraphic Names</i> in the appendix at the end of this document. Rule: allow multiple selections from the list.		No

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
40	LAB- MD23	MDL Reported	Conveys if the dataset contains MDLs.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Yes • No 		

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
41	FLD- MD2	Measurement Equipment	Device(s) or instrument(s) used to make the field observation or measurement.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Biological <ul style="list-style-type: none"> ○ [Then expand the selection] ○ [List to be determined] • Physical <ul style="list-style-type: none"> ○ [Then expand the selection] ○ [List to be determined] • Chemical <ul style="list-style-type: none"> ○ [Then expand the selection] ○ [List to be determined] 	<p>[Value List continued:]</p> <p>Rule 1: First select by Biological, and/or Physical, and/or Chemical; then allow selection for specific type of measurement equipment.</p> <p>Rule 2: allow multiple selections from the list.</p> <p>Note 1: The list above should represent the technology used, and not solely the brand name.</p> <p>Note 2: it is recommended that all programs submit an equipment list.</p>	Yes

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
42	GRD- MD20	Measuring Point Validity Date Range	Date Range of a valid measuring point (<i>Established Measuring Point</i>).	None	<ul style="list-style-type: none"> • No Default Value • Requires a value if the <i>Water Level Collection Flag</i> equals “Yes.” 		<ul style="list-style-type: none"> • [This is a date range] • 06/01/1973 to 07/16/1991 • 07/17/2008 to Current Rule 1: format date as MM/DD/YYYY Rule 2: accept “Current” as a valid end date.	No
43	AER- MD3	Mosaiced	Conveys if image(s) have been mosaiced.	None	No Default Value	<ul style="list-style-type: none"> • Yes • No • Unknown 		

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
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Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
44	CMN- MD14	Parameter Classes	The specific classes (Nutrients, Toxins, etc.) of parameters measured, studied, etc. on a project, observation, monitoring effort, etc.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	Value list will be hierarchal. For example: <ul style="list-style-type: none"> • Chemical <ul style="list-style-type: none"> ○ Metals ○ Nutrients • Physical <ul style="list-style-type: none"> ○ Temperature ○ [Etc.] Rule: allow multiple selections from the list.		
45	CMN- MD15	Parameter Names	The specific names (e.g., Dissolved Oxygen, Nitrogen, Phosphorous, etc.) of parameter classes (e.g., Nutrients) measured, studied, etc. on a project, observation, monitoring effort, etc.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	[Value list based on selection(s) for <i>Parameter Classes</i>] Rule: allow multiple selections from the list.		

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
46	CMN- MD20	Place	Text description of the location.	FGDC 1.6.2	<ul style="list-style-type: none"> • No Default Value • Value is Required 		<ul style="list-style-type: none"> • [Free Text] • North side of Guthrie bridge at highway 70 • USF • Billy's well • Lake Lindsay • [Etc.] 	
47	OCN- MD27	Platform Type	Conveys the type of structure(s) from which the sample was taken.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Mobile • Fixed 		
48	CMN- MD7	Point(s) of Contact	Individual(s) in the organization/agency/etc. that will be able to provide direction.		<ul style="list-style-type: none"> • No Default Value • Value is Required 	<p>Rule 1: allow multiple entries from the list.</p> <p>Rule 2: allow email and contact information to be entered for each individual.</p>	<p>John Doe 3900 Commonwealth Blvd., MS #235, Douglas Building, Tallahassee Florida 32399 (850) 245-2094 John.Doe@ dep.state.fl.us</p>	

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
49	LAB-MD22	PQL Reported	Conveys if the dataset contains PQLs.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Yes • No 		
50	LAB-MD15	Preparation Method	Method used to prepare the sample for analysis.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 		<ul style="list-style-type: none"> • EPA • None 	
51	GEO-MD20	Progress Status	The progress state of the dataset.	FGDC 1.4.1	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Complete • In work • Planned 		
52	CMN-MD12	Project End Date	End date/time of project.	FGDC 9.3.3	<ul style="list-style-type: none"> • No Default Value • Value is Required 		<ul style="list-style-type: none"> • MM/DD/YYYY hh:mm EST (date, time, time zone) • On-going <p>Note: Time and Time Zone are optional</p>	

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
53	CMN-MD1	Project Name	Name of the endeavor that creates the data set(s).	FGDC 8.4 (Title)	<ul style="list-style-type: none"> • No Default Value • Value is Required 		<ul style="list-style-type: none"> • Comprehensive Water Management • Tampa Bay Habitat Suitability Modeling 	
54	CMN-MD11	Project Start Date	Start date/time of project.	FGDC 9.3.1	<ul style="list-style-type: none"> • No Default Value • Value is Required 		MM/DD/YYYY hh:mm EST (date, time, time zone) Note: Time and Time Zone are optional	
55	CMN-MD2	Project Themes	Subject(s) covered by a project data set(s).	FGDC 1.6.1	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Geospatial • Biology • Sea Grass • Lake Okeechobee • Seasonal • Storm Event • Regulatory • Benchmark • [Etc.] 		

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
56	CMN- MD4	Purpose Category	Reason for which data were collected.	NWQMC (National Water Quality Monitoring Council)	<ul style="list-style-type: none"> • No Default Value • Value is Required 	NWQMC value list and others from workshop. For example: <ul style="list-style-type: none"> • Storm Event • Regulatory • Benchmark 		
57	CMN- MD3	Purpose Text	Narrative of why the study was performed.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 		Determine the acceptable level in South Florida marsh.	

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
58	GEO- MD21	Reference Scale	The dimensionless ratio of the data production environment map distance units (x) to the real world distance units (y), expressed as x:y.	None	No Default Value		<ul style="list-style-type: none"> • 1:24,000 • 1:100,000 	

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
59	AER- MD24	Remote Sensor	Type of satellite or airborne sensor.	None	No Default Value	<ul style="list-style-type: none"> • ADS40. • [List of sensors to be determined] • Unknown • Other <p>Rule: if <i>Other</i> is selected then text should be accepted.</p>		
60	CMN- MD6	Responsible Organization Name	Conveys who performed the collection or sampling effort.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • FWC • NOAA • FDEP • Private • FDEP-CAMA • FDEP-Ambient • FDEP-WAS • NOAA-FSU • Photo Science • Other <p>Rule 1: allow multiple selections from the list.</p> <p>Rule 2: If <i>Other</i> is selected then text should be accepted.</p>		

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
61	BIO- MD13	Sample Type	Describes the nature of the sample collection.	None	<ul style="list-style-type: none"> • “Discrete” • Value is Required 	<ul style="list-style-type: none"> • Discrete • Series • Composite 		Yes
62	FLD- MD17	Sample Type	Describes the nature of the sample collection.	None	<ul style="list-style-type: none"> • “Discrete” • Value is Required 	<ul style="list-style-type: none"> • Discrete • Series • Composite 		Yes

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
63	GRD- MD30	Sampling Equipment	Type of equipment, device, or instrument used to collect the sample.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Biology <ul style="list-style-type: none"> ○ Van Dorn ○ Seine Net ○ Peristaltic Pump ○ Ekman ○ Dip Net ○ Bailer ○ Dredge 0.5m² ○ Petite Ponar ○ Quadrate 0.25m² ○ Two Inch Cylindrical Core ○ Hester-Dendy m² ○ 500µm-zooplanktion net ○ 25m Otter Trawl ○ [Etc.] 	<p>[Value List Continued:]</p> <ul style="list-style-type: none"> • Groundwater <ul style="list-style-type: none"> ○ Bailer ○ Peristaltic Pump ○ Submersible Pump ○ Turbine Pump ○ Pump ○ Other ○ Unknown • Centrifugal • [Add FL STORET values for sampling equipment] <p>Rule 1: if <i>Other</i> is selected then text should be accepted.</p> <p>Rule 2: allow multiple selections from the list.</p>	Yes

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
64	FLD- MD1	Sampling Equipment	Type of equipment, device, or instrument used to collect the sample.	EML	No Default Value	<ul style="list-style-type: none"> • Biology <ul style="list-style-type: none"> ○ Van Dorn ○ Seine Net ○ Peristaltic Pump ○ Ekman ○ Dip Net ○ Bailer ○ Dredge 0.5m² ○ Petite Ponar ○ Quadrate 0.25m² ○ Two Inch Cylindrical Core ○ Hester-Dendy m² ○ 500µm-zooplanktion net ○ 25m Otter Trawl ○ [Etc.] 	[Value List Continued:] <ul style="list-style-type: none"> • Groundwater <ul style="list-style-type: none"> ○ Bailer ○ Peristaltic Pump ○ Submersible Pump ○ Turbine Pump ○ Pump ○ Other ○ Unknown • Centrifugal • [Add FL STORET values for sampling equipment] Rule 1: if <i>Other</i> is selected then text should be accepted. Rule 2: allow multiple selections from the list.	Yes
65	OCN- MD4	Sensor Calibration	Value to determine if the sensor was calibrated.	None	No Default Value	<ul style="list-style-type: none"> • Yes • No • Unknown 		

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
66	FLD-MD11	Source Matrix	Specific Type of <i>Field Source Medium</i> .	GGWIS	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Surface Water • Groundwater • Spring Water • Freshwater • Ocean Water • Marine • Estuarine • Storm Water • Drinking Water • Wastewater • Tissue • [Etc.] 		Yes
67	CMN-MD25	Source Medium	Environment medium that is the source of the sample/measurement or observation.	NWQMC	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Air • Biological • Sediment • Soil • Water • Drilling Core • Pore • [Etc.] 		
68	AER-MD17	Spatial Resolution	Spatial resolution of the data. The minimum size object that can be seen.	FGDC	No Default Value		1 Meter	

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
69	AER- MD25	Spectral Range	Spectral wave lengths of the image.	FGDC	No Default Value	<ul style="list-style-type: none"> • RGB • CIR • RADAR • Hyper spectral • Black and white • Multispectral • [Etc.] • Not Available • Other <p>Rule: if <i>Other</i> is selected then text should be accepted.</p>		
70	GRD- MD38	Spring Magnitude	Weighted median value of all discharge measurements for the period of record.	SP52	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Unknown • 1st Magnitude • 2nd Magnitude • 3rd Magnitude • 4th Magnitude • 5th Magnitude • 6th Magnitude • 7th Magnitude • 8th Magnitude 		Yes

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
71	GRD- MD40	Spring Magnitude Date	Source Publication Date.	SP52	No Default Value		<ul style="list-style-type: none"> • Unknown • [Date] • 07/17/2008 Rule: format date as MM/DD/YYYY	Yes
72	AER- MD26	Stereo Acquisition	Sufficient overlap of images to allow the collection of vertical features.	None (amount of end-lap and side-lap is in FGDC)	No Default Value	<ul style="list-style-type: none"> • Yes • No 		
73	CMN- MD16	Study Design Methodology	Conveys if there is sufficient overlap of images to allow the collection of vertical features.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Deterministic • Probabilistic 		

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
74	AER- MD15	Unprocessed Image Data Available	The raw data capture format.	None	No Default Value	<ul style="list-style-type: none"> • Film • Diapositive • Level 0 		

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
75	GEO- MD12	Update Schedule	Frequency that the data are revised.	FGDC	<ul style="list-style-type: none"> • No Default Value • Value is Required 		<ul style="list-style-type: none"> • None • Yearly • 5-years • Monthly • As planned/funded • [Etc.] 	
76	GEO- MD13	Use Constraints	Restrictions and legal prerequisites for using the dataset after access is granted.	FGDC (1.8)	<ul style="list-style-type: none"> • No Default Value • Value is Required 		<ul style="list-style-type: none"> • [Free Text] • None • For planning purposes only 	

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
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Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
77	GRD- MD35	Water Use	Describes the use of the water.	GWSI (USGS) or NFWFMD	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Public Supply • Irrigation Agricultural • Irrigation Industrial • Aquaculture • Aquifer Recharge • Aesthetic • Commercial • Diversion/ Impoundment • Domestic • Desalination • Dewatering • Essential Service • Freeze Protection • Golf Course Irrigation • Industrial • Landscape Irrigation • Livestock • Medicinal • Mining • Navigation • Nursery Irrigation 	<p>[Value List continued:]</p> <ul style="list-style-type: none"> • Limited Use Public Supply • Other Outside Use • Public Supply • Power Production • Recreational Irrigation • Soil Flooding • Sanitation • Water-based Recreation • Domestic/ Multiple Family • Fire • Heat Pump Recharge • Heat Pump Supply • Institutional • Restoration • Well • Unknown <p>Rule: allow multiple selections from the list.</p>	Yes

Alphabetized List of IDM Metadata Elements

Line	MID	Name	Definition/ Description	MDS Used	Default Value	Value List	Example(s)	IWA
78	GRD- MD7	Well Total Depth Range	The range of total well depth in the project dataset(s) below the land surface.	None	<ul style="list-style-type: none"> • No Default Value • Value is Required 		<ul style="list-style-type: none"> • 10m.–20m. During design the details of representing the ranges from shallowest to deepest should be worked out.	Yes
79	GRD- MD34	Well Use	Describes the historical and current well purpose.	GWSI (USGS) or NFWFMD	<ul style="list-style-type: none"> • No Default Value • Value is Required 	<ul style="list-style-type: none"> • Withdrawal • Test well • Monitor/ observation Well • Drainage • AC Return Well • Oil/Gas • Waste disposal / injection • Standby • Emergency supply Geothermal • Seismic • Heat reservoir 	[Value List continued:] <ul style="list-style-type: none"> • Mine • Observation • Recharge • Repressurize • Test hole • Unused site • Withdrawal/ Return • Destroyed • Unknown Rule: allow multiple selections from the list.	Yes

11. Glossary of Terms

The purpose of this glossary is to facilitate communication between the IDM Metadata Workshop participants and the IDM Project Team. The terms below (modified by the IDM Team during the metadata workshop process) were originally created by the Florida Water Resources Monitoring Council, and subject matter experts from various scientific disciplines. The table below has two headings—*Term*, and *Description*—where *Term* represents the name or phrase of the word(s) used during the Metadata Workshop (and this document), and *Description* conveys the definition of the term.

Term	Description
Analyte	The substance being measured or undergoing analysis.
Collection	Physically removing a portion of the medium.
Core Metadata	The minimum amount of metadata elements required to answer the basic set of data-suitability questions.
Data	Discrete observations and measurements (e.g., Brackish, 12.4, etc.).
Data (a dictionary definition)	The raw material from which information is constructed via processing or interpretation.
Data Record	A collection of data focused on a single sample or event (e.g., a single record in a database table).
Dataset	Any organized collection of data pertaining to a particular project; projects may have one or more datasets.
Datum	A specific item of data (e.g., a single populated field within a record of a data table).
DEP	The Florida Department of Environmental Protection
Discipline (or Scientific Discipline)	In this context, a scientific arena (e.g., Groundwater, Biological Measurements, Field Sampling, etc.) that is expected to produce/use data that is assessed differently from other data.
EML	Ecological Metadata Language
EPA	United States Environmental Protection Agency
FLASTORET	Florida's STORET (storage and retrieval) database. A repository used for storing biological, chemical, and physical data for Florida's surface waters. STORET is driven by the Impaired Waters Rule (Chapter 62-303, Florida Administrative Code [FAC]) and is the primary source of data used for determining whether or not samples meet water quality criteria.
Florida 20 (EAS-0101)	IWR-directed water quality data exchange program.

Term	Description
IDM Metadata Standard	The core set of metadata elements (the minimum amount of metadata elements) that describes a project's dataset(s) and allows others to make judgments about whether or not the dataset would be useful for their purposes.
ITIS	Integrated Taxonomic Information System
IWR	Impaired Waters Rule. Designed to establish a scientific basis for identifying and listing impaired waters.
Mandatory/Optional	Regarding metadata standards, this attribute determines which metadata elements are mandatory (requires some value) or optional (does not require a value) when submitting metadata.
Matrix (in chemical analysis)	The components of a sample other than the analyte. The matrix can have a considerable effect on the way the analysis is conducted and the quality of the results obtained.
Medium	The environmental vehicle by which a pollutant is carried to the receptor (e.g., air, surface water, soil, or groundwater).
Metadata	The data descriptors (e.g., "Units," "MDL") for data that has been or will be collected.
Metadata (a dictionary definition)	"Data" that describes a dataset and allows others to find and evaluate it.
Metadata Element	A single piece of metadata, or a single data descriptor.
Metadata Element Value	The actual value for a metadata element.
Metadata Standard	A formalized collection of metadata elements.
Project	An endeavor to create a product [data set(s)] that involves research and/or monitoring that is planned to achieve a particular purpose.
Project (a dictionary definition)	A planned undertaking that encompasses a set of tasks or activities having a definable starting point and well defined objectives.
Project (IDM context)	A planned set of activities pertaining to a goal or objective related to scientific monitoring and/or research of the environment.
QA/QC	Quality Assurance/Quality Control
Result Value	Data recorded from <u>measurements</u> that have been conducted.
Sample	A small part of something intended as representative of the whole.
SCI	Stream Condition Index
SOP	Standard Operating Procedure
Source Metadata Standard	The entity (e.g., person, agency, federal body, etc.) where a metadata standard comes from.

Term	Description
Standard (a dictionary definition)	Anything serving as a rule for making judgments or as a basis of comparison.
STORET	Storage and Retrieval Database
Sub-Discipline	A formally recognized subgroup or partition of a discipline (e.g., when a determination has been made to create different metadata elements for types of data within a discipline that are specific to only that subgroup). A subgroup or partition of a discipline may become a separate discipline.
Tier One Metadata (or Common Metadata; also referred to as First Tier Metadata)	The general set of metadata that is needed by all scientific disciplines (for example, Who, What, When, Where, and Why).
Tier Two Metadata (or Scientific Discipline Metadata; also referred to as Second Tier Metadata)	This is the metadata necessary to assess the suitability of discipline specific types of data.
TMDL	Total Maximum Daily Load
Unit	The unit of measurement (e.g., "µg").

12. Appendix

Lithostratigraphic Names

This table was provided by the Groundwater participants after the Groundwater Metadata Workshop. The column titled *Strata Name* represents the value list for the metadata element *Lithostratigraphy* (the lithostratigraphic names used in the State).

Strata Id	Strata Code	MODIFY	Strata Name	Strata Description
1	124CNZC		Cenozoic	Cenozoic (Erathem)
2	200MSZC		Mesozoic	Mesozoic (Erathem)
3	300PLZC		Paleozoic	Paleozoic (Erathem)
4	500PRTZ		Proterozoic	Proterozoic (Erathem)
5	360ODVC		Ordivician	Ordivician (System) -->Paleozoic (Erathem)
6	125TERY		Tertiary	Tertiary (System) -->Cenozoic (Erathem)
8	124EOPL		Eocene-Paleocene	Eocene-Paleocene (Series/Stage) -->Tertiary (System) --> Cenozoic (Erathem)
9	221JRSCL		Lower Jurassic	Lower Jurassic (Series/Stage) -->Jurassic (System) -->Mesozoic (Erathem)
10	221JRSCM		Middle Jurassic	Middle Jurassic (Series/Stage) -->Jurassic (System) -->Mesozoic (Erathem)
11	211CRCSU		Upper Cretaceous	Upper Cretaceous (Series/Stage) -->Cretaceous (System) -->Mesozoic (Erathem)
13	125CLBN		Claiborne Group	Claiborne Group (Group) -->Eocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
14	125MDWG		Midway Group	Midway Group (Group) -->Paleocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
15	113TSND		Terrace Sands	Terrace Sands (Group) -->Pliostocene (Series/Stage) -->Quaternary (System) -->Cenozoic (Erathem)

Strata Id	Strata Code	MODIFY	Strata Name	Strata Description
16	123VKBG		Vicksburg Group	Vicksburg Group (Group) -->Oligocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
17	124WLCX		Wilcox Group	Wilcox Group (Group) -->Eocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
18	217TRNT		Trinity	Trinity (Formation/Unit) -->Cretaceous (System) -->Mesozoic (Erathem)
19	122MCSK		Miccosukee Fm.	Miccosukee Fm. (Formation/Unit) -->Pliostocene (Series/Stage) -->Quaternary (System) -->Cenozoic (Erathem)
20	121CYPR	Cypresshead Fm.	Cypress Head Fm.	Cypress Head Fm. (Formation/Unit) -->Pliostocene (Series/Stage) -->Quaternary (System) -->Cenozoic (Erathem)
21	121NASH	Nashua Fm.	Nashua	Nashua (Formation/Unit) -->Pliostocene (Series/Stage) -->Quaternary (System) -->Cenozoic (Erathem)
22	112ANSS	Anastasia Fm.	Anastsia Fm	Anastsia Fm (Formation/Unit) -->Pliostocene (Series/Stage) -->Quaternary (System) -->Cenozoic (Erathem)
23	122TMIM		Tamiami Fm.	Tamiami Fm. (Formation/Unit) -->Pliocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
24	112FTMP		Fort Thompson Fm.	Fort Thompson Fm. (Formation/Unit) -->Pliostocene (Series/Stage) -->Quaternary (System) -->Cenozoic (Erathem)
25	112CLSCR		Caloosahatchee Fm.	Caloosahatchee Fm. (Formation/Unit) -->Pliostocene (Series/Stage) -->Quaternary (System) -->Cenozoic (Erathem)
26	122HTRN		Hawthorn Group	Hawthorn Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
27	122STAT		Statenville Fm.	Statenville Fm. (Formation/Unit) -->Hawthorn Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)

Strata Id	Strata Code	MODIFY	Strata Name	Strata Description
28	122MKHD	Marks Head Fm.	Markshead Fm.	Markshead Fm. (Formation/Unit) -->Hawthorn Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
29	122PNFM		Penney Farms Fm.	Penney Farms Fm. (Formation/Unit) -->Hawthorn Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
30	122SMRK		St. Marks Fm.	St. Marks Fm. (Formation/Unit) -->Hawthorn Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
31	123SWNN		Suwannee Limestone	Suwannee Limestone (Formation/Unit) -->Oligocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
32	124OCAL		Ocala Group	Ocala Group (Group) -->Eocene (Series/Stage) -->Tertiary (System) --> Cenozoic (Erathem)
33	124AVPK		Avon Park Fm.	Avon Park Fm. (Formation/Unit) -->Eocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
34	124OLDM	Oldsmar Fm.	Oldsmar Limestone	Oldsmar Limestone (Formation/Unit) -->Eocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
35	125CDRK	Cedar Keys Fm.	Cedar Keys Limestone	Cedar Keys Limestone (Formation/Unit) -->Eocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
36	210CCJC		Cretaceous-Jurassic	Cretaceous-Jurassic (System) -->Mesozoic (Erathem)
39	122ALCH		Alachua Fm	Alachua Fm (Formation/Unit) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
40	122AMBF		Alum Bluff Group	Alum Bluff Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
41	122ALVA		Alva Clay Member of the Tamiami Fm.	Alva Clay Member of the Tamiami Fm. (Member) -->Tamiami Fm. (Formation/Unit) -->Pliocene (Series/Stage) -->Tertiary (System) --> Cenozoic (Erathem)

Strata Id	Strata Code	MODIFY	Strata Name	Strata Description
42	122ARCA	Arcadia Fm.	Arcadia Fm	Arcadia Fm (Formation/Unit) -->Hawthorn Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
43	211AKNS		Atkinson Fm.	Atkinson Fm. (Formation/Unit) -->Upper Cretaceous (Series/Stage) -->Cretaceous (System) -->Mesozoic (Erathem)
44	211ASTN		Austin Group	Austin Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
45	112ALDG		Ayers Landing Marl Member of Caloosahatchee Fm.	Ayers Landing Marl Member of Caloosahatchee Fm. (Member) -->Caloosahatchee Fm. (Formation/Unit) -->Pliocene (Series/Stage) -->Quaternary (System) -->Cenozoic (Erathem)
46	230BSLT		Basalt	Basalt (Formation/Unit) -->Jurassic (System) -->Mesozoic (Erathem)
47	124BSHI		Bashi Marl Member of Hatchetigbee Fm.	Bashi Marl Member of Hatchetigbee Fm. (Member) -->Hatchetigbee (Formation/Unit) -->Wilcox Group (Group) -->Eocene (Series/Stage) --> Tertiary (System) -->Cenozoic (Erathem)
48	122BYSR	Bayshore Member (Peace River Fm.)	Bayshore Member (Peace River Fm)	Bayshore Member (Peace River Fm) (Member) -->Peace River Fm (Formation/Unit) -->Hawthorn Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
49	112BBRC		Bee Branch Member of Caloosahatchee Fm.	Bee Branch Member of Caloosahatchee Fm. (Member) -->Caloosahatchee Fm. (Formation/Unit) -->Pliocene (Series/Stage) --> Quaternary (System) -->Cenozoic (Erathem)
50	217BGCP		Big Cypress Group	Big Cypress Group (Group) -->Lower Cretaceous (Series/Stage) -->Cretaceous (System) -->Mesozoic (Erathem)
51	400BCGR		Biotitic Granite	Biotitic Granite (Formation/Unit) -->Precambrian (System) --> Proterozoic (Erathem)

Strata Id	Strata Code	MODIFY	Strata Name	Strata Description
52	122BNVL		Peace River Fm	Peace River Fm (Formation/Unit) -->Hawthorn Group (Group) --> Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
53	112BRDN		Brandy Wine Fm.	Brandy Wine Fm. (Formation/Unit) -->Pliocene (Series/Stage) --> Quaternary (System) -->Cenozoic (Erathem)
54	122BCCK		Bruce Creek Limestone	Bruce Creek Limestone (Formation/Unit) -->Alum Bluff Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
55	123BCTN		Bucatumna Clay Member of Byram Fm.	Bucatumna Clay Member of Byram Fm. (Member) -->Byram Fm. (Formation/Unit) -->Vicksburg Group (Group) -->Oligocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
56	122BKGM		Buckingham Limestone member of Tamiami Fm.	Buckingham Limestone member of Tamiami Fm. (Member) -->Tamiami Fm. (Formation/Unit) -->Pliocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
57	221HSBK		Buckner Member of Haynesville Fm.	Buckner Member of Haynesville Fm. (Member) -->Haynesville Fm. (Formation/Unit) -->Upper Jurassic (Series/Stage) -->Jurassic (System) -->Mesozoic (Erathem)
58	124BPNS		Bumpnose Member of Crystal River Fm.	Bumpnose Member of Crystal River Fm. (Member) -->Crystal River Fm. (Formation/Unit) -->Ocala Group (Group) -->Eocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
59	123BYRM		Byram Fm.	Byram Fm. (Formation/Unit) -->Vicksburg Group (Group) -->Oligocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
60	370CMBR		Cambrian	Cambrian (System) -->Paleozoic (Erathem)
61	211CDSO		Card Sound Dolomite	Card Sound Dolomite (Formation/Unit) -->Upper Cretaceous (Series/Stage) -->Cretaceous (System) -->Mesozoic (Erathem)
62	122CRLN		Charlton Fm.	Charlton Fm. (Formation/Unit) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)

Strata Id	Strata Code	MODIFY	Strata Name	Strata Description
63	122CHAR	Charlton Member of Coosawatchie Fm.	Charlton Member of Choctawhatchee Fm.	Charlton Member of Choctawhatchee Fm. (Member) -->Choctawhatchee Fm. (Formation/Unit) -->Alum Bluff Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
64	122CTTC		Chattahoochee Fm.	Chattahoochee Fm. (Formation/Unit) -->Hawthorn Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
65	123CKHY		Chickasawhay Limestone	Chickasawhay Limestone (Formation/Unit) -->Oligocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
66	122CHPL		Chipola Fm.	Chipola Fm. (Formation/Unit) -->Alum Bluff Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
67	122CCTC		Choctawhatchee Fm.	Choctawhatchee Fm. (Formation/Unit) -->Alum Bluff Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
68	121CRNL	Citronelle Fm.	Citronelle Fm	Citronelle Fm (Formation/Unit) -->Pleistocene (Series/Stage) -->Quaternary (System) -->Cenozoic (Erathem)
69	124CLBR		Claiborne	Claiborne (Formation/Unit) -->Eocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
70	112CEMH	OLD USAGE	Coffee Mill Hammock Member of the Fort Thompson Fm	Coffee Mill Hammock Member of the Fort Thompson Fm (Member) -->Fort Thompson Fm. (Formation/Unit) -->Pleistocene (Series/Stage) -->Quaternary (System) -->Cenozoic (Erathem)
71	122COOS		Coosawatchie Fm.	Coosawatchie Fm. (Formation/Unit) -->Hawthorn Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
72	221CNVL		Cotton Valley Group	Cotton Valley Group (Group) -->Upper Jurassic (Series/Stage) -->Jurassic (System) -->Mesozoic (Erathem)
73	124CLRV		Crystal River Fm.	Crystal River Fm. (Formation/Unit) -->Ocala Group (Group) -->Eocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)

Strata Id	Strata Code	MODIFY	Strata Name	Strata Description
74	217DTZL		Dantzler Fm.	Dantzler Fm. (Formation/Unit) -->Cretaceous (System) -->Mesozoic (Erathem)
75	221DNKM		Denkman Sandstone	Denkman Sandstone (Formation/Unit) -->Upper Jurassic (Series/Stage) -->Jurassic (System) -->Mesozoic (Erathem)
76	340DVNN		Devonian	Devonian (System) -->Paleozoic (Erathem)
77	230DIBS		Diabase	Diabase (Formation/Unit) -->Lower Jurassic (Series/Stage) -->Jurassic (System) -->Mesozoic (Erathem)
78	217DLRB		Dollar Bay Fm.	Dollar Bay Fm. (Formation/Unit) -->Cretaceous (System) -->Mesozoic (Erathem)
79	123DCCC		Duncan Church Beds Member of Suwannee Limestone	Duncan Church Beds Member of Suwannee Limestone (Member) --> Suwannee Limestone (Formation/Unit) -->Oligocene (Series/Stage) --> Tertiary (System) -->Cenozoic (Erathem)
80	122DPLN		Duplin Marl	Duplin Marl (Formation/Unit) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
81	230ELML		Eagle Mills Formation	Eagle Mills Formation (Formation/Unit) -->Upper Triassic (Series/Stage) -->Triassic (System) -->Mesozoic (Erathem)
82	124EOCN		Eocene	Eocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
83	122ECMB		Escambia Sand Member of Pensacola Clay	Escambia Sand Member of Pensacola Clay (Member) -->Pensacola Clay (Formation/Unit) -->Miocene (Series/Stage) -->Tertiary (System) --> Cenozoic (Erathem)
84	211EUTW		Eutaw Fm.	Eutaw Fm. (Formation/Unit) -->Upper Cretaceous (Series/Stage) --> Cretaceous (System) -->Mesozoic (Erathem)
85	217FRLK		Ferry Lake Anhydrite	Ferry Lake Anhydrite (Formation/Unit) -->Lower Cretaceous (Series/Stage) -->Cretaceous (System) -->Mesozoic (Erathem)

Strata Id	Strata Code	MODIFY	Strata Name	Strata Description
86	000FILL		Fill	Fill (Formation/Unit) -->Quaternary (System) -->Cenozoic (Erathem)
87	112FDND		Fort Denaud Member of Caloosahatchee Fm.	Fort Denaud Member of Caloosahatchee Fm. (Member) --> Caloosahatchee Fm. (Formation/Unit) -->Pliostocene (Series/Stage) --> Quaternary (System) -->Cenozoic (Erathem)
88	210FPRC		Fort Pierce Fm.	Fort Pierce Fm. (Formation/Unit) -->Lower Cretaceous (Series/Stage) - ->Cretaceous (System) -->Mesozoic (Erathem)
89	122FRPR	Fort Preston Fm. (Cypresshead Fm.)	Fort Preston Fm.	Fort Preston Fm. (Formation/Unit) -->Miocene (Series/Stage) --> Tertiary (System) -->Cenozoic (Erathem)
90	217FKBG		Fredericksburg Group	Fredericksburg Group (Group) -->Cretaceous (System) -->Mesozoic (Erathem)
91	217GLDS		Glades Group	Glades Group (Group) -->Lower Cretaceous (Series/Stage) --> Cretaceous (System) -->Mesozoic (Erathem)
92	400GRNT		Granite	Granite (Formation/Unit) -->Precambrian (System) -->Proterozoic (Erathem)
93	124HCGB		Hatchetigbee	Hatchetigbee (Formation/Unit) -->Wilcox Group (Group) -->Eocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
94	221HSV L		Haynesville Fm.	Haynesville Fm. (Formation/Unit) -->Upper Jurassic (Series/Stage) --> Jurassic (System) -->Mesozoic (Erathem)
95	400HBDD		Hornblende Diorite	Hornblende Diorite (Formation/Unit) -->Precambrian (System) --> Proterozoic (Erathem)
96	217HSTN		Hosston Fm.	Hosston Fm. (Formation/Unit) -->Lower Cretaceous (Series/Stage) --> Cretaceous (System) -->Mesozoic (Erathem)
98	124IGLS		Inglis Fm.	Inglis Fm. (Formation/Unit) -->Ocala Group (Group) -->Eocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)

Strata Id	Strata Code	MODIFY	Strata Name	Strata Description
99	122ITCL	Intercoastal Limestone	Intracoastal Limestone	Intracoastal Limestone (Formation/Unit) -->Alum Bluff Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
100	122JKBL		Jackson Bluff Fm.	Jackson Bluff Fm. (Formation/Unit) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
101	112KLRG		Key Largo Limestone	Key Largo Limestone (Formation/Unit) -->Pliocene (Series/Stage) --> Quaternary (System) -->Cenozoic (Erathem)
102	112LBLL	check	La Belle Clay Member of Tamiami Fm.	La Belle Clay Member of Tamiami Fm. (Member) -->Tamiami Fm. (Formation/Unit) -->Pliocene (Series/Stage) -->Tertiary (System) --> Cenozoic (Erathem)
103	211LCRS		La Crosse Sandstone	La Crosse Sandstone (Formation/Unit) -->Upper Cretaceous (Series/Stage) -->Cretaceous (System) -->Mesozoic (Erathem)
104	124LKCT		Lake City Limestone	Lake City Limestone (Formation/Unit) -->Avon Park Fm. (Formation/Unit) -->Eocene (Series/Stage) -->Tertiary (System) --> Cenozoic (Erathem)
105	111LKFL	Lake Flint Marl (informal)	Lake Flirt Marl	Lake Flirt Marl (Formation/Unit) -->Holocene (Series/Stage) --> Quaternary (System) -->Cenozoic (Erathem)
106	217LKTF		Lake Trafford Fm.	Lake Trafford Fm. (Formation/Unit) -->Lower Cretaceous (Series/Stage) -->Cretaceous (System) -->Mesozoic (Erathem)
107	211LWSN		Lawson Limestone	Lawson Limestone (Formation/Unit) -->Upper Cretaceous (Series/Stage) -->Cretaceous (System) -->Mesozoic (Erathem)
108	124LSBN		Lisbon Fm.	Lisbon Fm. (Formation/Unit) -->Claiborne Group (Group) -->Eocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
109	221LUNN		Louann Salt	Louann Salt (Formation/Unit) -->Middle Jurassic (Series/Stage) --> Jurassic (System) -->Mesozoic (Erathem)

Strata Id	Strata Code	MODIFY	Strata Name	Strata Description
110	122LBVL	check	Lower Bone Valley	Lower Bone Valley (Member) -->Bone valley (Formation/Unit) --> Hawthorn Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
111	217CRCSL		Lower Cretaceous	Lower Cretaceous (Series/Stage) -->Cretaceous (System) -->Mesozoic (Erathem)
112	211TSCLL		Lower Member of Tuscaloosa Fm.	Lower Member of Tuscaloosa Fm. (Member) -->Tuscaloosa Fm. (Formation/Unit) -->Upper Cretaceous (Series/Stage) -->Cretaceous (System) -->Mesozoic (Erathem)
113	367ODVCL		Lower Ordovician	Lower Ordovician (Series/Stage) -->Ordivician (System) -->Paleozoic (Erathem)
114	217TRNTL		Lower Trinity	Lower Trinity (Member) -->Trinity (Formation/Unit) -->Cretaceous (System) -->Mesozoic (Erathem)
115	123MRNN		Marianna Limestone	Marianna Limestone (Formation/Unit) -->Oligocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
116	211TSCLS		Massive Sandstone Member of Lower Tuscaloosa Fm.	Massive Sandstone Member of Lower Tuscaloosa Fm. (Member) -->Tuscaloosa Fm. (Formation/Unit) -->Upper Cretaceous (Series/Stage) -->Cretaceous (System) -->Mesozoic (Erathem)
117	112MIMI		Miami Limestone	Miami Limestone (Formation/Unit) -->Pliostocene (Series/Stage) -->Quaternary (System) -->Cenozoic (Erathem)
118	122MOCNC		Miococene Coarse Clastics	Miococene Coarse Clastics (Formation/Unit) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
119	211TSCLM		Middle Member of Tuscaloosa Fm.	Middle Member of Tuscaloosa Fm. (Member) -->Tuscaloosa Fm. (Formation/Unit) -->Upper Cretaceous (Series/Stage) -->Cretaceous (System) -->Mesozoic (Erathem)
120	125MDWY	Midway Fm.	Midway Fm	Midway Fm (Formation/Unit) -->Midway Group (Group) -->Paleocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)

Strata Id	Strata Code	MODIFY	Strata Name	Strata Description
121	122MOCN		Miocene	Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
122	217MRST	Moorisport Fm.	Moorisport Fm	Moorisport Fm (Formation/Unit) -->Lower Cretaceous (Series/Stage) --> Cretaceous (System) -->Mesozoic (Erathem)
123	122MCKS	Murdock Station Member . (Peace River Fm.)	Murdock Station Member.(Peace River Fm)	Murdock Station Member . (Peace River Fm) (Member) -->Peace River Fm (Formation/Unit) -->Hawthorn Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
124	217NPLB		Naples Bay Group	Naples Bay Group (Group) -->Lower Cretaceous (Series/Stage) --> Cretaceous (System) -->Mesozoic (Erathem)
125	211NVRR		Navarro Group	Navarro Group (Group) -->Pliocene- Pleistocene (Series/Stage) --> Quaternary (System) -->Cenozoic (Erathem)
126	231NWRK		Newark Group	Newark Group (Group) -->Upper Triassic (Series/Stage) -->Triassic (System) -->Mesozoic (Erathem)
128	122NOCA		Nocatee Member of Arcadia Fm.	Nocatee Member of Arcadia Fm. (Member) -->Arcadia Fm (Formation/Unit) -->Hawthorn Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
129	221NRPL		Norphlet Sandstone	Norphlet Sandstone (Formation/Unit) -->Upper Jurassic (Series/Stage) -->Jurassic (System) -->Mesozoic (Erathem)
130	124OKGV		Oak Grove Sand Member of Shoal River Fm.	Oak Grove Sand Member of Shoal River Fm. (Member) -->Shoal River Fm. (Formation/Unit) -->Alum Bluff Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
131	124OCALL		Ocala Limestone Lower Member	Ocala Limestone Lower Member (Member) -->Ocala Limestone (Formation/Unit) -->Ocala Group (Group) -->Eocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
132	124OCALU		Ocala Limestone Upper Member	Ocala Limestone Upper Member (Member) -->Ocala Limestone (Formation/Unit) -->Ocala Group (Group) -->Eocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)

Strata Id	Strata Code	MODIFY	Strata Name	Strata Description
133	217OCRF		Ocean Reef Group	Ocean Reef Group (Group) -->Lower Cretaceous (Series/Stage) -->Cretaceous (System) -->Mesozoic (Erathem)
134	122OCHP		Ochopee Limestone member of Tamiami Fm.	Ochopee Limestone member of Tamiami Fm. (Member) -->Tamiami Fm. (Formation/Unit) -->Pliocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
135	112OKKC	Oakaloacoochee Member of the Fort Thompson Fm.	Okoloakoochee Member of the Fort Thompson Fm.	Okoloakoochee Member of the Fort Thompson Fm. (Member) -->Fort Thompson Fm. (Formation/Unit) -->Pleistocene (Series/Stage) -->Quaternary (System) -->Cenozoic (Erathem)
136	123OLGC		Oligocene	Oligocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
137	360ODVC		Ordovician	Ordovician (System) -->Paleozoic (Erathem)
138	122ORTN		Ortona Sand Member (Peace River Fm)	Ortona Sand Member (Peace River Fm) (Member) -->Peace River Fm (Formation/Unit) -->Hawthorn Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
139	125PLCN		Paleocene	Paleocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
140	217PLXY		Paluxy Fm.	Paluxy Fm. (Formation/Unit) -->Lower Cretaceous (Series/Stage) -->Cretaceous (System) -->Mesozoic (Erathem)
141	122PCRv	Peace River Fm.	Peace River Fm	Peace River Fm (Formation/Unit) -->Hawthorn Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
142	122PSCL		Pensacola Clay	Pensacola Clay (Formation/Unit) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
143	211PLOT		Pilot Sandstone Member of Tuscaloosa Fm.	Pilot Sandstone Member of Tuscaloosa Fm. (Member) -->Tuscaloosa Fm. (Formation/Unit) -->Upper Cretaceous (Series/Stage) -->Cretaceous (System) -->Mesozoic (Erathem)
144	217PNIS		Pine Island Fm.	Pine Island Fm. (Formation/Unit) -->Cretaceous (System) -->Mesozoic (Erathem)

Strata Id	Strata Code	MODIFY	Strata Name	Strata Description
145	122PCRS		Pinecrest Sand	Pinecrest Sand (Formation/Unit) -->Pliocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
146	112PLSC		Pleistocene Sands	Pleistocene Sands (Formation/Unit) -->Pleistocene (Series/Stage) -->Quaternary (System) -->Cenozoic (Erathem)
147	121PLCN		Pliocene	Pliocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
148	121PCPC		Pliocene- Pleistocene	Pliocene- Pleistocene (Series/Stage) -->Quaternary (System) -->Cenozoic (Erathem)
149	400PCMB		Precambrian	Precambrian (System) -->Proterozoic (Erathem)
150	217PGRD		Punta Gorda Anhydrite	Punta Gorda Anhydrite (Formation/Unit) -->Glades Group (Group) -->Lower Cretaceous (Series/Stage) -->Cretaceous (System) -->Mesozoic (Erathem)
151	122RDBY		Red Bay Fm.	Red Bay Fm. (Formation/Unit) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
152	230RYLT		Rhyolite	Rhyolite (Formation/Unit) -->Jurassic (System) -->Mesozoic (Erathem)
153	217SNRZ		Roberts Zone of Sunniland Limestone	Roberts Zone of Sunniland Limestone (Member) -->Sunniland Limestone (Formation/Unit) -->Ocean Reef Group (Group) -->Lower Cretaceous (Series/Stage) -->Cretaceous (System) -->Mesozoic (Erathem)
154	217RDSS		Rodessa Fm.	Rodessa Fm. (Formation/Unit) -->Cretaceous (System) -->Mesozoic (Erathem)
155	217SDGV		Sands and Gravel Undifferentiated	Sands and Gravel Undifferentiated (Formation/Unit) -->Cretaceous (System) -->Mesozoic (Erathem)
156	211SELM		Selma Group	Selma Group (Group) -->Upper Cretaceous (Series/Stage) -->Cretaceous (System) -->Mesozoic (Erathem)

Strata Id	Strata Code	MODIFY	Strata Name	Strata Description
157	122SLRV		Shoal River Fm.	Shoal River Fm. (Formation/Unit) -->Alum Bluff Group (Group) --> Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
158	350SLRN		Silurian	Silurian (System) -->Paleozoic (Erathem)
159	221SMKV		Smackover Fm.	Smackover Fm. (Formation/Unit) -->Upper Jurassic (Series/Stage) --> Jurassic (System) -->Mesozoic (Erathem)
160	122STJO		St. Joe Limestone	St. Joe Limestone (Formation/Unit) -->Miocene (Series/Stage) --> Tertiary (System) -->Cenozoic (Erathem)
161	124STNC		Steinhatchee Dolomite Member of Crystal River Fm.	Steinhatchee Dolomite Member of Crystal River Fm. (Member) --> Crystal River Fm. (Formation/Unit) -->Ocala Group (Group) -->Eocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
162	217SNLD		Sunniland Limestone	Sunniland Limestone (Formation/Unit) -->Ocean Reef Group (Group) - -> Lower Cretaceous (Series/Stage) -->Cretaceous (System) --> Mesozoic (Erathem)
163	124TLLS		Tallahassee Limestone	Tallahassee Limestone (Formation/Unit) -->Eocene (Series/Stage) --> Tertiary (System) -->Cenozoic (Erathem)
164	124TLLT		Tallahatta Formation	Tallahatta Formation (Formation/Unit) -->Claiborne Group (Group) --> Eocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
165	122TAMP		Tampa Member of Arcadia	Tampa Member of Arcadia (Member) -->Arcadia Fm (Formation/Unit) -->Hawthorn Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
166	211TYLR		Taylor Group	Taylor Group (Group) -->Cretaceous (System) -->Mesozoic (Erathem)
167	112TRSD		Terrace Sands	Terrace Sands (Formation/Unit) -->Terrace Sands (Group) -->Pleistocene (Series/Stage) -->Quaternary (System) -->Cenozoic (Erathem)

Strata Id	Strata Code	MODIFY	Strata Name	Strata Description
168	122TORR		Torreyia Fm	Torreyia Fm (Formation/Unit) -->Hawthorn Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
169	230TRSC		Triassic	Triassic (System) -->Mesozoic (Erathem)
170	217TRNT		Trinity Group	Trinity Group (Group) -->Cretaceous (System) -->Mesozoic (Erathem)
171	230TUFF		Tuff	Tuff (Formation/Unit) -->Jurassic (System) -->Mesozoic (Erathem)
172	211TSCL		Tuscaloosa Fm.	Tuscaloosa Fm. (Formation/Unit) -->Upper Cretaceous (Series/Stage) --> Cretaceous (System) -->Mesozoic (Erathem)
173	090UDSC		Undifferentiated Sand and Clay	Undifferentiated Sand and Clay (Formation/Unit) -->Pliostocene (Series/Stage) -->Quaternary (System) -->Cenozoic (Erathem)
174	090UDSS		Undifferentiated Sand, Clay, and Shells	Undifferentiated Sand, Clay, and Shells (Formation/Unit) -->Pliostocene (Series/Stage) -->Quaternary (System) -->Cenozoic (Erathem)
175	231TRSCU		Upper Triassic	Upper Triassic (Series/Stage) -->Triassic (System) -->Mesozoic (Erathem)
176	122UBVL		Upper Bone Valley	Upper Bone Valley (Member) -->Bone valley (Formation/Unit) -->Hawthorn Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
177	211CRCSU		Upper Cretaceous	Upper Cretaceous(Series/Stage) -->Cretaceous (System) -->Mesozoic (Erathem)
178	221JRSCU		Upper Jurassic	Upper Jurassic (Series/Stage) -->Jurassic (System) -->Mesozoic (Erathem)
179	211TSCLU		Upper Member of Tuscaloosa Fm.	Upper Member of Tuscaloosa Fm. (Member) -->Tuscaloosa Fm. (Formation/Unit) -->Upper Cretaceous (Series/Stage) -->Cretaceous (System) -->Mesozoic (Erathem)

Strata Id	Strata Code	MODIFY	Strata Name	Strata Description
180	217TRNTU		Upper Trinity	Upper Trinity (Member) -->Trinity (Formation/Unit) -->Cretaceous (System) -->Mesozoic (Erathem)
181	217WSHT		Washita Group	Washita Group (Group) -->Cretaceous (System) -->Mesozoic (Erathem)
182	221WRNR		Werner Anhydrite	Werner Anhydrite (Formation/Unit) -->Middle Jurassic (Series/Stage) -->Jurassic (System) -->Mesozoic (Erathem)
183	124WLCX		Wilcox	Wilcox (Formation/Unit) -->Eocene-Paleocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
184	124WLSN		Williston Fm.	Williston Fm. (Formation/Unit) -->Ocala Group (Group) --> Eocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
185	124WLIG		Williston-Inglis	Williston-Inglis (Formation/Unit) -->Ocala Group (Group) --> Eocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
186	122YLRV		Yellow River Fm.	Yellow River Fm. (Formation/Unit) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
187	113HOCN		Holocene	Holocene (Series/Stage) -->Quaternary (System) --> Cenozoic (Erathem)
188	112PLST		Pleistocene	Pleistocene (Series/Stage) -->Quaternary (System) -->Cenozoic (Erathem)
189	113QTRY		Quaternary	Quaternary (System) -->Cenozoic (Erathem)
190	221JRSC		Jurassic	Jurassic (System) -->Mesozoic (Erathem)
191	217CRS		Cretaceous	Cretaceous (System) -->Mesozoic (Erathem)
192	112CLSCR		Caloosahatchee Fm.	Caloosahatchee Fm. (Formation/Unit) -->Oligocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)
193	124OCAL	Put above Ocala Group	Ocala Limestone	Ocala Limestone (Formation/Unit) -->Ocala Group (Group) -->Eocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)

Strata Id	Strata Code	MODIFY	Strata Name	Strata Description
194	000NOSM		No Samples	No Samples (Formation/Unit)
195	122BNVL	Duplicate -Delete this one	Bone valley	Bone valley (Formation/Unit) -->Hawthorn Group (Group) -->Miocene (Series/Stage) -->Tertiary (System) -->Cenozoic (Erathem)