Reference Number: 200-01
Title: Field Data Deliverable
Primary Data Steward: Laboratory Section
Initiator: Mark Rials, Chemistry Laboratory Manager
Approved Date:
Effective Start Date:
Next Review Date:

Revision History

Revision Number	Revision Date	Revision Description
001		Initial Version

Specification Purpose

The District regularly collects field data during routine monitoring of surface and groundwater resources. This document defines the technical specifications for field data collected for water resources.

1 FIELD DATA DELIVERABLE SPECIFICATIONS

1.1 Intended Use of Data

The field data collected under this specification will be used in support of water resource assessments throughout the District. The data is intended to be made available from the Environmental Data Management System and the Water Management Information System. All data must be collected in accordance with DEP-SOP-001/01 and Southwest Florida Water Management District Field SOP Revision 7.

1.2 Existing Field Data

All existing field data will, to the greatest extent possible, be configured to conform with this specification to facilitate uploading to the Environmental Data Management System and subsequent transfer to the Water Management Information System.

2 FIELD DATA TECHNICAL SPECIFICATIONS

All field data must be collected and processed by staff trained to collect field data in accordance with DEP-SOP-001/01 and Southwest Florida Water Management District Field SOP Revision 7.

2.1 Location_Code (Required field) Data Type – Text(80)

The location code is the identifier where the sample was taken. This is also known as the Universal Identifier (UID) or Station Identifier (SID).

2.2 Client_Sample_ID (Required field) Data Type – Text(35)

The client sample id is the client's identifier for the site. The laboratory sample id is commonly used in this field when known. In the case of field data collected without lab samples, any text value will suffice.

2.3 Sample_Depth (Conditional field) Data Type – Numeric(15.1)

The sample depth is the depth at which the field readings are taken. Only required for surface water sites

2.4 Depth_Units (Conditional field) Data Type – Text(15)

The preferred units are metric. Only required for surface water sites.

2.5 Project_Number (Required field) Data Type – Text(10)

The activity number assigned by the finance department.

2.6 Project_Name (Required field) Data Type – Text(90)

The project name assigned by the finance department.

2.7 Program_Type (Required field) Data Type – Text(SVL)

Program types currently consist of monitoring programs or experimental programs. Accepted values for program type are MON and EXP.

2.8 Sampling_Method (Required field) Data Type – Text(SVL)

Use the DEP Field SOP number.

2.9 Sample_Collection_Type (Required field) Data Type – Text(SVL)

Sample collection type (grab, composite, etc).

2.10 Matrix_ID (Required field) Data Type – Text(SVL)

Sample matrix.

2.11 Field_Measurement_Method (Required field) Data Type – Text(SVL)

Method used in measuring field parameters.

2.12 Field_Parameter_Name (Required field) Data Type – Text(SVL)

Name of the field Parameter.

2.13 Result (Required field) Data Type – Text(10)

Result for the field parameter measured.

2.14 Result_Units (Required field) Data Type – Text(SVL)

Units of measure for the field parameter result.

2.15 Field_Parameter_Qualifier_Code (Not a required field) Data Type – Text(SVL)

Qualifier for field parameter result.

2.16 Field_Parameter_Comments (Not a required field) Data Type – Text(90)

Comments unique to a field parameter.

2.17 Field_Comments (Not a required field) Data Type – Text(90)

Information about the field sample for which no specific field has been designated. All records associated with a sample must have matching field comments.

2.18 Flow (Not a required field) Data Type – Text(SVL)

Water flow measurement at the time of sampling.

2.19 Flow_Units (Not a required field) Data Type – Text(15)

Flow units.

2.20 Weather (Not a required field) Data Type – Number(SVL)

Weather conditions at the time of sampling.

2.21 Sampling_Personnel (Required field) Data Type – Text(20)

Person collecting the sample.

2.22 Collection_Agency (Required field) Data Type – Text(25)

Agency collecting the sample.

2.23 Begin_Date_Collected (Not a required field) Data Type - DateTime

Date and time sample collection began. This field is optional for grab samples. The data time format shall be MM/DD/YYYY HH:MN

2.24 End_Date_Collected (Required field) Data Type - DateTime

Date and time sample collection ended. The data time format shall be MM/DD/YYYY HH:MN

2.25 Shipping_Batch_ID (Required field) Data Type – Text(10)

Unique identifier assigned to a cooler or group of coolers or shipping containers that link samples together. The Shipping_Batch_ID is provided by the client on the chain of custody. The format is MMDDYYHHMN.

2.26 Latitude_Degrees (Not a required field) Data Type – Number(2)

The degrees portion of the angular distance on a meridian north or south of the equator

2.27 Latitude_Minutes (Not a required field) Data Type – Number(2)

The minutes portion of the angular distance on a meridian north or south of the equator.

2.28 Latitude_Seconds (Not a required field) Data Type – Number(2)

The seconds portion to four significant digits of the angular distance on a meridian north or south of the equator.

2.29 Longitude_Degrees (Not a required field) Data Type – Number(2)

The degrees portion of the angular distance on a meridian east or west of the prime meridian.

2.30 Longitude_Minutes (Not a required field) Data Type – Number(2)

The minutes portion of the angular distance on a meridian east or west of the prime meridian.

2.31 Longitude_Seconds (Not a required field) Data Type – Number(2)

The seconds portion to four significant digits of the angular distance on a meridian east or west of the prime meridian

2.32 Locational_Collection_Method (Not a required field) Data Type – Text(SVL)

The method or mechanism used to derive the measurements

2.33 Map_Source_Scale (Not a required field) Data Type – Text(15)

If the measurement was derived from a map, the scale of the map series used.

2.34 Locational_Data_Collector (Not a required field) Data Type – Text(20)

The name of the person taking the locational measurement.

2.35 Locational_Data_Collection_Date (Not a required field) Data Type - DateTime

Date and time on which the locational measurement was taken. The data time format shall be MM/DD/YYYY HH:MN

2.36 Coordinate_Accuracy_Level (Not a required field) Data Type – Number(SVL)

The measured, estimated, or deduced degree of correctness of the measurement.

2.37 Datum (Not a required field) Data Type – Text(SVL)

The horizontal reference for measuring locations on the earth's surface.

2.38 Object_of_Interest (Not a required field) Data Type – Text(20)

The entity of interest (the thing regulated, permitted or tracked)

2.39 Relationship_of Point_to_Object_of_Interest (Not a required field) Data Type – Text(SVL)

What the point defined by the latitude and longitude coordinates represents relative to the object of interest – exact location, center of the lake/facility, etc.)

2.40 Verifier_Name (Not a required field) Data Type – Text(20)

The name of the person verifying the measurement if available.

2.41 Verifier_Date (Not a required field) Data Type - DateTime

Date and Time on which the verification was performed. The data time format shall be MM/DD/YYYY HH:MN

2.42 Upper_Interval_Measurment (Conditional field) Data Type – Number(5.1)

Upper interval depth (case depth) of the well. The case depth of a well as measured from land surface rounded to the nearest whole number. If there is no casing the value would be 0. If it is a screened well, enter the depth value from land surface at which the screened interval begins. Only required for wells.

2.43 Lower_Interval_Measurement (Conditional field) Data Type – Number(5.1)

Lower Interval depth (total depth) of the well. The current total depth of the well as measured from land surface rounded to the nearest whole number. If it is a screened well, enter the depth value from land surface at which the screened interval ends. Only required for wells.

2.44 UpperLower _Depth_Units (Conditional field) Data Type – Text(SVL)

Units of measure for the depth interval. Only required for wells.

3.0 STANDARD VALUE LISTS

SVL - Program Type	
Program Type	***Program Type Description***
Exp	Experimental
Mon	Monitoring

SVL - Sampling Method	
Sampling Method	***Sampling Method Description***
FS 1000	General Sampling
FS 2000	General Aqueous (AQ)
FS 2001	AQ-pH Preserved Samples

FS 2002	AQ-Metals
FS 2003	AQ-Extractable Organics
FS 2004	AQ-Volatile Organics
FS 2005	AQ-Bacteriological Sampling
FS 2006	AQ-Oil and Grease and TRPHs
FS 2007	AQ-Radiological Sampling
FS 2008	AQ-Radon Sampling
FS 2009	AQ-Cyanide Sampling
FS 2100	Surface Water (SW)
FS 2200	Groundwater (GW)
FS 2210	Groundwater Purging
FS 2220	Groundwater Sampling Techniques
FS 2300	Drinking Water (DW)
FS 2310	DW-Potable Well
FS 2320	DW-Drinking Water Supply System Sampling
FS 2330	DW-Sampling Cryptosporidium and Giardia
FS 2400	Wastewater (WW)
FS 2420	WW-Sample Types
FS 2430	WW-Wastewater Sampling Techniques
FS 2440	WW-Biosolids
FS 2450	WW-Sampling Cryptosporidium and Giardia
FS 3000	Soil
FS 3100	Surface Soil Sampling
FS 3200	Subsurface Soil Sampling
FS 4000	Sediment
FS 5000	Waste (WASTE)
FS 5020	WASTE-Preliminary Waste Characterization
FS 5100	WASTE-Drum Sampling
FS 5110	WASTE-Sampling Liquids from Drums
FS 5120	WASTE-Sampling Solids and Sludges from Drums
FS 5200	WASTE-Tank, Sump and Leachate Sampling
FS 5210	WASTE-General Sampling Instructions for Tanks
FS 5220	WASTE-Leachate and Sump Sampling
FS 5300	WASTE-Waste Pile Sampling
FS 5400	WASTE-Impoundment and Lagoon Sampling
FS 6000	General Biological Tissue
FS 6100	Shellfish Tissue Sampling
FS 6200	Finfish Tissue Sampling
FS 6300	Miscellaneous Animal Tissue Sampling
FS 6400	Plant Tissue Sampling
FS 7000	General Biological Community (GBC)
FS 7100	GBC-Phytoplankton Sampling
FS 7210	GBC-Quantitative Periphyton Sampling
FS 7220	GBC-Qualitative Periphyton Sampling
FS 7300	GBC-Macrophyton Sampling

FS 7400	GBC-Benthic Macroinvertebrate Sampling
FS 7410	GBC-Rapid Bioassessment Method
FS 7420	GBC-Stream Condition Index Sampling
FS 7430	GBC-Hester-Dendy Sampling
FS 7440	GBC-Core Sampling
FS 7450	GBC-Dredge Sampling
FS 7460	GBC-Lake Condition Index Sampling
FS 8100	Contaminated Surface
FS 8200	Clean Sampling for Ultratrace Metals (in Surface Waters)

SVL - Sample Collection Type	
Sample Collection Type	***Sample Collection Type Description***
ACF	Auto-Sampler Composite Flow Proportional
ACT	Auto-Sampler Composite Time Proportional
ADF	Auto-Sampler Discreet Flow Proportional
ADT	Auto-Sampler Discreet Time Proportional
BLK	Bulk
CDI	Composite Depth Integrated
CSI	Composite Site Integrated-Sediment/Soil only
CWI	Composite Width Integrated
CXI	Composite Cross Section Integrated
DRY	Dry (Atmospheric Deposition/Rain)
FP	Field Paramaters (In Situ measurements, no sample)
G	Grab
GB	Grab Bailer
GD	Grab Dipper
GP	Grab Pump
WET	Wet (Atmospheric Deposition/Rain)

SVL - Matrix	
Matrix ID	***Matrix ID Description***
AQUEOUS-Drinking	Drinking water
AQUEOUS-Fresh	Surface water
AQUEOUS-Groundwater	Groundwater
AQUEOUS-Pore Water	
AQUEOUS-Rain	
AQUEOUS-Brackish	Estuarine water
AQUEOUS-Saline	Saline water

AQUEOUS-Wastewater	Waste water
FILTER	Filter
SED-Fresh	Freshwater sediment
SED-Saline	Saltwater sediment
SOILS	Soils
TISSUE	Tissue
TISSUE-Algae	
TISSUE-Animal	
TISSUE-Feathers	
TISSUE-Finfish	Identifiable non-soil solid, or unidentifiable solid
TISSUE-Other	Tissue from other animals
TISSUE-Periphyton	
TISSUE-Plant	Plants
TISSUE-Shellfish	Shellfish
WASTE-Aqueous	Aqueous liquid waste
WASTE-Nonaqueous	Non-aqueous liquid waste
WASTE-Sludge	Non-aqueous or mixed media sludge
WASTE-Solid	Solid chemical waste
WIPE	Wipe

SVL - Field Measurement Method	
Field Measurement Method	***Field Measurement Method Description***
120.1	Specific Conductance
120.6	Conductance-Specific/Wet Deposition Electrolytic
150.1	pH
150.2	Continuous Monitoring pH
150.6	pH of Wet Deposition -Electrolytic Determination
170.1	Temperature
180.1	Turbidity
2	Turbidity
2130 B	Turbidity
2350 B	Chlorine Demand
2510 B	Specific Conductance
2520 B	Salinity
2520 C	Salinity
2550 B	Temperature
2580 B	ORP
2710 B	Oxygen Consumption Rate
3.1	Closed Conduit Flow Measurement
3.3	Flow Measurements - Open Channel
3.4	Flow Measurement, Misc.
330.1	Total Residual Chlorine
330.2	Total Residual Chlorine
330.3	Total Residual Chlorine

330.4	Total Residual Chlorine
330.5	Total Residual Chlorine
360.1	Dissolved Oxygen
360.2	Dissolved Oxygen
377.1	Sulfite
378-75WA	pH
4500-Cl B	Total Residual Chlorine
4500-Cl C	Total Residual Chlorine
4500-Cl D	Total Residual Chlorine
4500-Cl D (Free Chlorine)	Free Residual Chlorine
4500-Cl D (Total Chlorine)	Total Residual Chlorine
4500-Cl E	Total Residual Chlorine
4500-Cl F	Total Residual Chlorine
4500-Cl F (Free Chlorine)	Free Residual Chlorine
4500-Cl F (Total Chlorine)	Total Residual Chlorine
4500-Cl G	Total Residual Chlorine
4500-Cl G (Free Chlorine)	Free Residual Chlorine
4500-Cl G (Total Chlorine)	Total Residual Chlorine
4500-Cl H	Free Residual Chlorine
4500-Cl I	Total Residual Chlorine
4500-H+B	pH
4500-O C	Dissolved Oxygen
4500-O G	Dissolved Oxygen
4500-SO3-2 B	Sulfite
62-302.200(6)	Transparency
8156	pH in Water
8229	Dissolved Oxygen - Winkler Method
9040	pH
9040B	pH - Electrometric Measurement
9041	pH
9041A	pH - Paper Method
9045	pH
9045C	Soil and Waste pH
9050	Specific Conductance
9050A	Specific Conductance
9100	Conductivity, Hydraulic/Leachate/Permeability
973.4	Specific Conductance
973.41	pH
973.45B	Dissolved Oxygen
CE-81-1 P. 3-397 Method 1	Sediment Oxygen Demand
CE-81-1 P. 3-52	ORP
Chapter D1	Temperature
D1125-91 (A)	Specific Conductance
D1125A	Test Method A: Electrical Conductivity of Non-Flowing Water Samples

D1253-86 (92)	Total Residual Chlorine
D1293-84	pH
D1293-84 (90) A	pH
D1293-84 (90) B	pH
D1293A	Method A: Precise Laboratory Measurement of pH
D1498	ORP
D1889	Turbidity of Water
D1889-88 (A)	Turbidity
D5388	Discharge
D5389	Flow Measurments
D5390	Flow
D5413A	Test Method A: Nonrecording water-level measurement devices
D5413B	Test Method B: Recording water-level measurement devices
D5413C	Test Method C: Remote-interrogation water-level measurement devices
D5613	Travel Time
D5614	Open Channel Flow Measurement of Water
D6569	On-Line Measurement of pH
D888-92 (A)	Dissolved Oxygen
D888-92 (B)	Dissolved Oxygen
ESTUARINE	Salinity
FT 1000	General Field Testing and Measurement
FT 1100	pH (Hydrogen Ion Activity)
FT 1200	Specific Conductance
FT 1300	Salinity
FT 1400	Temperature
FT 1500	Dissolved Oxygen
FT 1600	Turbidity
FT 1700	Light Penetration (Secchi Depth and Transparency)
FT 1800	Water Flow and Velocity
FT 1900	Continuous Monitoring
FT 2000	Residual Chlorine
FT 2100	Oxidation-Reduction Potential (ORP)
FT 2200	Sulfite
FT 2300	Sediment Oxygen Demand (SOD)
FT 2400	Explosive Gases
I-1020	Acidity, water, titrimetric
I-1312	Density, dissolved water; gravimetric
I-1575-78	Dissolved Oxygen
I-1586	Water pH
I-1586-85	pH
I-1780-85	Specific Conductance
I-3860	Turbidity, nephelometric
I-3860-85	Turbidity

IP-6B	Continuous Colorimetric Analyzer
Measuring Tape	
Mercury Thermometer	
Orion (Note 16)	Total Residual Chlorine
Orion Instruction Manual	Total Residual Chlorine
Potentiometric	
PROPEL	Velocity & Volumetric Flowrate - Cyclonic Flow
Secchi	
Selective Probe	
SOD	SOD (Sediment Oxygen Demand) by Bench Model
SOP #2151	Water Level Measurement
SOP #2157	Controlled Pumping Test

SVL - Field Parameter Name	
Field Parameter Name	
Acidity, water, titrimetric	
Chlorine Demand	
Closed Conduit Flow Measurement	
Conductance-Specific/Wet Deposition Electrolytic	
Conductivity, Hydraulic/Leachate/Permeability	
Continuous Colorimetric Analyzer	
Continuous Monitoring	
Continuous Monitoring pH	
Controlled Pumping Test	
Density, dissolved water; gravimetric	
Sample Depth	
Discharge	
Dissolved Oxygen	
Dissolved Oxygen - Winkler Method	
Explosive Gases	
Flow	
Flow Measurement, Misc.	
Flow Measurements - Open Channel	
Flow Measurements	
Free Residual Chlorine	
General Field Testing and Measurement	
Light Penetration (Secchi Depth and Transparency)	
Method A: Precise Laboratory Measurement of pH	
On-Line Measurement of pH	
Open Channel Flow Measurement of Water	

ORP	
Oxidation-Reduction Potential (ORP)	
Oxygen Consumption Rate	
pH - Electrometric Measurement	
pH - Paper Method	
pH (Hydrogen Ion Activity)	
pH in Water	
pH of Wet Deposition -Electrolytic Determination	
pH, Field	
Residual Chlorine	
Salinity	
Sdd	
Sediment Oxygen Demand	
Sediment Oxygen Demand (SOD)	
SOD (Sediment Oxygen Demand) by Bench Model	
Soil and Waste pH	
Specific Conductance, Field	
Sulfite	
Total Depth	
Temperature, Field	
Test Method A: Electrical Conductivity of Non-Flowing Water	
Test Method A: Nonrecording water-level measurement devices	
Test Method B: Recording water-level measurement devices	
Test Method C: Remote-interrogation water-level measurement	
Total Residual Chlorine	
Transmissivity	
Transparency	
Travel Time	
Turbidity	
Turbidity, nephelometric	
Velocity & Volumetric Flowrate - Cyclonic Flow	
Water Flow and Velocity	
Water Level Measurement	

SVL - Unit of Measure	
Units	***Units Description***
CFU/100 mL	
CFU/g	
Deg. C	

G/Hr.	
M3/Day	
Meter	
MFL	
mg/kg	
mg/l	
pCi/L	
ug/kg	
ug/L	
units	
uS/cm	

SVL - Field Parameter Qualifier Code	
Field Parameter Qualifier Code	***Field Parameter Qualifier Code Description***
F	The reported value failed to meet the established field quality control criteria for either precision or accuracy; OR the sample matrix interfered with the ability to make an accurate field determination; OR the value is questionable because of improper field sampling protocols
L R D !	Actual value is known to be greater than reported value Significant rain in the last 48 hrs. In Situ measurement. Data deviates from historically established concentration ranges

Flow	***Flow Description***
1	Flow
2	No flow
3	Reverse flow or backpumping
	(null) No observation

Weather	***Weather Description***
1	Clear skies
2	Slight overcast
3	Medium overcast
4	Very overcast
5	Drizzle
6	Rain
7	(null) No observation

SVL - Locational Collection Method	
Locational Collection Method	***Locational Collection Method Description***

ADDM	Address matching
AGPS	Autonomous GPS
CSUR	Cadastral Survey
DGPS	Differentially Corrected GPS
DMAP	Digital Map Interpolation
DPHO	Digital Aerial Photography with ground Control
GGPS	Geodetic Quality GPS
LORN	LORAN C Navigational device
MMAP	Manual Map Interpolation
MPHO	Manual Aerial Ophotography with Ground Control
OTHR	A method not listed
SATI	Satellite Imagery with ground control
UNKN	Unknown
WGPS	GPS with Wide-Area Augmentation Service Correction
ZIPC	Zip Code centroid

SVL - Coordinate Accuracy Level	
Coordinate Accuracy Level	***Coordinate Accuracy Level Description***
1	+/- 0.01 meter
2	0.02 to 1.0 meter
3	1.1 to 10 meters
4	10 to 20 meters
5	20 to 50 meters
6	>50 meters

SVL - Datum	
Datum	***Datum Description***
CAC	Cape Canaveral
HARN	High accuracy reference work
HPGN	High precision GIS Network / High precision geodetic survey
NAD27	North American Datum of 1927
NAD83	North American Datum of 1983
WGS84	World geodetic survey of 1984

SVL - Relative Point to Object of Interest	
Relative Point to Object of Interest	***Relative Point to Object of Interest Description***
ADMIN	Administrative Center of Site or Facility containing Object of Interest Location
APPRX	Approximate Object of Interest Location
CENTR	Center of Site or Facility containing Object of Interest Location

ENTRA	Entrance to Site of Facility containing Object of Interest Location
EXACT	Exact Object of Interest Location
OFFST	Offset to Exact Object of Interest Location
VICIN	Vecinity of Object of Interest Location