

Compliance Monitoring Plan  
For  
Holey Land Wildlife Management Area  
(HOLY)

AGENCY: Florida Department of Environmental Protection

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Water Quality Monitoring Section  
Water Quality Bureau, Water Resources Division  
South Florida Water Management District

SFWMD-FIELD-CMP-026-01

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## 1.0 Project Organization

The following documents define the procedures used by South Florida Water Management District (SFWMD or District) personnel to meet the Florida Department of Environmental Protection's (FDEP or Department) Quality Assurance (QA) Rule, Florida Administrative Code (F.A.C.) 62-160, and should be referred to for details on key personnel and relevant responsibilities.

- Overall project organization and responsibilities -
  - SFWMD Water Quality Bureau (WQB) Quality Management Plan (QMP).
- Field activity and data validation responsibilities -
  - SFWMD Water Quality Monitoring Section's (WQM) Quality Manual (QM), Field Sampling Manual (FSM), and applicable Standard Operating Procedures (SOP).
- Laboratory analysis and data validation responsibilities –
  - SFWMD Analytical Service's (AS) Chemistry Laboratory Quality Manual (CLQM) and applicable SOPs.

## 2.0 Project Introduction and Background

This document serves as a reference for surface water quality monitoring for **Holey Land (HOLY) Wildlife Management Area (WMA)**. Samples and/or data are collected to satisfy the mandated monitoring requirements in accordance with the permit(s) to which this document is attached.

This plan details permit mandated monitoring requirements **for surface water quality sampling at the inflow and outflow stations and sediment sampling at stations HOLYSD1, HOLYSD2, HOLYSD3, and HOLYSD4 to satisfy the 2005 FDEP permit modification letter**. Modifications to this sampling may be requested in response to any future design changes, and/or changes to project objectives. Monitoring reductions may also be requested to stations, frequencies, and/or analytes if monitoring demonstrates that specific parameters are not present or if found consistently in compliance with regulatory standards. This plan will be reviewed and/or modified as needed to reflect necessary changes. At a minimum, this plan will be reviewed when the permit is renewed.

Monitoring of the **HOLY** was established specifically to meet the requirements of Florida Department of Environmental Protection (**FDEP permits Nos. 06-500809209 and 06-501191549** which were issued in 1984 and 1986, respectively.

The FDEP permits (Nos. 06-500809209, and 06-501191549) have had three (3) letters of modification. The 1997 modification eliminated collection of pesticides at all stations. All monitoring at stations G-200B and G-201 were eliminated based on the 2002 modification letter. Additionally, the 2002 modification resulted in elimination of collection of metals at all surface water stations except cadmium, copper and zinc. There was no change to sediment compliance monitoring for metals at the four (4) interior marsh stations. The 09/20/2005 minor modification letter eliminated surface water quality monitoring for orthophosphate, ammonia, and all metals and ions with no changes to sediment monitoring of the interior marsh stations.

Monitoring at G-372S will begin the first quarter of calendar year 2021 because it currently serves as an inflow to the Holey Land WMA.

Construction of the adjacent A-2 Stormwater Treatment Area (STA) will result in demolition of G-200 and the construction of a new structure, G-200E slightly to the east. During this time, G-372S will be the primary source of water to the Holey Land WMA, however temporary pumps near the current location of G-200 might also be employed. It is expected that the temporary pumps will draw water from the same location as G-200, thus the G-200 sampling location should be adequate to monitor these pumps, if this is found not to be the case new monitoring locations will be initiated. These interim inflows (temporary pumps and G-372S) will be monitored, at the same frequency and for the same parameters as G-200, until construction of G-200E is complete and/or they no longer serve as inflows. Once G-200E begins operations it will be monitored at the same frequency and for the same parameters as G-200 was.

### 3.0 Geographic Location

The HOLY project is located within Palm Beach (Section 7, Township 47, Range 36) and Broward Counties (Sections 11 and 29, Townships 47 and 48, Ranges 36 and 38). Eight (8) mandated monitoring station(s) will be sampled for this project. Station locations and descriptions are listed in Table 1 with locations also depicted in Figure 1.

**Table 1: HOLY Monitoring Stations and GPS Coordinates**

Station	Latitude (ddmmss.sss)	Longitude (ddmmss.sss)	Description
G200 <sup>1</sup>	262604.403	804839.908	Pump station at NW corner of Holey Land. Sample on the west side of the structure.
G372S	262608.676	804824.732	Seepage pump intake on north side of G372.
G204	261957.097	804553.257	Western discharge culvert on south side of Holey Land along L-5 discharge. Sample on the north side of the structure.
G205	261959.003	804300.226	Middle discharge culvert on south side of Holey Land along L-5 discharge. Sample on the north side of the structure.
G206	262000.860	803908.758	Eastern discharge culvert on south side of Holey Land along L-5 discharge. Sample on the north side of the structure.
HOLYSD1	262429.275	804615.211	Station located at northwest interior of Holey Land Wildlife Management Area
HOLYSD2	262416.275	804319.207	Station located at northeast interior of Holey Land Wildlife Management Area
HOLYSD3	262133.281	804524.211	Station located at southwest interior of Holey Land Wildlife Management Area
HOLYSD4	262104.282	804259.207	Station located at southeast interior of Holey Land Wildlife Management Area

*The standard positional goal for station coordinates is detailed in the Wate Quality Monitoring Station Registration SOP (SFWMD-FIELD-SOP-031). Coordinates are relative to NAD83 HARN horizontal datum.*

<sup>1</sup>G200 was formerly referred to as G200A.



Figure 1: HOLY Site Locations

#### 4.0 Sample Collection Procedures

All surface water quality samples are collected on the upstream side of all structures at a depth of 0.5 m unless vegetation and/or other conditions inhibit the collection of a representative sample upstream. Samples, including field testing and field quality control samples will be collected in accordance with the FDEP Quality Assurance Rule, 62-160 F.A.C. and the current version of the FSM. Applicable sections of the FSM include, but are not limited to, field sample collection procedures, decontamination procedures, field testing and quality control requirements. All water quality samples required for collection are depicted in Table 2.

#### 4.1 Field Testing Procedures

Field testing procedures follow the procedures and requirements found in the FSM. Table 2 below describes the field parameters collected for this project.

**Table 2: HOLY Station Frequencies and Parameter TESTS**

Station	Matrix	Collection Method	Frequency	Parameter TESTS
G200 G372S <del>G200E</del> G204 G205 G206	Surface Water	Grab	Quarterly (Q)	Nitrate-Nitrite (NOX), Total Nitrogen (TN), Total Phosphorous (TP)
		In-situ Grab	Q	pH (PH), Specific Conductance (SCOND), Temperature (TEMP)
HOLYSD1 HOLYSD2 HOLYSD3 HOLYSD4	Sediment	Grab	Annually (A)	Antimony (TSB), Arsenic (TAS), Beryllium (TBE), Cadmium (TCD), Chromium (TCR), Copper (TCU), Lead (TPB), Mercury (THG), Nickel (TNI), Selenium (TSE), Silver (TAG), Thallium (TTI), Zinc (TZN)

#### 4.2 Field Quality Control and Sample Submission Requirements

Field quality control requirements shall follow the procedures found in the Field Quality Control Measurements and Requirements Section of the FSM.

Samples are submitted to the laboratory on the same day as collection or via courier the following day. Samples are submitted according to the requirements outlined in the FSM. If samples are submitted to a laboratory other than the District Lab, it must be approved by the District Lab.

#### 5.0 Data Quality Objectives (DQOs)

##### 5.1 Data Usage

The data from this project are compiled and reported in accordance with the conditions outlined in the permit or mandate.



## 5.2 Data Quality

All monitoring described herein shall meet the requirements conveyed in the FDEP's Quality Assurance Rule, 62-160 F.A.C. The District has adopted a uniform set of DQOs following criteria detailed within the "Analytical Methods and Default QA/QC Targets" table of the Chemistry Laboratory Quality Manual (CLQM).

The DQOs of the field testing parameters for this project are covered by the table entitled Field Quality Assurance Objectives found in the field testing section of the FSM. This manual is updated regularly, and therefore, the most recent version of the FSM details the specific field testing DQOs for this project at the time of sample collection.

Samples are analyzed according to the provisions within the FDEP Rule 62-160 F.A.C. and the District's CLQM. This manual is updated regularly, and therefore, the most recent version of the District's CLQM details DQOs for this project at the time of sample collection for each specific laboratory analysis. Data are qualified in accordance with the FSM, CLQM, and applicable data validation SOPs.

## 5.3 Completeness Target

The completeness target (i.e., the number of samples successfully collected and analyzed) shall be set at 95% annually for this project. Sampling attempts shall be included in the completeness target. At times samples will not be able to be collected because of no flow or low water conditions, unsafe station conditions, equipment malfunction, site maintenance, tropical storms/hurricanes or other unforeseen problems that might affect sample collection and/or quality. If samples cannot be collected on an attempt, collectors shall document "no bottle" (NOB) to indicate and attempt was made and/or the sample could not be collected for the documented reasons.

## 6.0 Data and Records Management

The District evaluates data in accordance with the data quality objectives stated in the District's FSM and CLQM. All data submittals shall conform to existing District guidelines. **Contract laboratory data shall be submitted to the District in the ADaPT format or other format as requested by the District.**

### 6.1 Contract Deliverables

**Contract laboratory and/or field data and documentation shall be submitted to the District in the format specified in the applicable contract. The contract laboratory shall evaluate the data in accordance with the data quality objectives stated in the FSM and CLQM. All contract field and laboratory data and documentation submittals shall conform to existing FSM, CLQM, applicable SOPs or other formats as requested by the District.**

## 6.2 Data and Record Storage

After the data validation process, all data and records are maintained so that end users can retrieve and review information relative to a sampling event. Field records are maintained in accordance with the *Archive Records Storage and Retention* SOP (SFWMD-FIELD-SOP-022). All analytical data and specified metadata are sent to the DBHYDRO database for long-term storage and retrieval.

The District maintains both records of current and historical methodologies, and SOPs so that at any given time the conditions that were applied to a sampling event can be evaluated.

Records are maintained following the WQM SOP for Archive Records Storage and Retention (SFWMD-FIELD-SOP-022). Corrections of data and/or records follow applicable WQB SOPs, CLQM, and/or FSM.

## 7.0 References

Florida Department of Environmental Protection. Quality Assurance Rule, 62-160 Florida Administrative Code (F.A.C.)

Florida Department of Environmental Protection. Florida Department of Environmental Protection Table as Required By Rule 62-4.246(4) Testing Methods for Discharges to Surface Water. April 25, 2006.

South Florida Water Management District. Chemistry Laboratory Quality Manual (CLQM), SFWMD-LAB-QM-2020 or most current effective version. Analytical Services Section, West Palm Beach, FL.

South Florida Water Management District. Field Quality Manual (QM), SFWMD-FIELD-QM-001. Water Quality Monitoring Section. West Palm Beach, FL.

South Florida Water Management District. Field Sampling Manual (FSM), SFWMD-FIELD-FSM-001. Water Quality Monitoring Section. West Palm Beach, FL.

South Florida Water Management District. Quality Management Plan, SFWMD-QA-QM-001. Water Quality Bureau, West Palm Beach, FL.



## 8.0 Revisions and Modifications

Version	Date	Section/Page	Change/Reason
00	06/04/2020	All	Created CMP; Changed TKN to TN per the District's Total Nitrogen Fact Sheet and concurrence of FDEP on 05/12/2020.
01	12/17/2020	Section 2.0 Tables 1 and 2	Added monitoring at G372S and a narrative explaining future changes associated with the construction of the A-2 STA, including demolition of G200, construction of G200E, and the operation of G372S and temporary pumps.