Water Quality Monitoring Plan

For

Rolling Meadows Wetland Restoration Project

(ROME)

Document Date:
5/20/15

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

SFWMD-FIELD-077-02

Table of Contents

Figures

Tables

1.0 Project Organization

This South Florida Water Management District (SFWMD or District) water quality monitoring project follows the Organization and Responsibility Section of the Water Quality Bureau's Field Sampling Quality Manual SFWMD-FIELD-QM-001 (FSQM) and Quality Management Plan SFWMD-QS-QM-001. Refer to these documents for details on key personnel and relevant responsibilities.

2.0 Project Description

This document serves as a reference for monitoring of surface water for the Rolling Meadows Wetland Restoration Project (ROME). This restoration project is located in eastern Polk County adjacent to Lake Hatchineha.

In 2002 the FDEP and the SFWMD purchased a total of 5788 acres of agricultural land for Kissimmee River Headwaters Revitalization using mitigation escrow funding. Most of the 1972 acres of land purchased by the SFWMD borders the southwest edge of Lake Hatchineha**.** Parcel B is the northern parcel and encompasses approximately 1,972 acres. This parcel has historically been utilized as a sod farm and for cattle grazing and is currently being managed by SFWMD.

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 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.

2.1 Project Objectives

The goals of this restoration project are to restore the hydrology of the property as close to historically possible by reconnecting Lake Hatchineha, expanding the lake littoral zone and habitat, and increasing water volume and flow to the Kissimmee River. A second phase is planned to restore the alignment and flow south of Catfish Creek. Water quality sampling for this project will provide the data needed to assess nutrient levels upstream of the project in Catfish Creek and flows from the project area to Lake Hatchineha.

3.0 Geographic Location

The ROME project consists of sampling two (2) stations in Polk County, adjacent to Lake Hatchineha (Figure 1). The monitoring specified in this plan will occur in the region southwest of Lake Hatchineha, along a 1972 acre area along the east side of Catfish Creek. Table 1 provides the station names, GPS coordinates, and a description of each monitoring location. The locations of all monitoring sites are depicted on the map in Figure 2.

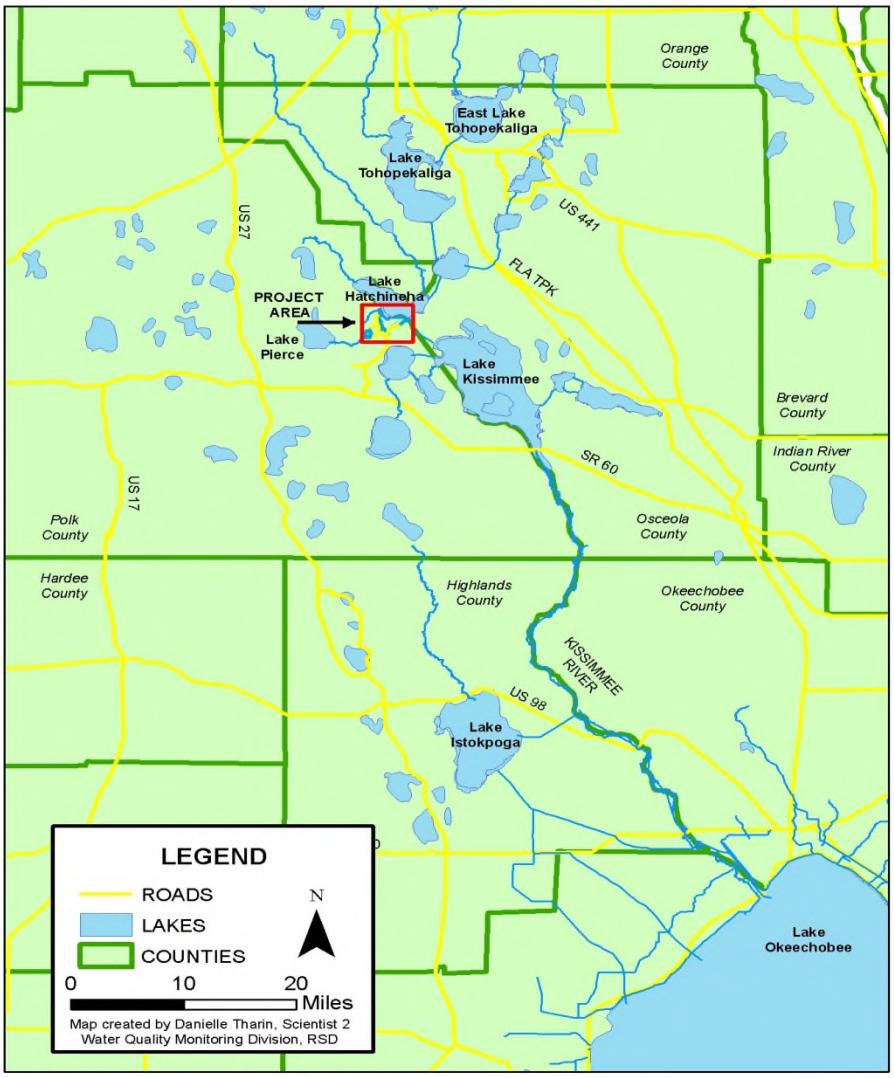

Figure 1: Rolling Meadows Wetland Restoration region.

Table 1: ROME Surface Water Monitoring Sites and GPS Coordinates

Station	Latitude	Longitude	Description
ROMCUT	280007.219	812546.384	Inflow to Parcel B from Catfish Creek
ROMOUT	275956.609	812312.445	Outflow structure from Parcel B into Lake Hatchineha.

The standard positional goal for site coordinates is ±1 meter. This standard can be obtained with a professional grade DGPS system. The coordinates are relative to NAD83 HARN horizontal datum.

Figure 2. ROME Monitoring Locations

4.0 Sample Collection Procedures

Water quality samples, including field testing and field quality control samples, will be collected in accordance with the FDEP Quality Assurance Rule, 62-160 Florida Administrative Code (F.A.C.) and the current version of the FSQM. Applicable sections of the FSQM include, but are not limited to, field sample collection procedures, decontamination procedures, field testing and quality control requirements.

4.1 Monitoring and Field Testing

All water quality samples required for collection are depicted in Table 2.

4.2 Field Quality Control and Sample Submission Requirements

Field quality control requirements shall follow the procedures found in the *Quality Control Section* of the FSQM. Samples shall be submitted to the District and/or contract laboratory according to the requirements outlined in the FSQM.

Table 2: ROME Sampling Parameters and Frequencies

Station	Sample Type	Frequency	Parameters
ROMCUT	Grab	Bi-Weekly*/Flow Only	TP – Total Phosphorus TN – Total Nitrogen: OPO4 – Ortho-phosphate
ROMOUT	Grab	Bi-Weekly/Flow Only	TP – Total Phosphorus TN – Total Nitrogen: OPO4 – Ortho-phosphate
ALL	Staff Gauge : Manual Readings	Bi-Weekly	Units: Ft, NAV 88

* Every other week

5.0 Data Quality Objectives (DQOs)

All monitoring required by the attached permit shall meet the indicators 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 Bureau's 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 FSQM. This manual is updated annually, and therefore, the most recent version of the FSQM 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 CLQM. The CLQM is annually updated, and therefore, the most recent version details DQOs for this project at the time of sample collection for each specific laboratory analysis. Data are qualified in accordance with the FSQM, CLQM and applicable Bureau standard operating procedures (SOPs).

Completeness targets (i.e., the number of samples successfully collected and analyzed) shall be set at 95% annually for this project. Completeness targets are inclusive of all sampling attempts including No Bottle Sample (NOB), which is defined as a sample not collected during a collection attempt. An NOB may be the result of no flow or low water conditions, unsafe station conditions, equipment malfunction, site maintenance, and/or other unforeseen problems that might affect sample collection and/or quality.

6.0 Data and Records Management

Water quality data collected from this project will be stored in the District's water quality database, DBHYDRO and are accessible through the District's website (http://www.sfwmd.gov/portal/page/portal/sfwmdmain/home%20page). The District

and/or contracted collecting agency shall maintain records of field notes and copies of all records relative to the chain of custody and analytical data following the protocol outlined in the FSQM. Upon completion of the project, these documents shall be archived by the District for the life of the project and for five (5) years thereafter. Storage shall follow the FSQM. Access to archived methods shall be through the designated records custodian. Corrections of data or records shall follow the FSQM, CLQM, and applicable SOPs.

7.0 Revisions and Modifications

Date	Section	Page Number(s)	Change From	Change To	Reason
5/20/2015	Table 2	6			Replaced Nitrate+Nitrite as N, and Total Kjeldahl Nitrogen with new lab method for Total Nitrogen

References:

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

South Florida Water Management District. Chemistry Laboratory Quality Manual (CLQM), SFWMD-LAB-QM-20##. Analytical Services Section, West Palm Beach, FL.

South Florida Water Management District. Field Sampling Quality Manual (FSQM), SFWMD-FIELD-QM-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.