

SOP 1.3 – Site Visit Scheduling, Communication and Collaboration for Discrete and Continuous Water Quality Monitoring.

This document provides the guidelines for the scheduling and tracking of field activities for water quality monitoring as well as communication procedures with park staff.

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I. General Guidelines

A. Sampling Frequency

(1) Discrete Water Quality Monitoring

- a. Monthly water quality monitoring
 - i. Plan sampling event to occur 30 (± 7) days from previous sampling event trying to stay as close to the target date as possible

(2) Continuous Monitoring

- a. Panel Design
 - i. Continuous monitoring sites are divided into two panels:
 - 1. Panel A: Northern Units
 - a. FRSP
 - b. GETT/EISE
 - c. HOFU
 - d. VAFO
 - 2. Panel B: Southern Units
 - a. APCO
 - b. BOWA
 - c. PETE
 - d. RICH

- b. Continuous Monitoring Sample Frequency

- i. Sites associated with each panel are monitored at one year intervals and rotated based on water year
 - 1. Panel A: even water years
 - 2. Panel B: odd water years

definition of Water Year (WY) follows USGS methods: Water Year is a 12-month period which begins on October 1 and ends of September 30 of the following calendar year. The WY is designated by the calendar year in which it ends (e.g., October 1, 2015 – September 30 2016 is WY 2016

B. Determining Field Visit Date

(1) Select Tentative Target Date

- a. Tentative Samples Dates for both discrete water quality and continuous monitoring is established on a quarterly basis
 - i. October: Schedule November, December, and January
 - ii. January: Schedule February, March, April
 - iii. April: Schedule May, June, July
 - iv. July: Schedule August, September, October
- b. Refine the tentative schedule after each field visit event
 - i. Adjust target date to be approximately 30 days from previous event

(2) Select Exact Field Visit Date

- a. As the tentative date approaches (within 10 days) select sampling date
 - i. Check weather and stream conditions
 - 1. All sampling should be conducted during base flow recession conditions
 - a. Sampling should not be conducted during periods of rapidly changing conditions within the stream channels (i.e., when a storm pulse is causing stream discharge to rise or fall rapidly)
 - b. Consult with MIDN Aquatic Ecologist for clarification on when sampling is inappropriate

II. Tracking Field Visits

Tentative field visit target dates, actual field visit dates, and data transfer dates should all be managed and tracked in Bison Connect calendar between MIDN and park offices.

A. Create Bison Connect calendar for each park

(1) Enter tentative target dates for all monitoring quarterly

- a. Label event: "Tentative"_Park Code_Type of event (Discrete or Continuous)
 - i. e.g., Tentative_PETE_Discrete

(2) When exact date is chosen update park calendar

- i. Delete tentative date and enter exact date (drop Tentative from label format)
- ii. If it is a continuous monitoring maintenance event, **include sonde serial number in notes field** for the event in the calendar

III. Collaboration and Communication between MIDN and park staff

Depending on available effort, which will fluctuate over time, MIDN staff, park staff, or other trained personnel will collect water quality data using this protocol. Clear communication of field visit scheduling is critical to successfully achieving the objectives of the protocol.

Communication is accomplished through several means primarily through bison connect google apps: email, shared calendars, and drive. Appropriate and current park contact information is maintained through google apps. Contact MIDN data manager for access. For emergency communications see Safety SOP (1.0), 911 is the primary emergency contact at all MIDN parks.

A. General Communication and Data Transfer Procedures

- (1) The MIDN Aquatic Ecologist will make email contact with all personnel collecting water quality data on a monthly basis, this communication is intended to:
 - a. Check status of supplies at distributed parks
 - b. Remind park staff to schedule the next monthly sampling event
 - c. Ensure personnel are prepared to complete next sampling event
- (2) MIDN staff will contact the park within 10 days of tentative field visit date for continuous monitoring
 - a. If MIDN staff are conducting discrete and continuous field visits this will be to inform park staff when and where MIDN personnel will be in the park
 - b. If park staff are conducting discrete field visits this contact will be to confirm sampling date and check on the status of equipment and supplies
- (3) MIDN staff will contact the park by phone or email either the day before or the day of a field visit to inform park contact on approximate time MIDN staff will be in the field on site

B. Transferring WQ Data

If data is not collected by MIDN staff the data must be transferred to the MIDN office to meet data management requirements (SOP 2.1).

- (1) Data is transferred to MIDN staff using a shared folder for MIDN WQ data on Google Drive
 - a. MIDN staff will manage Drive folders labeled “MIDN Water Quality Data Transfer” and provide access to these folders to personnel responsible for transferring data at parks
 - b. Data must be transferred in one of two formats:
 - i. Scanned data sheets (Calibration, sensor checks, and field data)
 - ii. Excel based data import forms (a copy of this form is maintained in the “MIDN Water Quality Data Transfer” specific park)
 - iii. Specific folders will be maintained on the drive for each park and format
 1. e.g., My Drive/MIDN Water Quality Data Transfer/APCO/APCO Scanned Data Sheets
 - c. Data should be transferred to MIDN staff in a timely manner, within three business days of data collection (SOP 2.1)

- (2) MIDN staff will maintain a shared folder in Google Drive to provide access to up-to-date guidance regarding this protocol