FIELD AUDIT

Form Version: June 2025

Status and Trend Monitoring Networks
Florida Department of Environmental Protection
MS 3560
2600 Blair Stone Road
Tallahassee, FL 32399-2400
Telephone (850) 245-7544

Sampling Agency:
Field Personnel:
Auditor(s):
Audit Date:
Project Name:
Site:
Audit Type:
Copies of Audit Report to:

Overall Sampling Performance

☐ A copy of the final report will be submitted to the sampling agency within 90 days. The sampling agency recognizes that they will submit a written acknowledgement addressing each corrective action that will be implemented (and how deficiencies will be prevented in the future) as a result of the deficiencies stated in the final audit report within 45 days of receipt.

SUMMARY

Summary of Audit Findings: Sampling Teams – please complete the "response" column and email table to the WMS QA Officer for approval.
DEP SOP references: https://floridadep.gov/dear/quality-assurance/content/dep-sops. S&T Manual reference: https://floridadep.gov/dear/watershed-monitoring-section/documents/status-and-trend-networks-sampling-manual

Finding #	SOP Reference	Audit Finding	Required or Suggested Corrective Action	Response	Approved by Auditors

Documentation (FD1000)	Yes	No	NA
1. Used electronic data entry forms or waterproof ink (pencil allowed when using waterproof paper) and corrected errors without obliteration.			
2. Described in written form, or verified on electronic data entry forms, the sampling location (waterbody name, station name, status random ID, etc.).			
3. Recorded preservation information and verification, including any deviations from protocols described on the electronic data entry forms, field sheets, and custody sheet.			
4. Labeled sample bottles properly (bar codes, site label, date, time).			
5. For calibrations, verifications and sample readings: temperature, pH, specific conductance, dissolved oxygen (mg/L and % sat), and turbidity were recorded to the resolution specified by the manufacturer.			
6. All sections of electronic data entry forms or field sheets completed correctly, including General: date/time; site location; names and/or initials; field testing measurements with units; ambient conditions; meter ID; use of fuel-powered equipment noted (if applicable); collection of blanks noted (if applicable); preservation; personnel on site; data value qualifiers (if applicable) Ground Water: purging equipment; purging procedure; well casing compositions; well diameter; measuring point elevation; stickup; water table depth; depth of well; volume of water in well; purge volume calculations; total volume of water purged; starting and ending times for purging; purging rate; stabilization measurements; water level drawdown measurements; FLUWID; Micro Land Use Surface Water: waterbody type; flow; water level; total depth; secchi depth; collection depth; equipment used (if applicable); sample collection access method Sediments: sample collection depth; collection time; areal location of sample; collection interval; sample collection devices; sediment type, odors, and color; number of grabs collected Biology: physical and chemical characterization information; stream or river habitat assessment information; rapid periphyton survey information; linear vegetation survey information; lake observation information; lake habitat assessment information; lake vegetation index information			
7. Instrument calibration log: • Unique ID for meter • Standards concentration, lot number, date of preparation or expiration date, units • Date, time, and results of each initial calibration and calibration verifications • Link to sampling project • Name of analyst performing calibration/ verification • Corrective actions performed on instrument, including date/time and if the instrument was removed from service • Citation or reference to specific calibration and verification procedures used (DEP SOPs or internal SOPs)			
8. Custody sheet verified and completed properly: • Date, time, sampler names, shipping method, sites, number of samples, bottle group, matrix, comments, labels • Notation was made if protocols described on the electronic data entry forms, or listed on the field sheet and custody sheet were not followed or submitted as described • Electronic data entry forms verified and distributed appropriately, paper copies retained and invoiced properly to lab, Project Manager, and sampling agency.			
9. Cleaning log: • Type and date of analyte free water • Date of lab cleaning • Time and date of field cleaning • Piece(s) of equipment • Procedure • Name of personnel performing cleaning			

Documentation (FD1000) (continued)	Yes	No	NA
10. Standards / Buffers / Reagents log: • Concentration, lot numbers, date of receipt, expiration date, vendor and initial date of use recorded for all reagents, detergents, solvents, and chemicals (recorded in log and on containers). • Were standards that were used beyond the expiration date verified and documented for acceptance? • Were certificates of assay retained for any standard or buffer *not* supplied by the DEP Laboratory?			
11. Equipment Maintenance log: • Unique ID for equipment • Maintenance and repair procedures • Routine cleaning procedures • Filling solution replacement for probes • Parts replacements for probes • Date procedures performed on each unit • Names of personnel performing maintenance and repair • Descriptions of malfunctions and repair • Information regarding rental equipment (dates of use, type, description, etc.) • Vendor service (vendor, date, type of service, etc.) • Were manufacturer operation and maintenance manuals and instructions retained?			

Field Quality Control (FQ 1000)	Yes	No	NA
1. Blank collected in same manner as samples and represent normal sampling conditions. Circle one: a) Precleaned EB b) Field cleaned EB c) Field blank (no equipment)			
2. Blanks were collected at the appropriate frequency and the correct type of blank was collected (precleaned or field-cleaned equipment blank or field blank).			
3. Extra bottles for lab matrix spikes were collected at required frequency (if applicable).			

***COMMENTS:**

Field Testing and Calibration (FT 1000 - FT 1600)	Yes	No	NA
1. All instruments or meters met DEP SOP specifications for accuracy, reproducibility and design.			
2. All applicable parameters were corrected for temperature and/or salinity (where applicable) either manually or automatically.			
3. Sample measurements were chronologically bracketed between acceptable calibration verifications for all parameters.			
4. Sample measurements were quantitatively bracketed for all parameters between acceptable calibration verifications (except for ambient conductivity readings that are less than 100 umhos/cm).			
5. An initial calibration verification was performed for each parameter immediately after initial calibration.			
6. If the ICV fails to meet acceptance criteria, the instrument is immediately recalibrated or removed from service.			
7. If any CCVs fail, additional attempts are made to meet the acceptance criteria or the instrument is recalibrated.			
8. Meter was rinsed with DI water between standards and allowed to stabilize before recording readings.			
9. pH was calibrated first with the 7 buffer, then a 4 or 10, depending on the expected sample range.			
10. Calibration verifications for pH were within ±0.2 su.			
11. pH millivolts (or % theoretical slope), DO charge, and DO gain checked at least weekly.			
12. Calibration verifications for conductance were within ± 5%.			
13. Calibration verifications for DO were within ± 0.3 mg/L DO when compared to the table of theoretical values for solubility of oxygen in water.			
14. DO electrode was stored in a water saturated air environment when not in use.			
15. Initial calibration of turbidimeter was performed quarterly using at least two primary standards (formazin) and met acceptance criteria for NTU range.			
16. For turbidity, at least one primary standard was used for the initial calibration verification.			
17. For turbidity, secondary gel standards were verified quarterly immediately after the initial calibration verification (if applicable).			
18. For turbidity, all continuing calibration verifications were performed using secondary gel standards (or factory-sealed primary formazin standards).			
19. Calibration verifications for turbidity met acceptance criteria for NTU range.			
20. Sample cells were inspected for scratches, cleaned as necessary and placed correctly in turbidimeter (fingerprints were removed with a lint-free wipe).			
21. Sample cells were rinsed and/or washed properly between calibrations and sample collections.			
22. Temperature was verified quarterly (against NIST-traceable thermometer with valid certificate) at a minimum of two temperatures and met acceptance criteria of ±0.5 ˚C.			
23. Lines used for secchi & depth measurement checked every 6 months and remarked as needed. (only applicable to surface water projects)			
24. Depth sensors in multi-parameter meters zeroed daily. All electronic depth sensors verified quarterly by comparing to reference device. (only applicable to surface water projects)			
25. Sample measurements are qualified with a "J" if instrument calibration can not be properly verified or if readings are not properly bracketed.			
26. All sample measurements were not collected until meter readings stabilized.			

***COMMENTS:**

General Sampling Procedures (FS 1000, FS 2000), Miscellaneous	Yes	No	NA
1. Paperwork, supplies, and equipment were inventoried, and in working condition before going into the field.			
2. Most recent version of electronic data entry forms, field sheets, and custody sheets were used.			
3. Sampling manual was in the field vehicle (and on the boat, if applicable).			
4. Sampling equipment & bottles were clean & appropriate. Equipment was in working order.			
5. Analyte free water was less than 1 week old (and dated).			
6. Samples were collected in the order listed on electronic data entry forms, or on the sample details page of the field sheet and custody sheet.			
7. Care was taken to avoid contamination of samples.			
8. Samplers wore gloves and changed as necessary.			
9. Containers were not prerinsed, especially if prepreserved.			
10. Samples were properly preserved within 15 minutes.			
11. pH was tested on preserved samples; paper was not inserted into bottle.			
12. Personal protective equipment was used when working with acid preservatives.			
13. Samples were properly filtered if necessary.			
14. Wastes generated as a result of the sampling project were containerized and stored for proper disposal. Waste containers properly labeled.			
15. Headspace was left in all sample containers and all samples were filled with appropriate amount of sample.			
16. Samples were packed properly. • All samples placed together in large bag, protected from ice • Custody sheet completed, verified, distributed electronically, and/or bagged and placed in cooler			
17. At least one sampler on site has attended Sampler Training Workshop			

Surface Water Sampling (FS 2100)	Yes	No	NA
1. Samples were collected upwind from power sources, if applicable.			
2. Samples were collected on upstream side of bridge (unless historic sampling location for Trend requires different position), body or boat without disturbing the sediments.			
3. Water samples were collected prior to sediment samples (if any).			
4. Intermediate collections devices were well rinsed with sample water; rinse water was discarded away from sample site.			
5. Bacteria containers collected as grab samples OR collected from an intermediate collection device without interruption of the flow.			
6. Sample containers were submerged neck first, inverted into flow, slowly filled and returned to surface (if sample containers were used as collection device).			
7. Samples collected from intermediate collection devices using technique that minimized settling of particulates.			
8. Field parameters were measured at appropriate depth(s).			
9. Water depth was at least 10 cm.			
10. Water samples were collected at the appropriate depth and corresponded with field parameter measurement depth.			
11. Sample was collected at correct location in waterbody.			
12. Total depth, secchi depth, and sample collection depth were measured to nearest 0.1m (or nearest 0.01m if total depth < 0.6m).			
13. Secchi depth was measured on shaded side of boat / body, and sunglasses were removed.			

***COMMENTS:**

Sediment Sampling (FS 4000)	Yes	No	NA
1. Lake was at least 1m deep at its deepest point.			
2. Samples were collected in the proper location.			
3. Surface water samples were collected prior to sediment samples.			
4. A minimum of 3 grabs were collected.			
5. Standing water was siphoned off before transferring to the sample jar.			
6. Only the top 3-5cm of sediments were transferred to the sample jar.			
7. Sample jar was filled to required level (2/3 full for 500mL jar; 1/2 full for 1L jar).			
8. For flocculent sediments, the sample was collected from below the top layer.			

Groundwater Sampling (FS 2200)	Yes	No	NA
1. Any standing water was removed from well head.			
2. Depth to water was measured to nearest 0.01 ft without sounding the bottom.			
3. Well volume was correctly determined.			
4. Depth to water was measured at intervals during purging. Drawdown was stabilized so pumping rate matched recharge rate.			
5. Pump or tubing was placed at top of water column.			
6. Generator was positioned downwind from well, if applicable.			
7. Whenever possible, a variable-speed pump was used.			
8. If a centrifugal pump (purging only) or submersible pump (purging or sampling) was used, a check valve was installed to prevent backflow.			
9. If a peristaltic pump was used, a 1-foot max length of silicone tubing was installed in the peristaltic pump head assembly.			
10. A closed flow cell was used to measure stabilization.			
11. At least one well volume (plus storage tank, if applicable) was purged **before** beginning purge stabilization measurements and at least 1/4 well volume was purged between measurements.			
12. Purging completion was measured as: • DO ≤ 20%. If DO ≥ 20%, reasons were justified and consecutive measurements were within the greater of ± 0.2 mg/L or 10% • Turbidity ≤ 20 NTU. If turbidity ≥ 20 NTU, reasons were justified and consecutive measurements were within the greater of ± 5NTU or 10% And at least three consecutive measurements of the following parameters were within stated limits: • temperature ± 0.2° C • pH ± 0.2 su • specific conductance ± 5.0% of reading			
13. If well failed to meet stabilization criteria after 5 well volumes, all instruments, equipment, tubing, etc. were tested and found functional before collecting sample.			
14. Low permeability well was purged at low flow rate. If well purged dry, well was allowed to recover before sample was collected.			
15. Pump and tubing decontaminated between wells or replaced at each well.			
16. A new filter was properly flushed with sample water before collecting filtered samples.			
17. For wells with in-place plumbing, purging and sampling was upstream of storage tanks where possible.			
18. Flow rate was reduced to less than 500mL/minute (1/8" stream) or 0.1 gal/min before collecting samples.			

*COMMENTS: