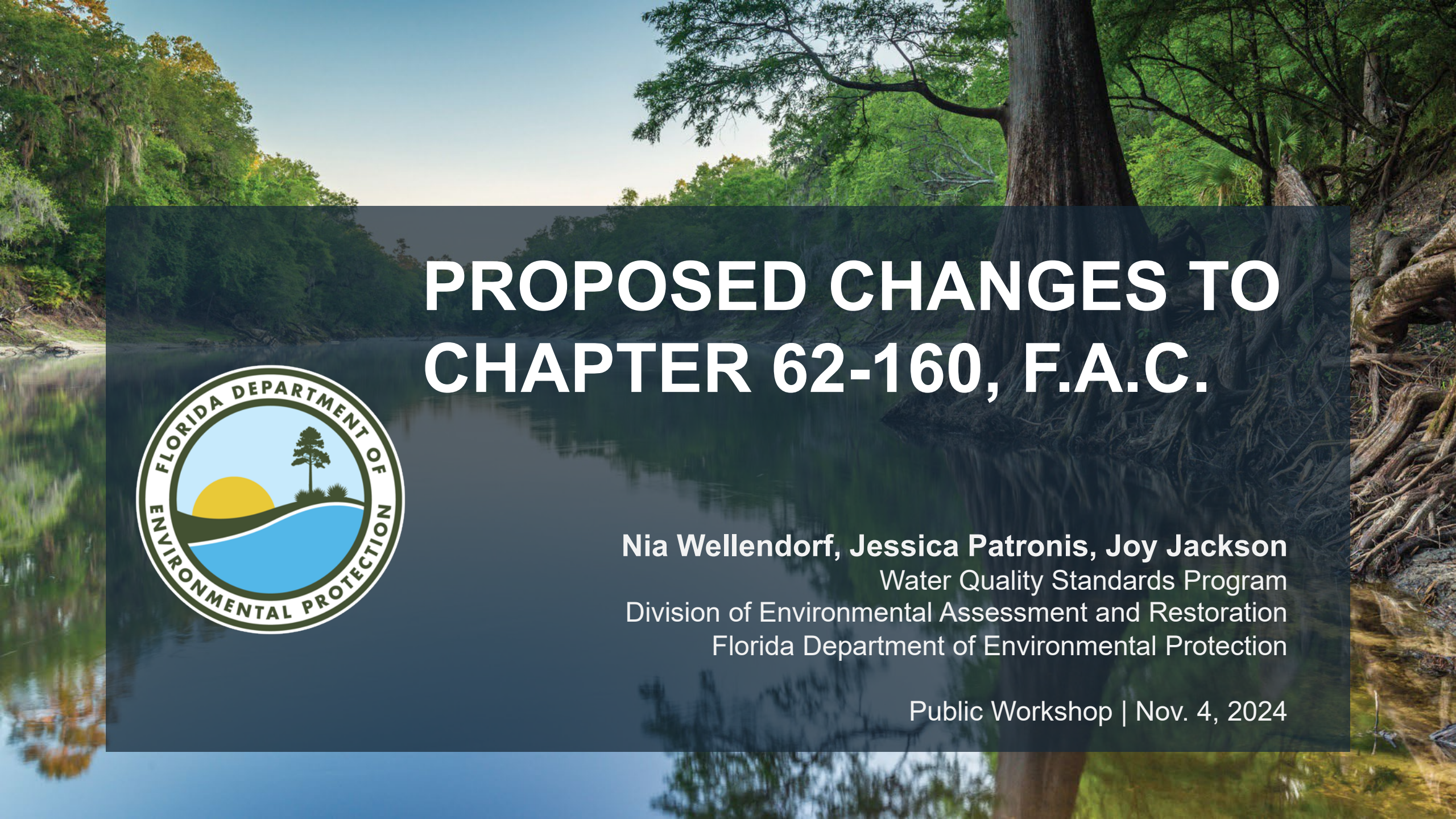


PROPOSED CHANGES TO CHAPTER 62-160, F.A.C.

Nia Wellendorf, Jessica Patronis, Joy Jackson
Water Quality Standards Program
Division of Environmental Assessment and Restoration
Florida Department of Environmental Protection

Public Workshop | Nov. 4, 2024

WORKSHOP/WEBINAR LOGISTICS

Public workshop webinar will be recorded, and all questions and comments will be part of public record.

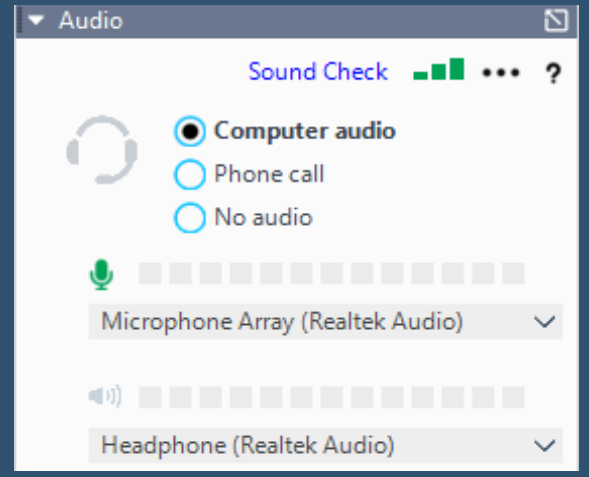
To join the audio, you can use the **Computer Audio** or **Phone Call** option.

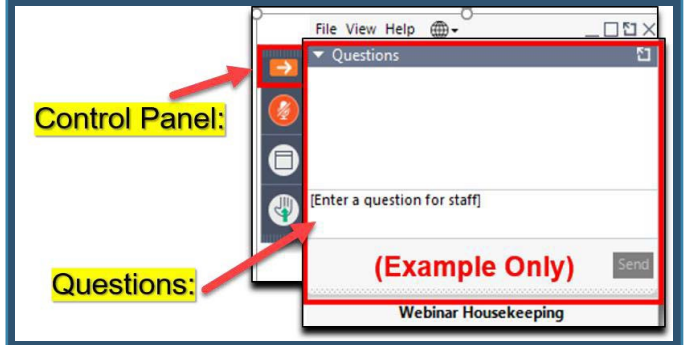
Questions:

- Answered at end of each presentation section.
- Webinar participants will be muted during presentations.
- To ask questions, please type your questions in the question box.

Public comments:

- Taken at end of public workshop.
- Webinar participants will use "raise hand" function and wait to be unmuted.
- Provide your name and affiliation before providing your public comment.
- Written comments can be typed in question box or submitted through the comment survey.





PRESENTATION OUTLINE

Introduction.

Rulemaking Schedule.

Summary of Proposed Changes:

- Focus Topics.
- General/Editorial.
- Chapter 62-160, Florida Administrative Code (F.A.C.).
- Incorporated Documents.
- Standard Operating Procedures.

Comment Process.

Public Comments.

CHAPTER 62-160, F.A.C., PURPOSE

62-160.110 Purpose, Scope and Applicability.

(1) The purpose of this chapter is to assure that chemical, physical, biological, microbiological and toxicological data used by the Department are appropriate and reliable, and are collected and analyzed by scientifically sound procedures. To this end, this chapter defines the minimum field and laboratory quality assurance, methodological and reporting requirements of the Department.

(2) Except as provided in subsection (3) of this rule, this chapter shall apply to all programs, projects, studies or other activities that are required by the Department, and that involve the measurement, use or submission of environmental data or reports to the Department. This chapter shall apply to all entities that participate in the process of generating environmental data. This process includes, but is not limited to: field activities (sample collection, sample preservation, field measurements, and site evaluation); sample handling, storage and/or transport (except common carriers); laboratory activities (e.g., sample receipt, analysis, data review and data validation); additional data review, summaries or data presentation activities; and all activities that impact data quality such as providing sample containers, instrument calibration services, or reagents and standards (except commercial vendors).

(3) Programs, projects, studies or activities pertaining to air quality, meteorology, atmospheric radiation, atmospheric noise, electric and magnetic fields or air pollutant emissions, and having no requirements for monitoring contamination of soil, water, or tissue are excluded from the scope of this chapter.

DEP QUALITY ASSURANCE (QA) RULEMAKING SCHEDULE

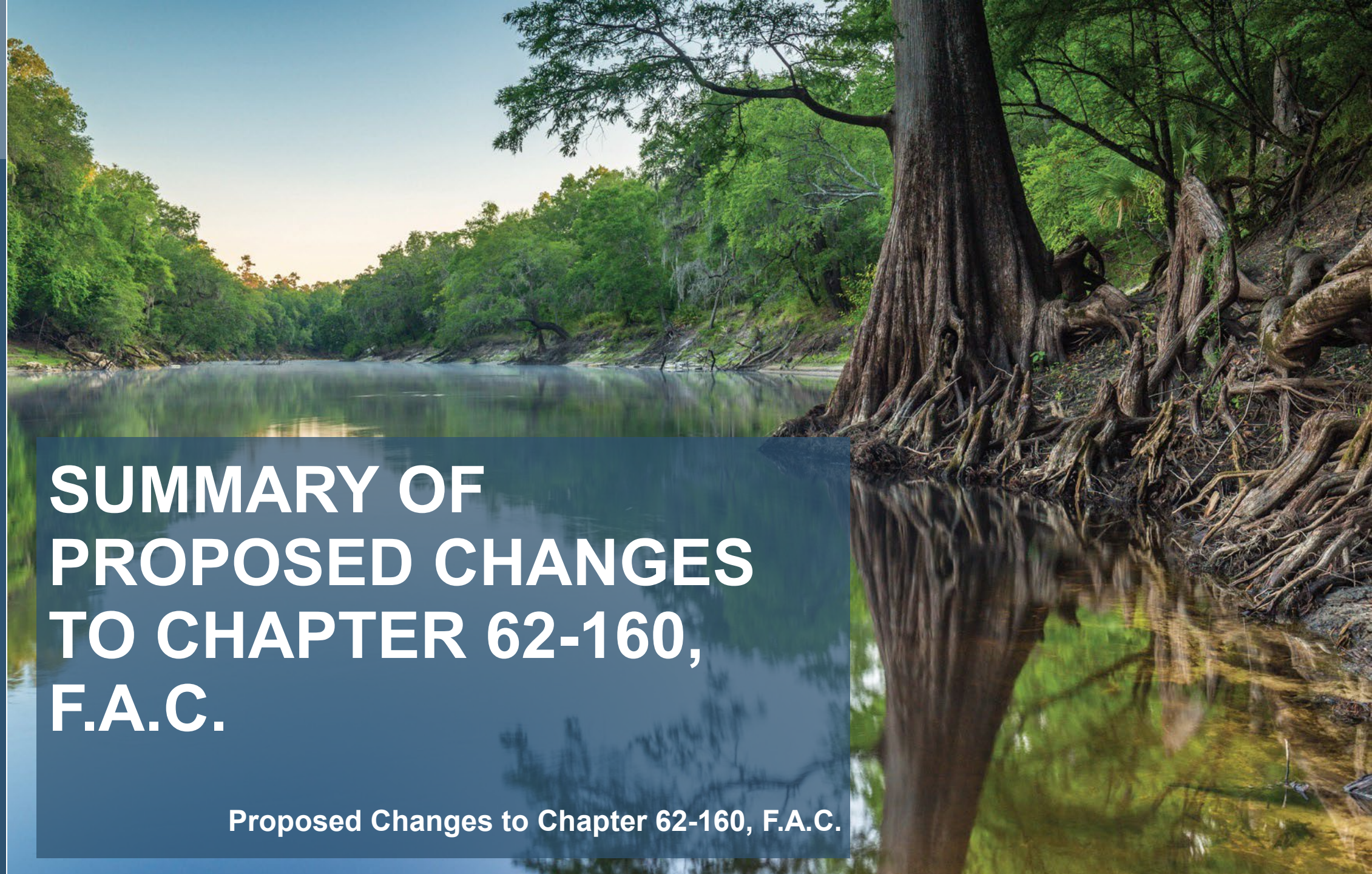
- 7/17/2024 - Published Notice of Rule Development for Chapter 62-160, F.A.C., including the QA rules, field sampling Standard Operating Procedures (SOPs) and other incorporated documents.
  - 10/18/2024 - Posted draft revisions to webpage.
  - 11/4/2024 – Public workshop.
  - Invite public comment until 11/27/2024.
  - Evaluate public comment and make revisions as needed.
- 2025 – Hold additional public workshop if needed. Issue a Notice of Proposed Rule by 7/17/2025.

TOPICS OF FOCUS

- Alternative method that involves a field probe method in place of a laboratory method (e.g., nutrient probes) (Rule 62-160.220; FA 2000).
- Per- and Polyfluoroalkyl Substances (PFAS) field collection (FA 1000, FC 1000, FQ 1000, FS 1000, FS 2000).
- Field Testing Requirements for:
  - Turbidity probes (FT 1620).
  - Total suspended solids (TSS) probes (FT 1630).
  - Transparency measurements (FT 1710).
  - Continuous monitoring with field meters in surface waters (FT 1920).
  - Amperometric inline chlorine meters for reclaimed water (FT 2050).
  - Ultraviolet optical nitrate sensors (FT 2100).

GENERAL AND EDITORIAL PROPOSED CHANGES

- Updating references to other rules, regulations, methods and SOPs.
  - 2016 NELAC Standards (2003).
  - 9-26-2018, DOH Rule 64E-1.102, F.A.C. (1-24-05).
  - CIO 2105-S-02.1 Quality Assurance Project Plan Standard (EPA QA/R-5).
  - Definition and Procedure for the Determination of the Method Detection Limit, Revision 2 (Revision 1.11).
  - Analytical method list in 40 CFR 136 (Revision effective 7/16/2024)
  - Chlorophylls, SM 10150 (SM 10200 H).
  - Dissolved Oxygen, SM 4500-O 2016 (SM 4500-O 2011).
- Fixing incorrect numbering.
- Adding clarifying language.
- Making grammatical and editorial revisions.



SUMMARY OF PROPOSED CHANGES TO CHAPTER 62-160, F.A.C.

Proposed Changes to Chapter 62-160, F.A.C.

RULE SECTIONS THAT CONTAIN PROPOSED CHANGES AND CLARIFICATIONS

62-160.110 Purpose, Scope and Applicability
62-160.120 Definitions and Standards
62-160.210 Approved Field Procedures
62-160.220 Approval of Alternative and Modified Field Procedures
62-160.240 Record Keeping and Reporting Requirements for Field Procedures
62-160.300 Laboratory Certification
62-160.320 Approved Laboratory Methods
62-160.330 Approval of Alternative and Modified Laboratory Methods
62-160.340 Recordkeeping and Reporting Requirements for Labs
62-160.400 Sample Preservation and Holding Times
62-160.600 Research Field and Laboratory Procedures
62-160.650 Field and Laboratory Audits
62-160.670 Data Validation by the Department
62-160.700 Data Qualifier Codes (Table 1)
62-160.800 Documents Incorporated by Reference

CHAPTER 62-160, F.A.C.

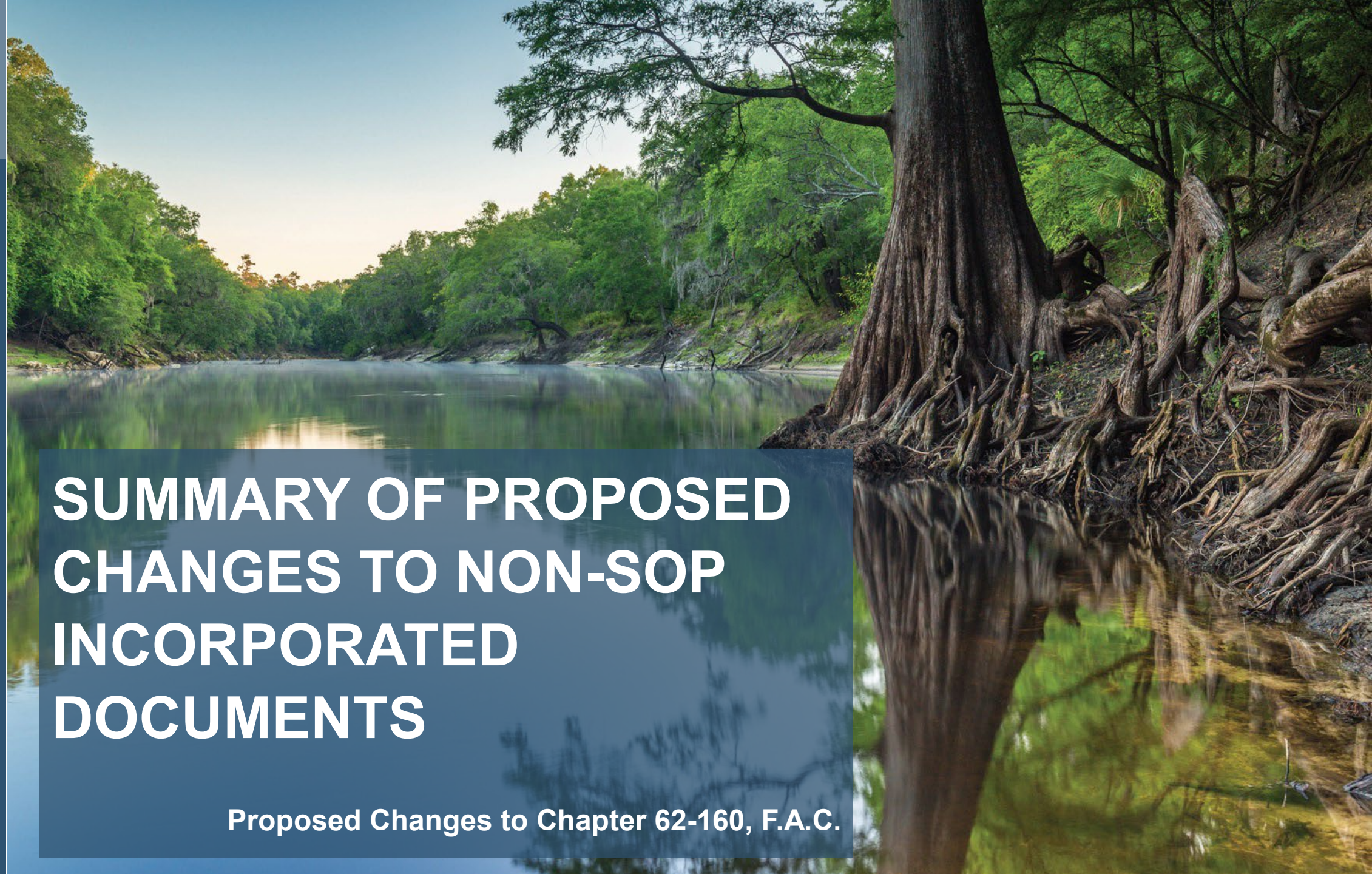
- Updating references to other rules and regulations.
- Updating dates of incorporated documents.
- 62-160.210: Approved Field Procedures
  - Adding: “For activities not included in the DEP SOP collections, methods specified in Department rules, permits, contracts, or order shall be used. If methods are not specified in Department rules, permits, contracts, or orders, and activities are not included in the DEP SOP collections, any method that satisfies data quality objectives established for the Department project may be used upon approval by the DEP project manager.”
- 62-160.220: Alternative Field Procedures
  - Adding that any person that wishes to use a field procedure in place of a laboratory procedure shall follow the requirements provided in this rule, DEP SOP FA 2000, and the Alternative and Modified Analytical Laboratory Methods (DEP-QA-001/01) incorporated document.

CHAPTER 62-160, F.A.C.

- 62-160.320: Approved Laboratory Methods
  - Proposing to require labs to use certain chlorophyll methods when submitting data to the department. Allows other methods to be used if they are specified in Department rule, contract, order, or permit.
- 62-160.340: Laboratory Documentation
  - Proposing revision: “Sample preparation and analysis information including date and time if the holding time is less than or equal to 72 hours **or if data will be entered into the Watershed Information Network (WIN)**.”
  - Only applied to preparation if preparation date and time is required in WIN.
- 62-160.650: Field and Laboratory Audits
  - Adding a note for field and lab audits: “Failure to provide requested records may result in a recommendation that the affected Department program not use project data.”

CHAPTER 62-160, F.A.C.

- 62-160.700: Data Qualifiers
  - Proposing to combine lab and field qualifiers into one table.
  - Clarifying qualifier definitions: D, L, Q, T, Y.
  - Expanding definition of "H" to include unapproved field testing procedure used in place of laboratory procedure.
  - Adding language for continuous monitoring: J, ?.
  - Proposing an additional qualifier for continuous monitoring to indicate corrected data: C.
  - Expanding definition of “Z” to include enzymatic substrate methods:
    - “Too many colonies were present for accurate reporting. **Report this qualifier code and the dilution factor when all wells of the tray are positive in all dilutions of the sample tested. Result must be reported as the limit of the tray.”**



SUMMARY OF PROPOSED CHANGES TO NON-SOP INCORPORATED DOCUMENTS

Proposed Changes to Chapter 62-160, F.A.C.

ALTERNATIVE AND MODIFIED ANALYTICAL LABORATORY METHODS (DEP-QA-001/01)

- Updating the definition of MDL to reflect the U.S. Environmental Protection Agency's (EPA) updated definition (EPA rev 2, 2016).
- Revising Appendix B-1 formulas for calculating precision and accuracy to match calculations in Process for Assessing Data Usability Document (DEP-EA 001/07).
- Updating Appendix B-2a. to reflect new EPA MDL procedure (EPA rev 2, 2016).

PROCESS FOR ASSESSING DATA USABILITY DOCUMENT (DEP-EA 001/07)

- Updating references to 2016 TNI Standard.
- Clarifying definitions for Quality Control (QC) components (matrix spikes, laboratory control samples, surrogate spikes, duplicates, replicates) to be more in line with current expectations.
- Updating generally applicable requirements for lab instrument calibration per 2016 TNI Standard (section 8.1.5).
- Adding DEP's hold time interpretation released via Quality of Science Newsletter, 10/23/2018 (section 11).
  - For all DEP programs, holding times specified in hours are evaluated to the minute.
  - For some DEP programs, holding times specified in days are evaluated to the minute.
- Adding appendices with definitions and calculations.

TNI: The National Environmental Laboratory Accreditation Conference (NELAC) Institute

APPLICABILITY OF CHLOROPHYLL *a* METHODS (DEP-SAS-002/10)

- Proposing to incorporate it into 62-160.320(7).
  - Currently incorporated into 62-302 and 62-303, F.A.C.
  - Requires laboratories analyzing for chlorophyll *a* to use one of the following methods:
    - Chlorophyll *a*, corrected for pheophytin: Spectrophotometric method with acidification, according to EPA 446.0 or SM 10200 H.2.b.-2011 or 10150 B-2022.
    - Chlorophyll *a*, corrected for pheophytin: Conventional fluorometric method with acidification, according to EPA 445.0 or SM 10200 H.3.-2011 or 10150 C-2022.
    - Chlorophyll *a*, free of pheophytin: Modified fluorometric method, using special, narrow-bandpass filters to eliminate spectral interference from pheophytin and chlorophyll *b*, according to EPA 445.0.
    - Chlorophyll *a*, free of pheophytin: HPLC (High Performance Liquid Chromatography), pigment separation and analysis according to EPA 447.0 or SM 10200 H.4.-2011 or SM 10150 D-2022.

STREAM CONDITION INDEX (SCI) PRIMER

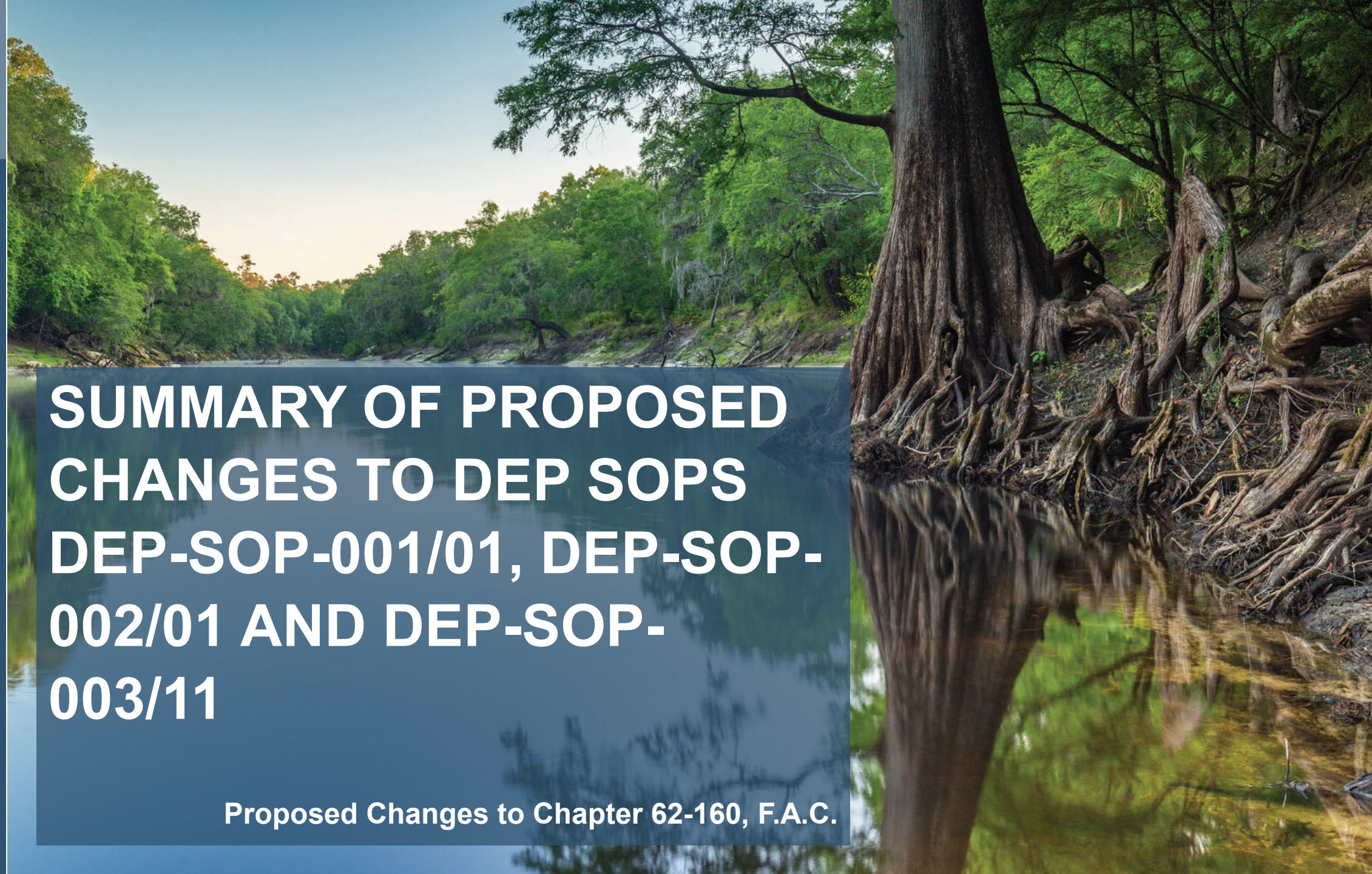
- Removing text duplicated in Numeric Nutrient Criteria (NNC) Implementation Document and/or SOP SCI 1000.
- Expanding upon descriptions of SCI metrics.
- Adding information regarding sampling of large river systems.
- Adding information regarding identification and sampling of nonperennial systems.

LAKE VEGETATION INDEX (LVI) PRIMER

- Updating the name of the Florida Exotic Pest Plant Council (FLEPPC) to Florida Invasive Species Council (FISC).
- Adding guidance for how to conduct the LVI in lakes that have natural or artificial divisions.
- Updating proficiency requirement description per revisions to DEP SOP LVI 1000.
- Proposing minor clarifications and editorial revisions.
- Updating webpage references.

QA RULE AND INCORPORATED DOCUMENTS

Question Period.



SUMMARY OF PROPOSED CHANGES TO DEP SOPS DEP-SOP-001/01, DEP-SOP-002/01 AND DEP-SOP-003/11

Proposed Changes to Chapter 62-160, F.A.C.

DEP SOP COLLECTION DEP-SOP-001/01

FA 1000 Administrative
FC 1000 Field Decontamination
FD 1000 Documentation
FM 1000 Field Mobilization
FQ 1000 Quality Control
FS 1000 General Sampling
FS 2000 General Water Sampling
FS 2100 Surface Water Sampling
FS 2200 Groundwater Sampling
FS 2300 Drinking Water Sampling
FS 2400 Wastewater Sampling
FS 3000 Soil Sampling
FS 4000 Sediment Sampling
FS 5000 Waste Sampling
FS 6000 Tissue Sampling
FS 7000 Biological Communities
FS 8100 Contaminated Surfaces Sampling
FS 8200 Clean Sampling for Trace Metals

DEP SOP FA 1000

- FA 2000: Proposing changes according to Rule 62-160.220 (Alt/Mod Field Procedures). Adding requirements for use of a field testing procedure in place of a laboratory procedure. A Validation Package according to FA 2242 will be required for approval:
  - Applicability and Scope of Alternative or Modified Procedure.
  - Initial Demonstration of Capability and Equivalency Study.
    - Method detection limit study.
    - Verifications with standards checks.
    - Equivalency Study: Collect at least 30 side by side grab samples for laboratory analysis of the analyte being measured by the probe, across the range of concentrations sought for approval.
  - Ongoing Demonstration of Capability to include calibration curve, MDL checks and comparisons with grabs samples at frequency appropriate for the project. Also, conduct matrix spikes using the ambient water tested and certified standards at a frequency appropriate for the project.

DEP SOP FA 1000

- FA 5720: Proposing revised requirements for Stream and River Habitat Assessment (HA) proficiency testing process.
  - For HA, visit three benchmark sites and pass two of three.
  - To maintain “Pass” status, individuals shall make a proficiency demonstration every five years.
  - Proposing addition of an online test for HA proficiency.
- FA 5730: Proposing addition of an online test requirement for Rapid Periphyton Survey proficiency.
- FA 5740: Proposing addition of an online test requirement for Linear Vegetation Survey proficiency.

DEP SOP FA 1000

- Tables FA 1000-2 and FA 1000-3: Adding PFAS as a new analyte group. Adding cyanotoxins to the examples for the extractable organics analyte group.
- Appendix FA 1000: Revising Audit Checklists to match requirements in FD 1000 and associated SOPs.
- Appendix FA 1000: Revising Glossary to match definitions in Chapter 62-160, F.A.C., and Data Usability Document (DEP-EA 001/07).

DEP SOPS FC 1000, FD 1000, FM 1000

- **FC 1000 Cleaning/Decontamination Procedures:**
  - Adding specific instructions related to PFAS sample collection.
- **FD 1000 Documentation:**
  - Revising to match documentation requirements listed in individual SOPs and field sheets.
    - FD 5320 Stream and River Physical/Chemical Characterization.
    - FD 5330 Lake Observation (FT 3002) (Physical/Chemical Characterization).
    - FD 4300 for Continuous Monitoring with Field Meters.
- **FM 1000 Mobilization:**
  - Only proposing minor clarifications and editorial revisions.

DEP SOP FQ 1000

- **FQ 1000 Quality Control:**
  - Adding PFAS to the list of analytes and groups for which blanks are required.
  - Clarifying language for the collection of field duplicates and equipment blanks.
  - Adding “Note: Analytical methods or programs may have more stringent requirements for collection of QC samples including field blanks, equipment blanks, trip blanks and/or duplicates.”

DEP SOP FS 1000

- **FS 1000 General Sampling Procedures:**
  - Incorporating considerations for PFAS
    - FS 1003 Protective Gloves: “In the case of PFAS sampling, new powderless nitrile gloves must be worn when filling and sealing the sample bottles.”
    - Appendix Tables:
      - References: EPA 8327, EPA 1633, EPA 537.1 and EPA 533.
      - Required sample container material: Polypropylene and/or high-density polyethylene (HDPE), method dependent.
      - Required equipment material: Stainless steel, polypropylene and/or HDPE.
      - Preservation and holding times method-dependent.

DEP SOP FS 1000

TABLE FS 1000-5

Excerpt from Table FS 1000-5

Approved Water and Wastewater Procedures, Containers, Preservation and Holding Times for Analytes Not Found in 40 CFR 136

Analyte	Methods	Reference	Container	Preservation	Maximum Holding Time
Per- and Polyfluoroalkyl Substances	LC/MSMS	EPA 8327	PP, HDPE	Cool ≤6°C from collection to analysis	14 days until extraction; 30 days after extraction
Per- and Polyfluoroalkyl Substances	LC/MSMS	EPA 1633	HDPE	Cool ≤6°C in dark to transport	28 days in dark 0-6°C or 90 days in dark ≤-20 °C until extraction, 90 days at <6°C after extraction

DEP SOP FS 1000

TABLE FS 1000-6

Excerpt from Table FS 1000-6

Recommended Sample Containers, Sample Volumes, Preservation Techniques and Holding Times for Residuals, Soil and Sediment Samples

Analyte	Methods	Reference	Container	Preservation	Maximum Holding Time
Per- and Polyfluoroalkyl Substances	LC/MSMS	EPA 1633	Plastic	Cool ≤6°C for transport; ≤-20°C upon receipt; extracts ≤6°C	90 days in dark until extraction; 90 days until analysis

DEP SOP FS 1000

TABLE FS 1000-8

Excerpt from Table FS 1000-8

Containers, Preservation and Holding Times for Drinking Water Samples that Differ from CFR 136, Table II

Analyte or EPA or Standard Method Number	Preservation	Holding Time	Preservation and Holding Time for Extract	Container
EPA Method 537.1 Per- and Polyfluoroalkyl Substances, Version 2.0	Trizma®, pH 7.0, 5.0g/L. Cool <10°C during transport. Keep at lab <6°C until extraction, never freeze	14 days until extraction	28 days after extraction	Polypropylene
EPA Method 533 Per- and Polyfluoroalkyl Substances	$NH_4CH_3CO_2$ to $1 g/L$; Cool <10°C during transport. Keep at lab <6°C until extraction, never freeze	28 days until extraction	28 days after extraction	Polypropylene, Polyethylene (PFAS-free)

DEP SOP FS 1000

TABLE FS 1000-9

Excerpt from Table FS 1000-9

Containers, Preservation and Holding Times for Biosolids Samples and Protozoans

Analyte Name	Container	Preservation	Maximum Holding Time
Per- and Polyfluoroalkyl Substances	Plastic (certified PFAS-free)	≤6°C (Do not freeze) until receipt; ≤-20°C upon receipt and after extraction	90 days until extraction; 90 days in dark from extraction to analysis

DEP SOP FS 1000

TABLE FS 1000-10

Excerpt from Table FS 1000-10

Container Materials, Preservation and Holding Times for Fish and Shellfish

Analyte	Matrix	Sample Container	Field Preservations	Maximum Shipping Time (Transport to Lab)	Laboratory Storage	Laboratory Holding Time
Per- and Polyfluoroalkyl Substances	Whole Organism (Fish, shellfish, etc.)	Plastic or Foil-wrap (certified PFAS-free)	Cool in wet ice or Freeze on dry ice	24 hours or 48 hours	Freeze at <-20°C	90 days in dark until extraction; 90 days after extraction

DEP SOP FS 1000

- **FS 1000 General Sampling Requirements:**
  - Appendix Tables:
    - Adding Fifth Unregulated Contaminant Monitoring Rule (UCMR5) methods/compounds to preservation and hold times tables, including Haloacetic Acid and Dalapon by EPA Method 552.3 to FS 1000-8.
    - Updating Table FS 1000-series due to changes in 40 CFR 136.3.
    - Revising footnote 5 of Table FS 1000-4 to clarify that sodium thiosulfate should only be added to certain samples if residual chlorine is known or suspected to be present.
    - Revising FS 1000 tables as needed to change temperature preservation requirements from 4±2°C to ≤6°C.
    - Making corrections to Table FS 1000-7 to match associated method reference to SW 846 Method 5035A.

DEP SOP FS 2000

- **FS 2000 General Aqueous Sampling:**
  - Adding requirements for bacteriological samples (FS 2005): The sample container must "have adequate volume to analyze one undiluted sample and one diluted sample, typically 125 mL, as required by the method."
  - Adding sampling procedures for PFAS (FS 2011).
    - Avoid personal protective equipment and field supplies that may include PFAS which could contaminate field samples.
    - Sample containers must be made of PFAS free polypropylene or HDPE. Intermediate devices can also be made of stainless steel.
    - Preservation varies by matrix and method. Preserve samples according to Tables FS 1000-5, -6, -8, -9 and -10.
      - Preserve the sample within 15 minutes of sample collection. Place all samples in the dark and on wet ice immediately after sample collection.
    - PFAS have multiple holding times. Consult Tables 1000-5, -6, -8, -9 and -10.
  - Adding equipment material requirements for extractable organics for surface water.

DEP SOPs FS 2100, FS 2200

- **FS 2100 Surface Water Sampling:**
  - Adding equipment material requirements for extractable organics for surface water.
- **FS 2200 Groundwater Sampling:**
  - Proposing minor clarifications.
  - Adding FD 9000-24 Field Sheet or other datasheet to capture documentation requirements.
  - Adding FS 2218 for purging requirements for Underground Injection Control wells.

DEP SOPs FS 2300, FS 2400

- **FS 2300 Drinking Water Sampling:**
  - Proposing minor clarifications.
  - Proposing additional section for PFAS sampling requirements.
- **FS 2400 Wastewater Sampling:**
  - Proposing minor clarifications and editorial revisions.
  - Updating informational reference to EPA wastewater procedure and clarifying its requirement to check the flow measurement system.

DEP SOPs FS 3000 – FS 5000

- **FS 3000 Soil Sampling:**
  - Adding type 1-L Portland cement as example of cement type to use to grout the hole to land surface in the case of a breach of the confining layer during sampling.
  - Proposing edits to align with FS 1000 tables (changed preservation temperature from 4±2°C to ≤6°C).
- **FS 4000 Sediment Sampling:**
  - Clarifying cited method for porewater sampling.
  - Proposing edits to align with FS 1000 tables (changed preservation temperature from 4±2°C to ≤6°C).
- **FS 5000 Waste Sampling:**
  - Proposing minor clarifications and editorial revisions.

DEP SOPs FS 6000

- **FS 6000 General Biological Tissue Sampling:**
  - Updating optional references.
  - Reducing the minimum number of organisms required for DOH mercury advisory purposes from twelve to eight.
  - Proposing edits to align with FS 1000 tables (changed preservation temperature from 4±2°C to ≤6°C).

DEP SOP FS 7000

- **FS 7000 Bioassessment Procedures:**
  - FS 7110 Phytoplankton Sample Collection:
    - Removing Scum Sample Core method.
  - FS 7230 Rapid Periphyton Survey (RPS):
    - Proposing revised application of the RPS method for the stream numeric nutrient standard based on DEP statistical analyses.
    - Adding proficiency requirement for online test every five years.
    - Adding detail to RPS method for use of ViewScope.
    - Adding requirement for comment when “X” is used for the RPS.
  - FS 7320 Linear Vegetation Survey (LVS):
    - Adding proficiency requirement for online test every five years.

DEP SOPs FS 8100 – FS 8200

- **FS 8100 Contaminated Surface Sampling:**
  - Proposing minor clarifications and editorial revisions.
- **FS 8200 Clean Sampling for Ultratrace Metals in Surface Waters:**
  - Proposing minor clarifications and editorial revisions.

DEP SOPS: FA – FS SERIES

Question Period.

10-Minute Break.

DEP SOP Collection DEP-SOP-001/01

FT 1000 Field Testing General

FT 1100 Field pH

FT 1200 Field Specific Conductance

FT 1300 Field Salinity

FT 1400 Field Temperature

FT 1500 Field Dissolved Oxygen

FT 1600 Field Turbidity and TSS

FT 1700 Field Light Penetration

FT 1800 Field Flow Measurements

FT 1900 Field Continuous Monitoring

FT 2000 Field Residual Chlorine

FT 2100 Field Nitrate Using Ultraviolet Optical Sensors

FT 3000 Habitat Assessment

DEP SOPs FT 1000, FT 1100

- **FT 1000 General Field Testing:**
  - Adding: “When determining if acceptance criteria are met, the calculated difference between the expected value and the meter value should be expressed with the same precision as the acceptance criteria.”
  - Adding acceptance criteria for turbidity standards <0.1 NTU/FNU.
  - Adding FNU to Table FT 1000-1 Field Testing Acceptance Criteria.
- **FT 1100 Field pH:**
  - Adding language to General Concerns section regarding pH buffer values at different temperatures and use of automatically temperature-adjusting meters.
  - Clarifying use of fresh buffer when rinsing prior to calibration; use of fresh buffer not required when rinsing prior to verifications.

DEP SOPs FT 1200, FT 1300

- **FT 1200 Field Specific Conductance:**
  - Proposing clarifications to distinguish specific conductance and conductivity. “Specific conductance is conductivity temperature-adjusted to 25°C.”
  - Clarifying the requirement to use fresh standard when rinsing prior to calibration; use of fresh standard not required when rinsing prior to verifications.
- **FT 1300 Field Salinity:**
  - Revising to match requirements in FT 1200 Specific Conductance.
  - Clarifying the requirement to document that verifications achieve the quantitative bracketing requirement for salinity.

DEP SOPs FT 1400, FT 1500

- **FT 1400 Field Temperature:**
  - No changes.
- **FT 1500 Field Dissolved Oxygen:**
  - Adding language to General Concerns section regarding use of barometric pressure when determining dissolved oxygen saturation.
  - Adding more detail to Table FT 1500-1 Solubility of Oxygen in Water at Atmospheric Pressure.

DEP SOP FT 1600

- Adding introductory text to describe new sections (FT 1620 and FT 1630).
- **FT 1610 Measurement of Turbidity by Nephelometry (NTU):**
  - Clarifying requirements:
    - "Formazin standards can be either obtained commercially, **as commercial stock formazin polymer microsphere suspensions**, or prepared according to SM 2130B (2011)."
    - "For measurement samples of very low turbidity, select the lowest standard commercially available (**typically 1 to 20 NTU**) for bracketing the lower end of the anticipated sample turbidity range."
    - "**While it is important to choose calibration standards as close as possible to the expected range or environmental measurements, the quantitative bracket may be achieved using a combination of calibration and verification points if a low enough standard is not available for the lowest end of the calibration**."
    - Clarifying allowable uses for turbidity-free water:
      - Rinsing, setting zero point, not for calibration or verification.
    - Adding acceptance criteria for standard value <0.1 NTU.

DEP SOP FT 1600

- **FT 1620 In Situ Measurement of Turbidity by Formazin Nephelometric Units (FNU):**
  - Adding a new section, FT 1620, for in situ turbidimeter probes that use an infrared light source. Results are reported in Formazin Nephelometric Units (FNU).
  - Proposing that FT 1620 shall not be used when collecting samples for NPDES permit compliance or regulatory compliance sampling defined in rules or permits. FT 1620 may be proposed for use in studies that entail comparison measurements (dredge and fill) or unattended deployment for continuous monitoring purposes, with specific department approval.
  - Equipment and Supplies:
    - Nephelometric, non-ratiometric, near-infrared (780-900 nm) turbidimeter probe consisting of a monochromatic light source.
  - Standards:
    - Formazin standards can be either obtained commercially, as commercial stock formazin polymer microsphere suspensions, or prepared according to SM 2130B (2011).
    - Some instruments may require the use of styrene divinylbenzene (SDVB) standards for calibration.

DEP SOP FT 1600

- **FT 1620 In Situ Measurement of Turbidity by FNU Topics:**
  - Calibration and Use.
  - Post-deployment Verification for Data Corrections or Other Uses:
    - Refer to FT 1920 section 5 if data are to be corrected for instrument drift or fouling.
  - Preventative Maintenance.
  - Data Evaluation:
    - Refer to FT 1920 section 6.
  - Documentation.

DEP SOP FT 1600

- **FT 1630 Continuous Measurement of Total Suspended Solids (TSS) by In-line Meter:**
  - Proposing new SOP FT 1630 for continuous measurements of TSS in mg/L [parts per million (ppm)] with installed, in-line sensors meeting specifications described in SOP. It is intended to be used for the continuous in-line monitoring of TSS of wastewater matrices as reclaimed water at domestic wastewater treatment facilities as required by Rule 62-610.320, F.A.C.
  - Equipment:
    - TSS sensor consisting of a light source and one or more photoelectric detectors with a readout device to indicate the intensity of light.
  - Calibration, Initial Demonstration of Capability, Verification and Use:
    - Refer to FT 1910 for calibration and verification requirements.
    - Before reporting data from the TSS sensor, a wastewater treatment facility must collect comparison data and conduct an initial demonstration of capability.
    - The calibrated instrument reading must be no greater than 1.0 mg/L different from the certified lab result.
  - Preventative Maintenance.
  - Documentation.

DEP SOP FT 1700

- **FT 1710 PAR/Transparency:**
  - Proposing major revisions to instructions for direct measurement of photosynthetically active radiation (PAR) at depth, which can be used to calculate the light attenuation coefficient (light extinction coefficient), K_d.
  - Definitions.
  - Equipment and Supplies:
    - Underwater quantum sensor, 2π or 4 π.
    - Air/deck quantum sensor.
    - Detector capable of displaying or logging PAR data from multiple sensors simultaneously.
    - Underwater frame.
  - Calibration and Verification:
    - All sensor must be factory calibrated.
    - Verify sensors prior to operating.

DEP SOP FT 1700

- **FT 1710 PAR/Transparency:**
  - Measuring PAR:
    - Single underwater sensor versus multiple underwater sensors.
    - Deck sensor required in specific cases.
  - Use of PAR Data:
    - If calculating the percent light that reaches a particular depth, a subsurface measurement typically within the top 0.3 m of the water column is required for comparison with the light at depth measurement.
    - Various approached can be taken to calculate K_d from PAR measurements.
  - Documentation.
- **FT 1720 Measurement of Secchi Depth:**
  - Proposing only editorial changes.

DEP SOP FT 1800

- **FT 1800 Field Flow Measurements:**
  - No changes.

DEP SOP FT 1900

- Adding introductory text to describe SOP sections (FT 1910 and FT 1920).
- **FT 1910 Continuous Monitoring with Installed Meters:**
  - Proposing addition of verification acceptance criteria for TSS meters.
- **FT 1920 Continuous Monitoring for Ambient *In Situ* Monitoring:**
  - Definitions, Site Selection, Equipment and Supplies.
  - Calibration and Verification:
    - Follow applicable FT-series SOPs to meet calibration and verification requirements.
    - Mechanical verification checks if sondes cannot be calibrated and verified using known standards due to size constraints and/or housing obstructions. Acceptance criteria required.
  - Post-deployment Verification for Data Corrections or Other Uses:
    - Not required unless correcting data due to calibration drift or fouling.
    - Use of *in situ* measurements before and after cleaning.
    - Use of field measurements with a second probe that has been calibrated and verified.

DEP SOP FT 1900

- **FT 1920 Continuous Monitoring for Ambient *In Situ* Monitoring:**
  - Preventative Maintenance.
  - Data Evaluation:
    - Do not remove data from the deployment unless it is for pre- and post-deployment trimming.
    - Maximum allowable limit between a recorded value and a corrected value.
    - If data are corrected for calibration drift or fouling, use C qualifier.
    - Data review status must be indicated for any data intended for or funded by and/or submitted to DEP as either provisional, in review or approved.
      - Provisional: data uploaded from the sensor but not reviewed for QA/QC.
      - In review: data currently undergoing QA/QC and/or need final approval.
      - Approved: data reviewed and approved for accuracy. Data corrections made, if desired, and applicable data qualifiers applied.
  - Documentation: Documentation requirements also added to FD 4300.

DEP SOP FT 2000

FIELD MEASUREMENT OF RESIDUAL CHLORINE

- Adding a new SOP FT 2050 for amperometric inline chlorine meters, per 2020 statewide alternative method approval.
  - Technology: Reagent-less inline chlorine meters that contain an amperometric, 3-electrode sensor.
  - Scope of use: For reuse from domestic wastewater facilities, except where reclaimed water is directly discharged to surface waters of the state or is intentionally used as drinking water supply or to augment a drinking water supply.
  - Analyte: Residual chlorine.
  - Range: 0.5-5 parts per million (ppm) (permit limit of 2 ppm for internal process reporting).

DEP SOP FT 2000
FIELD MEASUREMENT OF RESIDUAL CHLORINE

- Proposing the following requirements for use of amperometric inline chlorine meters:
  - Initial demonstration of capability (IDC):
    - Can use historical data or newly generated data.
    - Collect a grab sample to be analyzed by an approved technology along side the in-line meter reading.
    - No maintenance or calibration for two consecutive weeks.
    - Inline chlorine meter result must be within ± 0.1 mg/L or ± 15% (whichever is larger) of the grab sample.
  - On-going demonstration:
    - Daily basis, measure a grab sample taken at or as near as possible to the same location as the meter and compare to the meter.
    - Difference can be no greater than 20% of the calibrated instrument reading.

DEP SOP FT 2100

FIELD MEASUREMENT NITRATE

- Proposing new SOP for optical nitrate probes used to measure nitrate concentrations in natural waters under field conditions. Data generated by optical nitrate probes will only be used for screening and research purposes.
- Equipment and Supplies:
  - Spectrometer with an ultraviolet (UV) lamp that measures wavelengths from 190-370 nanometers (nm) with pathlengths from 2-10 millimeter (mm).
  - Purchased or laboratory-prepared standard solutions with nitrate values that bracket the expected sample range.
- Interferences.

DEP SOP FT 2100
FIELD MEASUREMENT NITRATE

- QC:
  - Instruments are factory-calibrated.
  - In air and inorganic-grade blank water checks.
  - Establish MDL and PQL.
  - Verifications with known standards, including chronological and quantitative bracketing.
  - Matrix spike analysis.
  - Comparisons with lab-analyzed grab samples.
- Measuring Nitrate of Samples:
  - Follow manufacturer's instructions for sample measurement.
- Preventative Maintenance.
- Documentation.

DEP SOP FT 3000

- **FT 3001 and 3002 Physical/Chemical Characterization:**
  - Clarifying instructions to include details previously only found on field forms, FD 9000-3 and FD 9000-4.
  - Proposing new section FT 3002 for Lake Observation Form instructions/requirements.
- **FT 3100 Stream and River Habitat Assessment:**
  - Minor clarifications to stream habitat assessment procedures.
  - Clarifying instructions for hydrologic modification characterization (FT 3101).

DEP SOPS: FT-SERIES

Question Period.

DEP SOP COLLECTIONS

DEP-SOP-002/01:

- LD 1000 Laboratory Documentation.
- LQ 1000 Laboratory Quality Control.
- LT 7000 Biological Indices.

DEP-SOP-003/11:

- BRN 1000 Biological Reconnaissance Field Method.
- LVI 1000 Lake Vegetation Index Methods.
- SCI 1000 Stream Condition Index Methods.

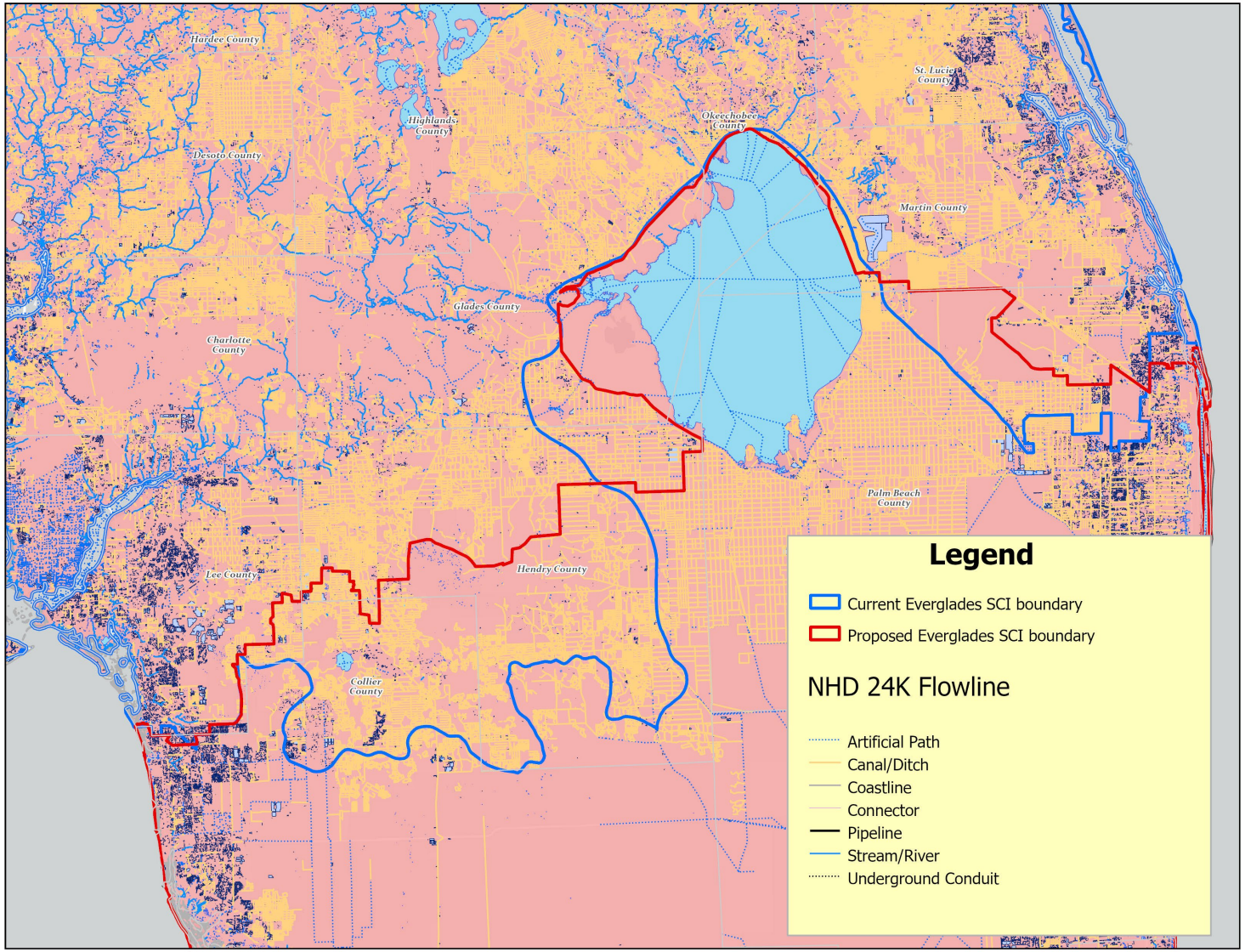
DEP SOPs LD 1000, LQ 1000, LT 7000

- **LD 1000 Laboratory Documentation:**
  - Adding documentation requirement for comments associated with macroinvertebrate QC checks: include comment that corrections were made to the appropriate database(s) as a result of QC check.
- **LQ 1000 Laboratory Quality Control:**
  - Proposing a new optional/recommended plant QC exercise.
  - Adding documentation requirement for comments associated with macroinvertebrate QC checks: include comment that corrections were made to the appropriate database(s) as a result of QC check.
- **LT 7000 Biological Indices:**
  - Revising Appendix LT 7600-1 Plant Attributes for Wetland Condition Index (WCI) Calculation, and several WCI metric tables, based on taxonomic changes.

DEP SOPs BRN 1000, SCI 1000

- **BRN 1000 BioRecon Field Method**:
  - Clarifying allowance for lab sorting and added language describing appropriate conditions for field sorting.
  - Updating taxa metric tables based on taxonomic revisions.
- **SCI 1000 Stream Condition Index Methods:**
  - Adding allowance for SCI samples to be “placed on ice if sorting or preservation is completed within 24-hours of sample collection.”
  - Updating taxa metrics tables based on taxonomic revisions.
  - Adding calculation formula for cumulative ID rate for laboratory QC for macroinvertebrate taxonomic identification (SCI 2220).
  - Revising the SCI Bioregions map to align with Stream NNC Regions at the southern boundary of the Peninsula Stream NNC Region.

SCI BIOREGIONS MAP



DEP SOP LVI 1000

- **LVI 1000 Lake Vegetation Index Methods:**
  - Adding requirements for Lake Vegetation Index (LVI) field documentation (Form FD 9000-31).
  - Proposing changes to the LVI proficiency demonstration process:
    - Change frequency of online plant ID test to every other year to sync with field-testing proficiency exercise.
    - Create online test for LVI Method and Lake Observation Form elements.
    - Add optional plant identification QC exercise.
  - Updating the name of the Florida Exotic Pest Plant Council (FLEPPC) to Florida Invasive Species Council (FISC).
  - Revising Appendix LVI 1000-1 Plant Attributes for LVI Calculation based on taxonomic changes.

DEP SOP FORMS

- **Field Forms and Checklists (not required):**
  - **FD 9000-1 BioRecon Field Sheet**
    - No changes.
  - **FD 9000-3 Physical/Chemical Characterization Field Sheet.**
    - Streamlining form and per changes in FT 3000.
  - **FD 9000-4 Stream/River Habitat Sketch Sheet.**
    - Revising to move some elements from Physical/Chemical form to sketch sheet.
  - **FD 9000-24 Groundwater Sampling Log.**
    - Added additional fields to document facility ID, well stickup, total well depth, and ORP. Clarified that many measurements taken from below the top of casing.
  - **FD 9000-25 Rapid Periphyton Survey.**
    - No changes.

DEP SOP FORMS

- **Field Forms and Checklists (not required):**
  - **FD 9000-27 Lake Vegetation Index Field Sheet.**
    - Updating plant names and FISC categories.
  - **FD 9000-31 Lake Observation Field Sheet.**
    - Revising to streamline form and per changes in FT 3000.
  - **FD 9000-32 Linear Vegetation Survey Form.**
    - Updating plant names and FISC categories.
  - **FD 9000-33 Wetland Condition Index Vegetation Field Form.**
    - No changes.

DEP SOP FORMS

- **Field Forms and Checklists (required):**
  - **FD 9000-5 Stream/River Habitat Assessment Field Sheet.**
    - No changes.
  - **FD 9000-6 Lake Habitat Assessment Field Sheet.**
    - No changes.
  - **FD 9000-34 Stream Habitat Assessment Training Checklist and Event Log:**
    - Updating HA proficiency testing procedure.
    - Matching language to SOP FT 3000.
  - **FD 9000-35 Stream Condition Index Training Checklist and Event Log:**
    - Modifying to include milestones related to BioRecon sorting and invertebrate ID and mock BioRecon audit.
    - Matching language to SOP SCI 1000.

DEP SOPS: LAB, BIOASSESSMENT, FORMS

Question Period.

ECONOMIC EVALUATION

As part of rulemaking, the department will conduct an economic evaluation of impact of rule changes.

- For any rule or SOP changes, we will evaluate whether the change will result in increased costs as part of Statement of Estimated Regulatory Costs (SERC).

PUBLIC COMMENT PERIOD

- We welcome your feedback on Chapter 62-160, F.A.C., and incorporated documents.
  - Documents are available on the QA Rulemaking webpage. https://floridadep.gov/dear/water-quality-standards-program/content/revisions-chapter-62-160-fac-quality-assurance-and-dep
  - Please provide feedback by **Nov. 27, 2024**.
  - Preferred method for specific comments is via an online survey: https://survey.alchemer.com/s3/7968531/QA-Rule
  - General comments may be sent to Quality_Assurance@floridadep.gov.

PUBLIC COMMENTS

To make a public comment, use the “raise hand” function and we will unmute you individually.

- Please provide your name and affiliation before providing your comment.
- If you want to comment but don’t want to speak, you can type comment in question box or submit a comment to DEP during the comment period.
- We may need to limit time for individual comments depending on how many people want to comment.

Thank you in advance for your participation!

THANK YOU

Division of Environmental Assessment and Restoration
Florida Department of Environmental Protection

Contact Information:
Quality_Assurance@FloridaDEP.gov