



PROJECT PREPARATION

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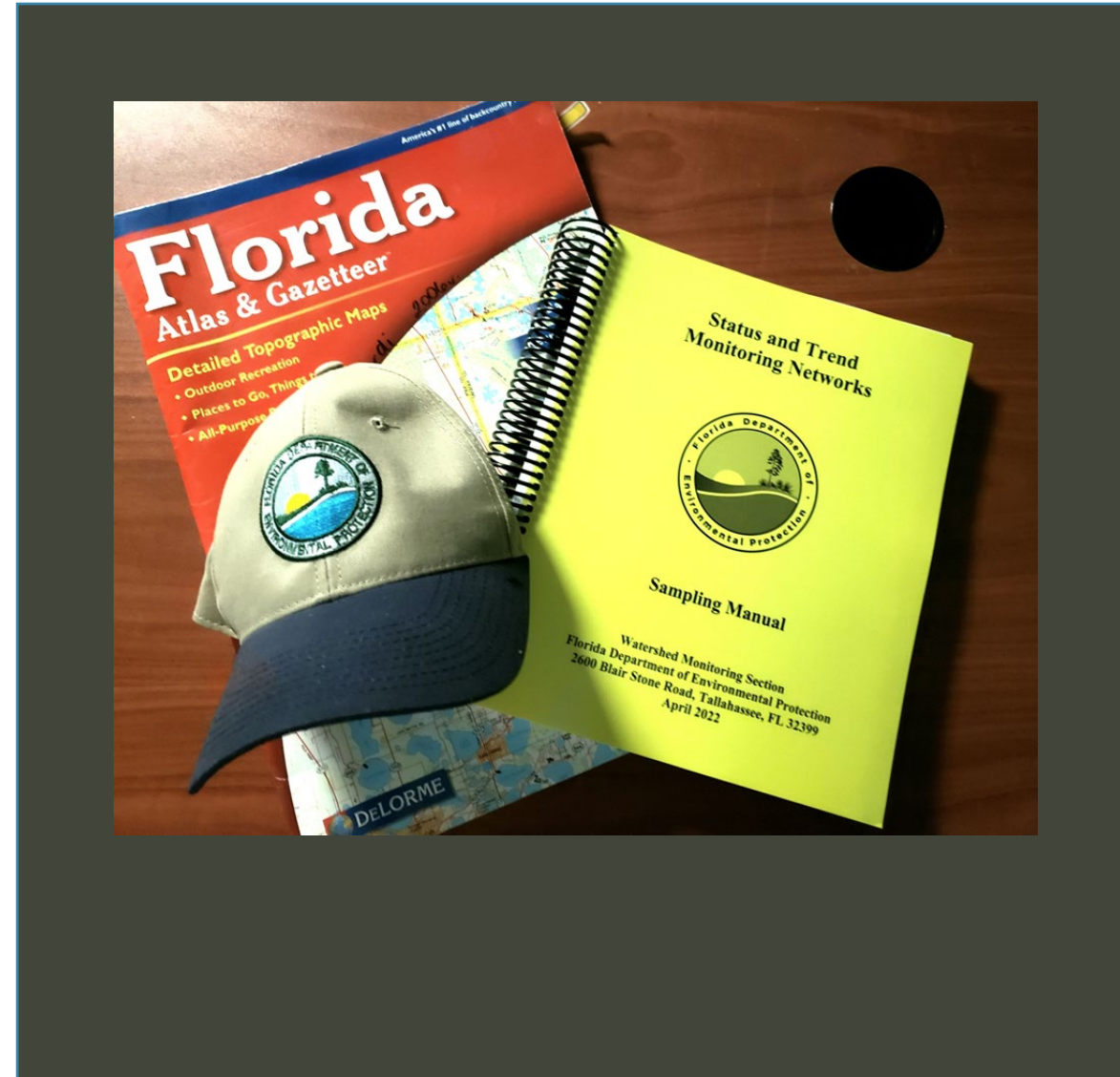
Division of Environmental Assessment and Restoration
Florida Department of Environmental Protection

Tallahassee, FL | April 22, 2025



TOPICS

- Scheduling.
- Permission.
- Supplies.
- Site visit.
- Safety.





SAMPLING MANUAL – SECTION 2



ALWAYS refer to the Sampling Manual.
Section 2 → Page 16



WATERSHED MONITORING INFORMATION CENTER

- Standard Operating Procedures (SOPs).
- Sampling schedules.
- Permission letters.
- Logbooks.
- Field sheets.
- Custody sheets.
- Bioassessment sheets.
- Bad Elf resources General Water Information System (GWIS) app link.
- Map direct.
- Sampler training presentations.

Watershed Monitoring Information Center

[Home](#) » [Divisions](#) » [Division of Environmental Assessment and Restoration](#) » [Watershed Monitoring Section](#) » Watershed Monitoring Information Center

Watershed-Monitoring-Section Quick links

[Status Network](#)

[Trend Network](#)

[Suwannee River Basin Sampling](#)

[Status and Trend Networks Brochure](#)

[Reports, Standard Operating Procedures, Documents and Links](#)

[Sediment Guidelines](#)

[Contacts](#)

[Florida Water Resources Monitoring Council](#)

[FWRMC Workgroups](#)

[All Watershed-Monitoring-Section content](#)

The information presented below is intended for use by staff who collect environmental data for the Florida Department of Environmental Protection (DEP) Status Network and Trend Network projects. The information presented below is not intended to be used for other monitoring projects. Please visit the [DEP Quality Assurance website](#) for general guidelines for other monitoring projects.

[Contact Information](#)

Sampling Information Standard Operating Procedures (SOPs) & Manuals

- [Sampling Manual](#) (April 2022)
- [Status Network Reconnaissance Manual](#) (April 2024)
- [GWIS Database Utilities Manual](#) (June 2024)
- [GNSS Basics Manual](#) (June 2024)
- [Project Manager Manual](#) (February 2025)
- [Data Management Protocols](#) (June 2024)
- [Monitoring Design Document](#) (2024)
- [Quality Manual](#) (January 2025)
- [GWIS Database Data Dictionary](#), Version 2.0
- [Groundwater Well Definitions](#)

Sampling Schedule

- [Status Network 2025](#)
- [Trend Network, October 2024 - September 2025](#)

Data Entry Applications

- [Generalized Water Information System \(GWIS\) Database Utilities](#) (password required)
- Survey123
 - [Survey123 Instructions for DEP ROC staff](#) (December 2024)
 - [Survey123 Instructions for Non-DEP staff](#) (December 2024)
 - [Tablet Computer Operations Manual for DEP ROC Staff](#) (August 2023)
 - [Tablet Computer Operations Manual for Non-DEP staff](#) (December 2024)

Bad Elf GNSS Units

- [WMS GNSS Basics Manual for use with Bad Elf 2500 Units](#) (June 2024)
- [Training Exercise for Bad Elf 2500 Units](#) (June 2024)
- [Status Network KML Files for Navigation](#)

Map Direct Resources

<https://floridadep.gov/dear/watershed-monitoring-section/content/watershed-monitoring-information-center>



SCHEDULING

One Month Before the Quarter Begins

Project Preparation



PROJECT SAMPLING SCHEDULE

- Submit project sampling schedule to Quality Assurance (QA) Officer.
- Number of samples per week.
- Total number of coolers.
- Number of boxes of acids.

agency	project	begin date	# samples	# blanks	total	RQ#	Comments	Need Acid Vials
South ROC	Z5CN1901	January 7, 2019	8				4 coolers	Yes - 1 case each
South ROC	Z5CN1901	January 14, 2019	7				4 coolers	No
South ROC	Z5CA1902	February 4, 2019	10				10 coolers	Yes - 1 case each
South ROC	Z5CA1902	February 11, 2019	10				10 coolers	No



QA Officer's Role in Sample Request Completion

agency	project	begin date	# samples	# blanks	total	RQ#	Comments	Need Acid Vials
South ROC	Z5CN1901	January 7, 2019	8	2	10	RQ-2019-01-07-16	4 coolers	Yes - 1 case each
South ROC	Z5CN1901	January 14, 2019	7	1	8	RQ-2019-01-14-13	4 coolers	No
South ROC	Z5CA1902	February 4, 2019	10	2	12	RQ-2019-02-04-15	10 coolers	Yes - 1 case each
South ROC	Z5CA1902	February 11, 2019	10	2	12	RQ-2019-02-11-10	10 coolers	No

- Number of blanks.
- Total number of samples.
- Requests (RQ) numbers.

Completed schedules posted on the watershed monitoring information center.



RQ and Label Processing

- Load RQs into GWIS database.
- Print site ID (barcode), Quality Assurance/Quality Control (QA/QC) Blank and RQ Labels.
 - Check labels for accuracy.
 - Mail or deliver to samplers.





SITE ACCESS AND PERMISSION

(Status Sites)

One to Two Months Before Sampling Begins

Project Preparation



Securing Permissions and Documenting

RETAIN CONTACT DOCUMENTATION

Florida Department of Environmental Protection
Verbal Permission Form

Please fill out when calling owner or contact for permission.

Random Sample Location: _____ - _____ - _____ Date: _____

Owner Name: _____

Mailing Address: _____

Owner Phone Number: _____

Physical Address: _____

Contact Phone Number: _____

Contact Name: _____

Contact Phone Number: _____

Email Address: _____

Comments: (call ahead, locked gates, dogs, make appointment, pick up key at office, etc.) _____

Send Results?

YES ___ Mail results to home address.

YES ___ Email results.

NO ___

Private Property.

- Need permission for all properties to be crossed.
- Document permission.
 - Three attempts.
 - Mail a written permission form to owner.
 - Verbal permission ok but must document if granted.

Government Property.

- Contact agency for details about accessibility or well instrumentation.
- Request keys for gates and/or wells.



Documentation for Sampling Permission

Minimum Documentation Requirements.

- Random site number.
 - For example, Z6-UA-18013.
- Contact First and Last Name
- Relationship of Contact to Property.
 - For example, owner, tenant.
- Conversation Date and Time.
- Contact Phone number.
- Expected sampling date.
- Hazard/obstacles.
 - Dogs, cattle, fences, etc.
- Mailing address and email for lab results.





Legal Waiver for Property Access & Sampling Permission

Permission to Enter Property

Please make any corrections needed and sign below.

1. The undersigned real property owner, Owner Name ("Undersigned"), hereby give(s) permission to the State of Florida Department of Environmental Protection ("DEP") to enter the Undersigned's property located at Property Address ("the property").
2. This permission is specifically limited to the following activities which may be performed by DEP: description of site activities. For example: Ingress and egress across the property to make observations and take samples
3. This permission expires in 4 months unless extended by the Owner Name ("Undersigned").
4. DEP employees are authorized to enter the property during normal business hours after confirming specific dates for site visits, and may also make arrangements to enter the property at other times with agreement from the Undersigned.
5. The Undersigned shall not be liable for any injury, damage or loss on the property suffered by DEP or its employees not caused by the negligence or intentional acts of the Undersigned, the Undersigned's agents or employees.
6. DEP acknowledges and accepts its responsibility under applicable law (Section 768.28, Florida Statutes) for damages caused by the acts of its employees acting within the scope of their employment while on the property.

Accepted by the following authorized person:

Signature of Undersigned (Property Owner) _____ Telephone Number _____

Print Name _____ Date _____

Others who may be contacted for confirming specific dates for access:

Print Name _____ Print Name _____

Telephone Number _____ Telephone Number _____

Permission declined: ☐ NO I do not wish for my waterbody to be sampled by DEP.

Accepted by the State of Florida Department of Environmental Protection by the following authorized agent:

Signature of DEP Representative _____

Print Name _____ Date _____

Additional Information to be completed by Property Owner:

Comments: (locked gates, new wells recently installed, dogs, stream or lake is dry, etc.)

I would like a copy of the analytical results from my waterbody.

YES ☐ NO ☐ Please mail a hard copy of the results to the following address:

YES ☐ NO ☐ Please email an electronic copy of the results to the following address:

Please send this form to:

Name

Florida Department of Environmental Protection

Choose an item.

Choose an item.

Email Address

Site Id



SUPPLIES

One to Four Weeks Before Sampling Begins

Project Preparation



INVENTORY SUPPLIES MONTHLY

Conductivity standards, pH buffers, gloves, Kimwipes, resealable bags, etc.

- Check standard and buffer expiration dates.
- Teams are responsible for purchasing these items.

Formalin.

- Recycled buffered formalin available from DEP lab.
 - Must be picked up in person.
- Can also be purchased from My Florida Marketplace (MFMP) state contracted vendor.

Acids for Preservation.

- Check expiration dates.
- DEP lab includes sulfuric and nitric acid vials with sample bottle kits.

Groundwater (GW) Filters.

- Contact the QA Officer at least three weeks in advance to order.

Station ID Labels, RQ Labels.

- Contact QA Officer or Tommy Seal (850-245-8514) for replacement labels.



REGULAR EQUIPMENT CHECK



- Check that vehicles, boats and equipment are functional and clean.
- Check settings and battery charge on equipment.
- If possible, bring backup sampling equipment.
- Ensure that all equipment and supplies needed for bioassessment are organized and complete.



DEP LAB RESPONSIBILITIES:

- Print packing list and bottle and cooler labels.
- Pack coolers with:
 - Sampling kits.
 - Temperature bottle.
 - Return FedEx handle tag.
 - Large plastic bag.
- Kits shipped about one week before sampling.
 - Make sure kits have arrived.
 - Check containers for damage
 - Call project manager or QA Officer if experience any problems.





VERIFY AND COMPARE CONTAINER LISTS

Cooler Packing Worksheet for Request: RQ-2015-08-31-26

WMS Training Course - Surface Water & Sediments

Ship Cooler On: 8/17/2015

Customer/Project: AMBIENT/STATUS

Requester: Stephanie

Priority: 4

850-245-8517

2600 Blair Stone Rd.

Lab Page 2 of 3

Comments:

No preservatives needed.

These kits are for training purposes.

No extra coolers.

Group: A

Container ID: BP-1L

Description: Brown Plastic

Analysis

CHLSUITE-W



Container ID: P-250ML-WO

Description:

Analysis

ECOLI-18QT

ENT-24-QT

RQ-2021-10-11-22		Collected By (Agency Code): 8050			
Project Name: Z6UA2110		Sampler Names: Sabrina Fischer, Charlie Hoey, Andrew Luerig			
Customer: AMBIENT		Lab Project ID: STATUS			
		Comments:			
Site Location: Z6-UA-15013		Sulfuric Acid Lot #: SA1105060			
		Nitric Acid Lot #: NA0344060			
Field ID: Z6-UA-15013					
Matrix: W-GROUND		<input checked="" type="checkbox"/> Grab			
Date Collected	Time Collected	D.O. (% SAT)	Temp (°C)	pH (SU)	Sp. Cond. (umhos/cm)
10/14/2021	10:50 ETZ	6.4	25.3	6.45	1008
Check Boxes for Each Container Submitted to Lab					
Parameter Suite	Lab Test Codes Trend Core	Lab Test Codes Status Core	Lab Test Codes Special Projects	Preservation (Must be completed within 15 min of sample collection)	# Bottles sent to Lab
Nutrients (P-5000(L))	W-NH3 / W-NO2NO3 / W-S-T-P / W-TKN / W-TOC	<input checked="" type="checkbox"/>	W-NH3 / W-NO2NO3 / W-S-T-P / W-TKN / W-TOC	<input checked="" type="checkbox"/> 2ML H2SO4 <input checked="" type="checkbox"/> pH < 2 <input checked="" type="checkbox"/> Ice	1
Metals (P-5000(L))	W-HARD / W-ICP / W-ICPMS	<input checked="" type="checkbox"/>	W-HARD / W-ICP / W-ICPMS	<input checked="" type="checkbox"/> 2ML HNO3 <input checked="" type="checkbox"/> pH < 2 <input checked="" type="checkbox"/> Ice	1
Anion / Phys. Aggregate (P-1L)	ALKALINITY / TURBIDITY / W-CL-IC / W-COLOR / W-COND / W-F / W-SO4-IC / W-TDS	<input checked="" type="checkbox"/>	ALKALINITY / TURBIDITY / W-CL-IC / W-COLOR / W-COND / W-F / W-SO4-IC / W-TDS	W-TSS <input checked="" type="checkbox"/> Ice	1
Microbiology (P-2500(L) or P-1200(L))	ECOLI-18QT / TCOLI-18QT	<input checked="" type="checkbox"/>	ECOLI-18QT / TCOLI-18QT	<input checked="" type="checkbox"/> Ice	2
Filtered Nutrient (P-1250(L))	W-PO4-F			<input type="checkbox"/> Field Filtered w/ in-line 0.45 um PES filter <input type="checkbox"/> Ice	

- Upon receipt of coolers.
 - Inventory all containers.
 - Check lab packing list.
 - Compare sample details page to lab packing list.
 - Call QA Officer or your project manager about any missing items.

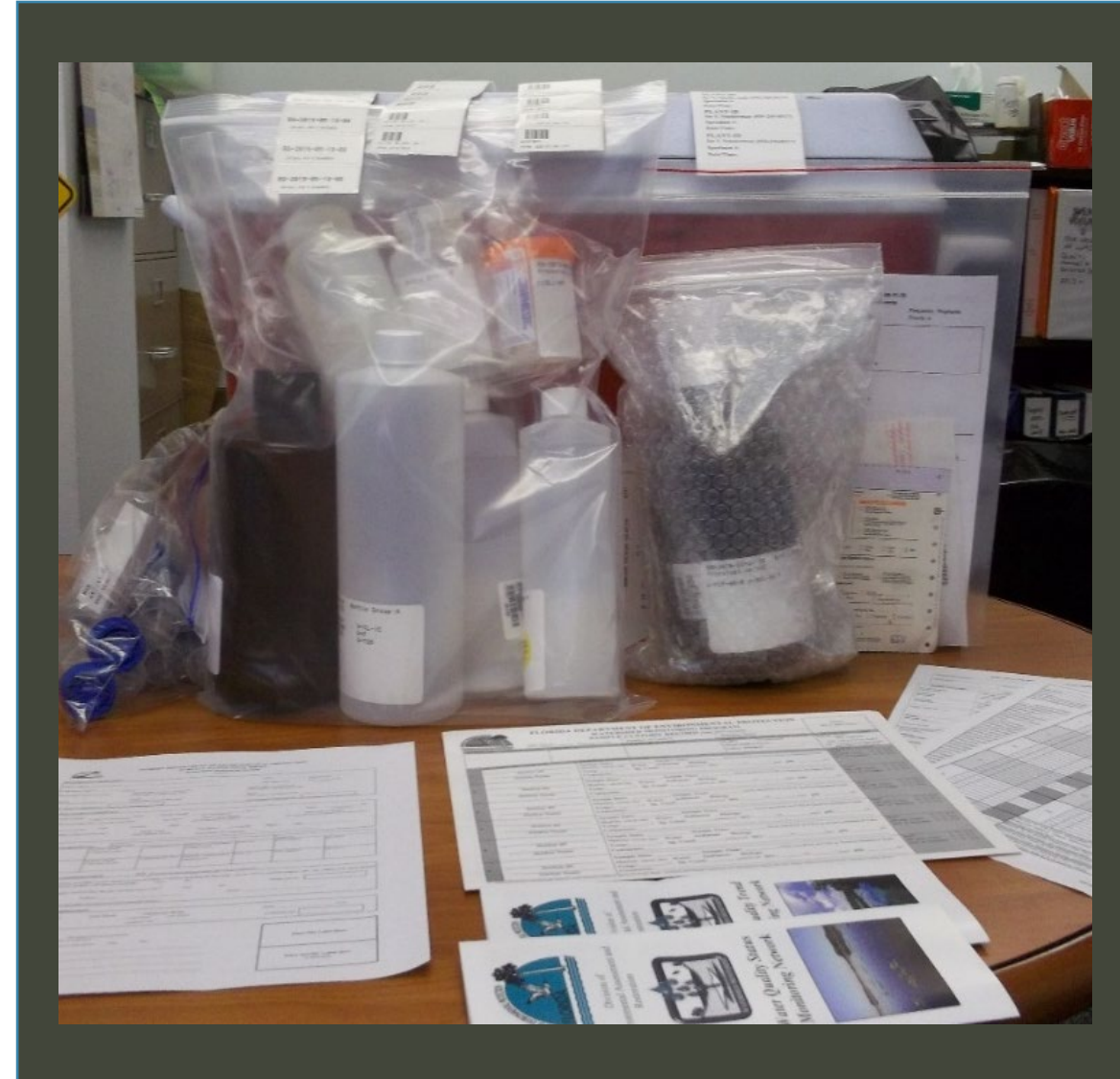


CHECK PAPERWORK BEFORE EACH PROJECT

- Fully charged tablets.
- Spare field sheets, including paper copies.
- Custody sheet cover page, including paper copies.
- Bioassessment Forms.
- Labels.
 - Station ID.
 - Blank.
 - RQ.
- Extra Florida Unique Well Identification (FLUWID) tags for new wells.
- Algal ID and Plant ID labels.
- FedEx pre-printed handle tag.



FLUWID
Tag Label





SITE VISITS

One to Seven Days Before Sampling

Project Preparation



STATUS GROUNDWATER

REVIEW HISTORICAL SITE INFORMATION

- Looking for most recent Random ID number.
- Can get clues about average purge time, access, safety issues and photos.
- Helpful for trip planning.





FINDING HISTORICAL INFORMATION IN GWIS

1. Select Existing Station.

The screenshot shows the GWIS Home page. On the left is a dark sidebar with navigation links: Home (with a house icon), Recon Tracking (with a cloud icon), Existing Station (with a leaf icon), New SW Station (with a document icon), and New GW Station (with a location pin icon). A red arrow points from the 'Existing Station' link to the right. The main content area is light gray and contains the text "Hello," followed by "Welcome to the C" and "This application is Monitoring and D Water Manageme".

2. Enter the FLUWID number and press the View Results button.

The screenshot shows the "Existing Station" form. It has a title bar "Existing Station" and several input fields: "Station ID:", "Station Name:", "Status Random Site ID:", "Water Resource:" (a dropdown menu), "Waterbody Name:" (a dropdown menu), "County:" (a dropdown menu), "Agency Maintaining Info:" (a dropdown menu), "Hydrologic Unit Name:" (a dropdown menu), and "Florida Unique Well ID:". The "Florida Unique Well ID" field contains the text "AAI3181" and is highlighted with a blue background. A red arrow points from the right towards this field. At the bottom right are three buttons: "Reset Form", "View Results", and "Generate Export File".



LOCATING HISTORICAL INFORMATION IN GWIS

3. On the results screen, click the Station ID link.

Existing Station Results						
Selection Criteria: Florida Unique Well ID = AAI3181;						
Station ID	Station Name	County	WMD	District	Waterbody Type	Water
830	ROMP CL-3 FLORIDAN	POLK	SOUTHWEST FLORIDA WMD	SOUTHWEST DISTRICT	AQUIFER	CONFI

4. On the station update screen, find the Random Sample ID.

Ground Water Station Update	
Changes to any information not editable in this form should be made by the Station Manager and Database Manager.	
Identifier	
STATION ID:	830
STORET ID:	274545081342501
RANDOM SAMPLE	Z4-CA-8024
LOCATION ID:	
FL UNIQUE WELL ID:	AAI3181
STATION NAME:	ROMP CL-3 FLORIDAN
STATION DESCRIPTION:	

5. Find site file and read sampler information.



INVENTORY SUPPLIES WITH CHECKLIST



- Use a checklist to be sure you have the equipment and supplies you will need for each day's sampling trip.
- Keep all supplies and equipment organized to locate them quickly.
- Especially helpful if you need to introduce new equipment to your sampling routine.



FIELD SAFETY

Project Preparation



FIELD SAFETY

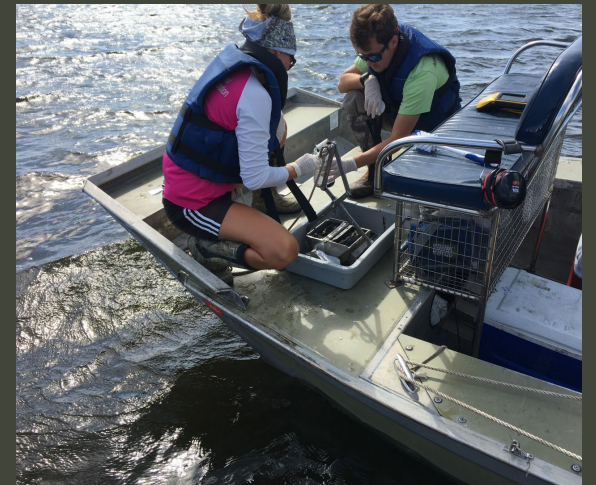
DEP Field
Safety Manual.



Float Plans:
• If using boat.



- DEP Field safety class.
- Boat safety class.
- Tool use.
 - Winches, machetes, etc.





TEAMWORK

- At least two samplers for each sampling event.
- At least one sampler must have attended this sampler training course.
- Necessary for safety, efficiency and QA/QC.
- More fun to work in groups, but more importantly it is much safer.
- Sampling alone is highly discouraged.
 - If solitary sampling must be conducted, talk to your supervisor and file a float plan.





SAFETY EQUIPMENT



- Protective eyewear.
- Eye wash.
- Sunscreen and bug spray
- Orange safety vests.
- Roadside cones/signs.
- First aid kit.
- Poison ivy wash.
- Prescription epi-pens for insect stings, if needed.
- Formalin spill clean-up kit, if sampling Stream Condition Index (SCI).
- Face masks, if needed.



MOSQUITOS AND TICKS



Asian Tiger Mosquito. Source: UC Santa Barbara



Deer Tick. Source: GardenTech

Deet

- Short-term repellent.
- Repels mosquitos and ticks.
- Apply to exposed skin and clothes.
 - Not to underclothes.
- Can damage synthetic fabrics and plastics.

Permethrin

- Kills ticks and mosquitos.
- Apply to clothes.
- Spray outdoors on clothing and let dry.
- Do not apply to skin.
- Persistent and will remain on clothes after several washes.
- Toxic to cats!



WILDLIFE

Clockwise from top left, Harlequin coral snake, Eastern Diamond-back rattlesnake, timber rattlesnake, Eastern copperhead, Florida cottonmouth and pygmy rattlesnake.



Source:

[Florida Museum Florida Snake ID Guide – Venomous Snake Statement.](#)



WILDLIFE SAFETY: When in Doubt, Stay Back

Southern
copperhead
with atypical
markings.

Source: The Mississippi
Clarion Ledger, June 9,
2021.





PLAN AHEAD AND BE PREPARED

HORROR STORIES FROM THE FIELD

- Samplers brought a 25-foot YSI cable for the sonde to sample a site with a 50-foot drop from a bridge.
- After a long drive, samplers discovered a dam blocked the south access and a secure military facility blocked the north.
- During an audit, samplers forgot field sheets and bottles.
- When their boat motor conked out, samplers discovered they were “up a creek without a paddle.”



THANK YOU

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