



Florida Department of Environmental Protection

Status & Trend Networks QA Updates and Reminders

May 2017

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Overview

Part 1 - Reminders

- Updates since last Biocriteria / Q Meeting (2016).
- These procedures are currently in effect.

Part 2 – Coming Soon

- Preview of planned updates.
- Release date not yet determined.



Reminders

Updated manuals
available at

**Watershed Monitoring
Information Center**

(<https://fldeploc.dep.state.fl.us/status/>)

- Status Network Recon (Feb. 2017)
- GWIS Database Utilities (Feb. 2017)
- GPS Basics (Feb. 2017)
- Data Management (July 2016)
- Quality Manual (June 2016)

Watershed Monitoring Information Center

Sampling Information

[Standard Operating Procedures](#) [Schedules](#) [Trimble GNSS / GPS Unit](#)

Standard Operating Procedure (SOP) Manuals

- [Sampling Manual \(January 2016, plus October 1, 2016 Revision\)](#)
- [Updates Included in the January 2016 Sampling Manual](#)
- [Status Network Reconnaissance Manual](#)
- [GWIS Database Utilities Manual](#)
- [GPS Basics Manual](#)
- [Project Manager Manual](#)
- [Data Management Protocols](#)
- [Monitoring Design Document](#)
- [Quality Manual](#)
- [Field Sample Database Data Dictionary, Version 2.6](#)
- [GWIS Database Data Dictionary, Version 1.5](#)
- [Ground Water Well Definitions](#)



Reminders

New Map Direct Resources available at Watershed Monitoring Information Center

(<https://fldeploc.dep.state.fl.us/status/>)

- Custom Map Direct Files for Status Network Recon
- Tips for using Map Direct

Map Direct Resources

- [Custom Files for Status Network Recon](#)
- [Learn and Customize Map Direct Handout](#)

February 2017 - Sampling Training

- [Introduction](#)
- [Status and Trend Monitoring Network Overview](#)
- [Project Preparation](#)
- [Calibration Procedures](#)
- [Florida Aquifer Geology](#)
- [Ground Water Procedures](#)
- [Surface Water Procedures](#)
- [Sediment Sampling](#)
- [Sample Preservation, Custody, & Shipment](#)
- [Equipment Cleaning](#)
- [Quality Assurance / Quality Control](#)
- [Status Network Reconnaissance](#)
- [Learn and Customize Map Direct](#)
- [Data Management](#)
- [GNSS / GPS Procedures](#) (also available as a [video presentation](#))
- [Data Management Practice Exercises](#)
- [Status Network Recon Practice Exercises](#)
- [Map Direct Practice Exercises](#)



Reminders

Custom Map Direct Files for Status Network Recon

publicfiles.dep.state.fl.us - /d

[\[To Parent Directory\]](#)

2/28/2017	3:40 PM	<dir> CustomMaps
2/22/2017	1:49 PM	1058 README.txt
2/28/2017	3:40 PM	<dir> Zone1
2/28/2017	3:40 PM	<dir> Zone2
2/28/2017	3:40 PM	<dir> Zone3
2/28/2017	3:40 PM	<dir> Zone4
2/28/2017	3:40 PM	<dir> Zone5
2/28/2017	3:40 PM	<dir> Zone6

Statewide maps showing weather, USGS gaging stations, elevation, high resolution imagery.

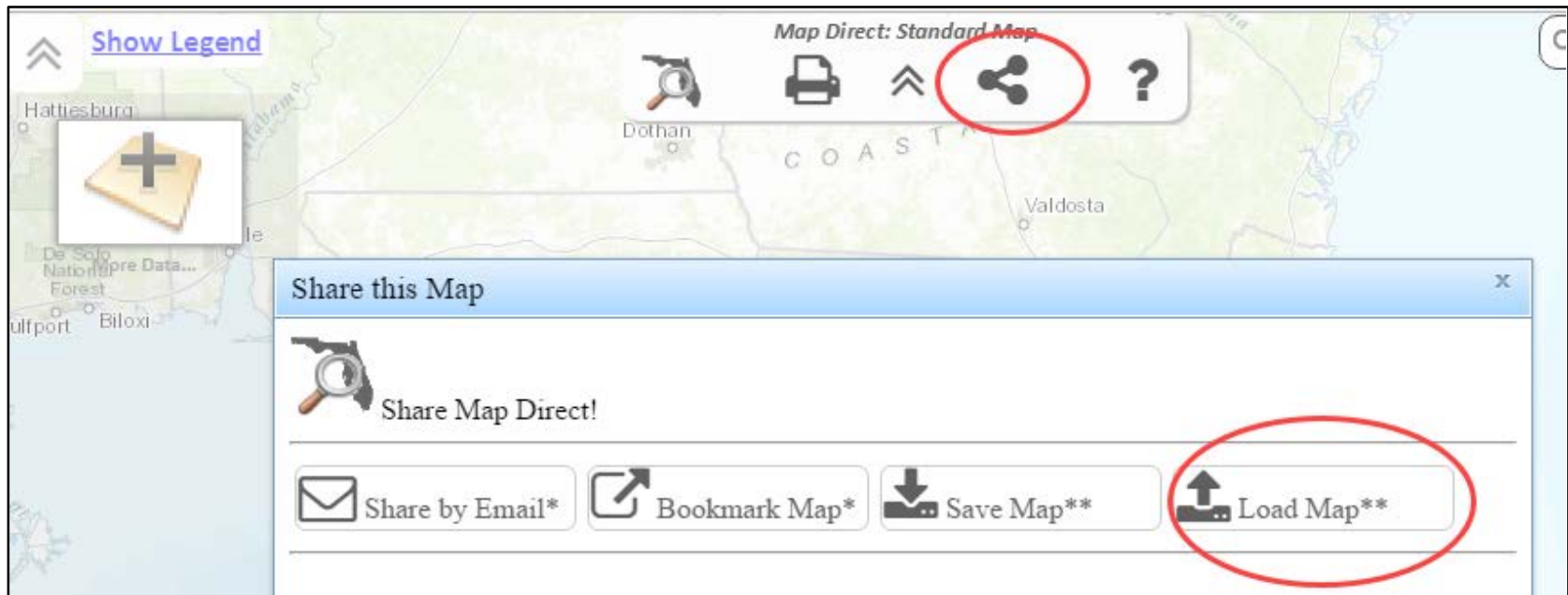
Maps showing all Status Network selections (current cycle) for each zone, and selections for individual resources for each zone.



Reminders

Custom Map Direct Files for Status Network Recon

1. Download .zip file and extract .mdmap file.
2. Open Map Direct
(<http://ca.dep.state.fl.us/mapdirect/?focus=standard>)
3. Click **Share Map** icon, then click **Load Map**.





Reminders

All GPS resources
available at

Watershed Monitoring
Information Center

(<https://fldeploc.dep.state.fl.us/status/>)

Sampling Information

[Standard Operating Procedures](#) [Schedules](#) [Trimble GNSS / GPS Unit Resources](#)

Standard Operating Procedure (SOP) Manuals

- [Sampling Manual \(January 2016, plus October 1, 2016 Revision\)](#)
- [Updates Included in the January 2016 Sampling Manual](#)
- [Status Network Reconnaissance Manual](#)
- [GWIS Database Utilities Manual](#)
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- [Quality Manual](#)
- [Field Sample Database Data Dictionary, Version 2.6](#)
- [GWIS Database Data Dictionary, Version 1.5](#)
- [Ground Water Well Definitions](#)

Sampling Schedule

- [Status Network 2017](#)
- [Trend Network, October 2016 - September 2017](#)

Trimble GNSS / GPS Unit Resources

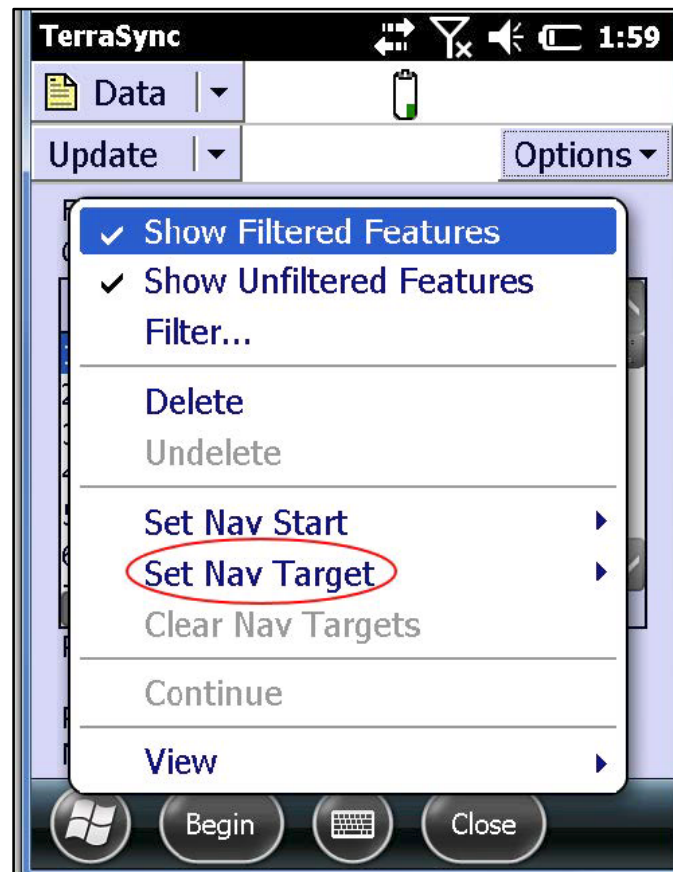
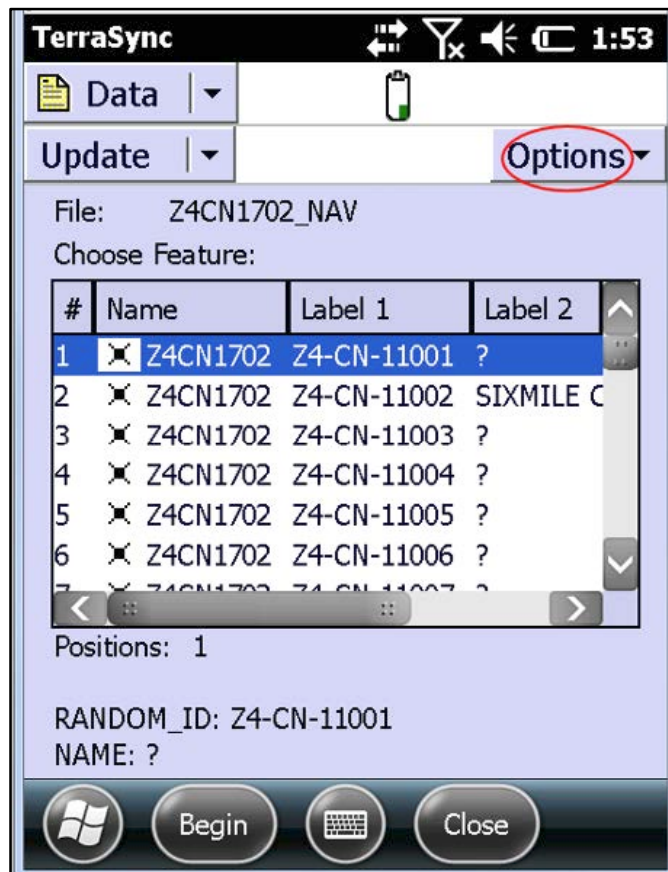
- [Data Transfer Software](#)
- [Status Network Data Files for Navigation](#)
- [2017 Status Network Trimble Data Dictionary \(Combined SW and GW\)](#)
- [2011 Apple Snail Trimble Data Dictionary](#)



Reminders

Status Network GPS Procedures

- Use pre-populated data files for navigation.





Reminders

Status Network GPS Procedures

- Use 2017 Data Dictionary

The screenshot shows the 'Create New Data File' screen in the TerraSync application. The status bar at the top indicates the time is 10:27. The interface includes a 'Data' menu, a 'New' button, and a 'Create New Data File' section. In this section, 'File Type' is set to 'Rover' and 'Location' is set to 'Default'. The 'File Name' field is empty. The 'Dictionary Name' dropdown menu is highlighted with a red circle and shows '2017 Status Net' as the selected option. At the bottom, there are 'Create' and 'Keyboard' buttons.

The screenshot shows the 'Collect' screen in the TerraSync application. The status bar at the top indicates the time is 11:42. The interface includes a 'Data' menu, a 'Collect' button, and an 'Options' dropdown. Below the 'Options' dropdown, there is a 'File:' section with a grid of six options: 'Aquifer' (red triangle), 'Flowing Water' (blue square), 'Lake' (green circle), 'Point_generic' (black cross), 'Line_generic' (black squiggle), and 'Area_generic' (black outline). At the bottom, there are 'Keyboard' and 'Close' buttons.



Reminders

Custody Sheets

- For Status & Trend Network projects only (do not use for other projects).
- Use current versions (GW = Oct. 2016; SW = Jan. 2017)
- For every row completed, circle:
 - Bottle Group (A = water samples; B = blanks; C = other)
 - Matrix (W-Surface, W-Ground, Sediment, Biology, W-Eqpmt-Blank, W-Field-Blank)

	STATION IDENTIFIER	SAMPLE INFORMATION	
1	pk_station # or Random Station ID ("Site Location" in LIMS) Station Name ("Field ID" in LIMS)	Sample Date: _____ Sample Time: _____ (circle one) ETZ or CTZ or E. Stand. Time (uncorrected) Bottle Group (circle one): A / B / C Two extra W-PSNP-TQ bottles filled for Lab QA? Y / N / NA Matrix (circle one): W-Surface / W-Eqpmt-Blank / W-Field-Blank / Sediment / Biology Temp: _____ °C Sp. Cond: _____ µmhos/cm DO : _____ % _____ mg/L pH: _____ SU Comments:	F I p S



Reminders

Stream / River Stage Height (Both Networks)

- Only record stage height data if gage can be safely observed in the field.
- Do not use online resources to look up value after sampling event.





Reminders

Status Network Cycle 11 Large & Small Lakes

- Analyte list includes extractable organics in water and sediment.
- Sampling equipment must be constructed of Stainless Steel, PTFE, PP, or PE.
- Equipment cleaning must include scrubbing with Luminol & rinsing with DI water.





Reminders

Site Photos – Surface Water

- All Status Network sites. All Trend Network sites once per year.
- One in each cardinal direction (N, E, S, W)
- Sampling location on structure (if applicable)
- Additional photos as needed to show up / down stream.





Reminders

Site Photos – Ground Water

- All Status Network sites. All Trend Network sites once per year.
- One in each cardinal direction (N, E, S, W)
- Overall condition of well.
- Close-up of FLUWID tag on well.





Overview

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Coming Soon

Status Network Sampling Periods

DRAFT - Proposed Effective Date January 1, 2018

Month	Confined Aquifers	Unconfined Aquifers	Canals	Rivers	Streams	Large Lakes	Small Lakes
Jan			60				
Feb	120						
Mar							
Apr				90			
May						90	
Jun							
Jul					90		
Aug							
Sep							90
Oct							
Nov		120					
Dec							

Proposed change #2:
switch LL & LR

Proposed change #1:
switch CA & CN

UA expanded,
effective Oct. 2016



Primary Sampling Period



Overflow Sampling Period

Contact
Jay Silvanima
with
additional
revision
requests
before
6/30/17.



Coming Soon

Status & Trend Networks Field Audit Form

- Changing required format for report and response.
- Adding table of audit findings.
 - Auditor(s) enter findings into table.
 - Sampling team completes “response” column.
 - Auditor(s) record approval of each response.

Finding #	SOP Reference	Audit Finding	Required or Suggested Corrective Action	Response	Approved by Auditors
1	FD 4100 Sec. 2.3 & 2.5.	Date, time, and sampler name not documented for turbidity meter ICV on 1/5/2017.	Complete all sections of DEP ROC turbidity calibration log form for each calibration or verification event.	All sections of turbidity log will be filled out completely and correctly.	05/03/2017



Coming Soon

Trend Network Field Data Entry Application

Adding ability to:

- Enter information about field blanks & equipment blanks.
- Specify sample collection equipment type & equipment ID for each sample or blank.

Zone 1 - Surface Water Field Data Entry Form

Station:
QA/QC BLANK SW 1

Trend Project:
January 2017

Sample Date:
January 1 2017

Sample Time: (24 hr clock)
06 00

Sampling Agency:
Northwest Florida WMD

Sample Type:
Equipment Blank

Sampler's Name(s):

Equipment Type:
Van Dorn Beta Bottle

Enter Your Name:

Equipment Name/Number:
Van Dorn 04

For Blanks ONLY, please enter a Sample Depth value of zero with no qualifier. It is okay to leave all other values empty.



Coming Soon

Surface Water Field Sheet

- Limiting choices for water sample collection device.

Water Sample Collection Device: (Circle One)	Direct Grab with Sample Bottle	Van Dorn _____ # of grabs	Other _____
Equipment ID (if applicable): _____			

- Clarifying that Equipment ID must be specified for blanks.

QA/QC SAMPLE INFORMATION

QA/QC Sample: (Circle One)	N/A	Field Blank	Equipment Blank (Field-cleaned) (Lab-cleaned)	Time: _____ (24 hr.)
Equipment ID: _____				Collected by:

- Adding space to document sample access method.

Fuel Powered Equipment Used? (e.g. boat motor)	Yes	No
Sample access method (circle one):		
Wading	Structure (e.g. bridge, dock)	Motorized Boat
Non-Motorized Boat (e.g. canoe, kayak)	Air Boat	Other _____
Weather Conditions: _____		



Coming Soon

Ground Water Field Sheet

- Separate sections for DTW measurement & WCH calc.
- Adding options for documenting DTW at flowing artesian wells.

DEPTH TO WATER (select one method, measure twice, measurements must be within ± 0.01 ft) (record as negative # if above MPE)

____ 1) Electronic Sensor	____ 2) Tape / Chalk (Held At - Wetted At) = DTW
1st Reading _____ ft	1st Reading (_____ ft - _____ ft) = _____ ft
2nd Reading _____ ft	2nd Reading (_____ ft - _____ ft) = _____ ft
____ 3) Hose / Tape for Flowing Artesian Well	____ 4) Pressure Gauge for Flowing Artesian Well
1st Reading _____ ft	1st Reading _____ PSI X 2.31 = _____ ft
2nd Reading _____ ft	2nd Reading _____ PSI X 2.31 = _____ ft
Adjust for difference between spigot & MPE (if needed) _____ ft	Adjust for difference between spigot & MPE (if needed) _____ ft (record as negative # if above MPE)
____ 5) DTW Not Measured. List Reason: _____	

WATER COLUMN HEIGHT (*DTW = N/A in this equation for flowing artesian wells or if DTW not measured)

Total Depth - (Depth to Water - Stickup) = Water Column Height

_____ ft - (_____ ft - _____ ft) = _____ ft

OR _____ Check here if WCH calculation not performed. List reason: _____



Coming Soon

Ground Water Field Sheet

- Added space to document purge requirements (volume and time) before first stability reading, and between readings.

PURGE METHOD (Check one):

- ____ 1) 1.5 well volumes & stability ____ 2) In-place plumbing purge & stability (continuous or intermittently running pumps ONLY)
____ 3) More than 1.5 well volumes & stability ____ 4) Fully dry purge (not recommended)
____ 5) Purged 5 or more well volumes without stability (explain in comments) ____ 6) Other (explain in comments)

MINIMUM PURGE VOLUME DETERMINATION (Do not complete if using purge method #2 above.)

Method 1: 0.041 X Diameter X Diameter X Water Column Height X # Well Purge Volumes = Min. Purge Volume (gal.)

0.041 X ____ in X ____ in X ____ ft X **1.5** = ____ gal

OR Method 2: Water Column Height (WCH) X Gfw (gallons per foot of water) X # Well Purge Volumes = Min. Purge Volume (gal.)

____ ft X ____ X **1.5** = ____ (gal.)

Minimum Purge Time: (Min. Purge Volume/Purge Rate) ____ (min.)

Volume to purge before 1st stability reading (1 well volume + storage tank if needed): ____ gal (purge for ____ min)

Volume to purge between subsequent stability readings (1/4 well volume): ____ gal (purge for ____ min between readings)

Well Diameter (inches) → Gfw (Gallons per foot of water): 0.75" → 0.02; 1" → 0.04; 1.25" → 0.06; 2" → 0.16; 3" → 0.37;
4" → 0.65; 5" → 1.02; 6" → 1.47; 8" → 2.62; 10" → 4.10; 12" → 5.88



Coming Soon

Developing new version of Status Network Trimble Data Dictionary

- Adding “Agency” to list of required owner / contact information.

Developing strategy to address recent / upcoming changes to DEP SOPs and other rules.

- Number of decimal places to record for field measurements.
- Improvements to log book forms.
- Surface water data collection depths.



Questions?

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