GNSS/STN Train the Trainer Workshop
Hosted by MD-DE-DC WSC and the Sandy Hydrology Team
Baltimore, MD
Week of May 5th, 2014
DRAFT Agenda

Meeting Goal & Objectives

USGS Sandy Supplemental Funds include resources to better prepare for the next coastal storm event. To meet that goal, the Theme 3 Sandy Hydrology Team is conducting a training effort to ensure that the NER and SER Water Science Centers have the necessary training and resources to respond to the next event.

The purpose of this week-long training effort is to "Train the Trainer" so that those representatives attending the course have the resources to train the teams that could be deployed from their respective WSCs to install and recover a variety of storm-tide and wave-height sensors. The workshop will include:

- Abbreviated GNSS training focused on coastal and inland monitoring stations
- Provide classroom training on the Short-Term Network (STN) application
- Provide field experience installing multiple brackets and housing for various sensors
- Provide field experience surveying the local RPs/brackets and populating the STN
- Chart next steps for moving forward

REGISTRATION LINK:
https://docs.google.com/a/usgs.gov/forms/d/1TWdIhC2g5KLK6WGiwKoZvAZBEmdWrSTfNebcyleWbiE/viewform **Please register by April 25.**

Sunday, May 4	Travel to Maryland Water Science Center **Hotel Address:** Embassy Suites BWI - 1300 Concourse Drive, Linthicum Heights, MD 21090 **Phone:** 410-850-0747 **MD-DE-DC WSC Address:** 5522 Research Park Drive, Baltimore, MD 21228 **Phone:** 443-498-5555	
Monday, May 5	GNSS Training	
8:00 - 8:15	Welcome	Shedlock
8:15 - 8:30	Introduction and Logistics	Fulton
8:30 - 10:30	Geodesy, Datum Est., GNSS Equipment	Rydlund

9:45 - 10:00	*Break*	
10:00 - 12:00	GNSS Mission Planning & Error Sources	Rydlund
12:00 - 1:00	*Lunch*	
1:00 - 3:00	GNSS Real-Time (RT) Surveys	Rydlund
3:00 - 3:30	*Break*	
3:30 - 5:00	GNSS Static Surveys & TEQC Demo	Rydlund

Tuesday, May 6 GNSS Training

8:00 - 9:30	GNSS Static Network Surveying & Processing	Rydlund
9:30 - 10:00	*Break*	
10:00 - 12:00	GNSS T&M Level Quality & Metadata	Rydlund
12:00 - 1:00	*Lunch*	
1:00 - 3:00	Total Station Primer / GNSS Proj. App & Future	Rydlund
3:00 - 3:30	*Break*	
3:30 - 5:00	GNSS RT Technique(s) Field Demonstration	Rydlund
6:30 - ?	Planned Group Dinner at local restaurant	

GNSS Instructing Slides, Downloads, and Reference Materials located at the following FTP
ftp://ftpint.usgs.gov/private/cr/mo/rolla/GNSS_STN/

Wednesday, May 7 STN Training/Field Part 1 (WebEx Available, 8am-2pm)
https://usgs.webex.com/usgs/j.php?ED=283097887&UID=481366317&RT=MiM3
Teleconference: 703-648-4848 Code 14167 #

8:00 - 9:30	STN Training	Peppler

- Overview of database structure, roles, data and permissions
- What is an EVENT
- Overview of public products

9:30 - 10:00 *Break*

10:00 - 12:00 STN Training — Peppler

- Walk-through of
  - Internal decision support mapper
  - Site creation
  - Sensor deployment, retrieval, data processing
  - HWM collection
- QA/QC and review/approval processes
- Basic overview of data processing — Jenter

11:30 - 12:30 *Lunch (catered in) and load trucks*

12:30 - 2:00 Mobilize for Field Trip (Parking Lot)

- Review equipment/methods — Busciolano
- Field Sheet Briefing/Reworking — Busciolano

2:00 - 5:00 Local Field Trips — TBD

Crew 1 - DESTINATION - MEMBERS - VEHICLE
Crew 2 - DESTINATION - MEMBERS - VEHICLE
Crew 3 - DESTINATION - MEMBERS - VEHICLE
Crew 4 - DESTINATION - MEMBERS - VEHICLE

Thursday, May 8 Field Part 2

8:00 - 9:00 Field Day 1 Debrief — Busciolano/Peppler

9:00 - 5:00 Field Trips — TBD

Crew 1 - DESTINATION - MEMBERS - VEHICLE
Crew 2 - DESTINATION - MEMBERS - VEHICLE
Crew 3 - DESTINATION - MEMBERS - VEHICLE
Crew 4 - DESTINATION - MEMBERS - VEHICLE

Friday, May 9 Wrap up

8:00 - 9:00 Field Day 2 Debrief — Busciolano/Peppler

9:00 - 10:00 Equipment Plan — Busciolano

10:00 - 10:30 *Break*

10:30 - 11:30 Action Items and Planning — Fulton

12:00 Adjourn and Travel home

The following utilities are recommended for download for the GNSS:

DS World

http://www.ngs.noaa.gov/PC_PROD/PARTNERS/

Vertcon

http://www.ngs.noaa.gov/PC_PROD/VERTCON/

APPENDIX A: EQUIPMENT AND SUPPLIES

VEHICLE

- Vehicle with safety screen, flashers, and visual ID (4WD if going on beach)
- Traffic cones and safety flares
- Gas card for vehicle
- E-ZPass tag for vehicle

COMMUNICATIONS

- Cell phone with charger
- MiFi or mobile hotspot
- Landowner permission documents and contact numbers

NAVIGATION TOOLS

- STN Application URL
- Paper road maps
- Hand-held GPS unit
- Pre-selected site maps and sketches
- Tide table to determine low-tide times

PERSONAL GEAR

- Rain gear
- Waders
- Hip boots
- PFDs
- Work gloves
- Sunglasses
- Sunscreen

- Bug spray
- Government ID card
- Government credit card
- Travel authorization
- Tax-exempt forms

GENERAL SUPPLIES

- Marine storage boxes for miscellaneous supplies
- Flashlight
- Spare batteries
- Multi-port power port (for vehicle cigarette lighter)
- First aid kit
- Safety glasses
- Boxes of Chemwipes or paper towels
- Clip board with lanyard
- Calculator
- Indelible marker
- Pens/Pencils

BRACKET DEPLOYMENT SUPPLIES

- SOP for site selection and bracket deployment
- Galvanized aluminum, pre-drilled housing brackets
- Stainless steel lag bolts (1/4-in x 2-1/2-in – 4 per bracket)
- Stainless steel flat washers (1/4-in – 4 per bracket)
- Concrete anchor bolts
- Laptop or tablet with all appropriate software pre-loaded
- Digital camera with extra storage disks/cards
- Small dry erase boards and markers (for digital picture site names)
- Field deployment forms
- Spray paint
- General hammer
- Small sledge hammer
- Chisels
- Screwdrivers
- Ratchet driver set
- Hand-held bubble level
- Retractable measuring tape
- Engineer’s folding ruler, 6 ft, 10th ft ruled
- Steel tape with weight
- Extension cords
- Power drill with bits and drivers
- Power impact drill with bits
- Small ladder

SURVEYING EQUIPMENT

- Existing RP, RM, and BM information with sketches and photos
- dGPS surveying equipment
- Digital level with tripod
- Digital level surveying rods
- Surveying rod levels
- USGS surveying forms and/or PDA with software
- Stainless steel lag bolts (for RPs)
- Railroad spikes or similar (for RMs)
- 10 penny galvanized nails
- Flagging
- 4-foot construction level