

Southeast Coast Network

National Park Service
Inventory and Monitoring Division



Standard Operating Procedure 1.3.20

Training for Coastal Shoreline Monitoring Field Data Collection—Version 1.0

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Summary

The following standard operating procedure (SOP) outlines the procedures for shoreline monitoring training. The purpose of this SOP is to outline the details, frequency, and target audiences of the shoreline monitoring training. The methodology used to collect data for shoreline monitoring utilizes GPS equipment. The topics addressed in this SOP are: (1) training implementation; (2) frequency of training; (3) target audience; and (4) training syllabus. These procedures are adapted from the *Northeast Coastal and Barrier Network Geomorphological Monitoring Protocol Part I—Ocean Shoreline Position* (Psuty et al. 2010).

Revision Log

Revision Date	Author	Changes Made	Reason for Change	New Version #

Implementation of Training

A critical component of the shoreline monitoring protocol is the GPS field survey of the shoreline. Successful execution of this task is contingent upon properly-trained personnel. The shoreline survey requires specific steps in preparation, collection, and processing. It is the responsibility of the Southeast Coast Network (SECN) to develop and deliver a training program to provide a scientific and technical foundation for consistent and accurate data collection. Network staff and non-network staff will be trained to successfully complete the shoreline survey data collection.

Frequency of the Training Sessions

For SECN staff, training will be led by the coastal ecologist and conducted prior to data collection each year. For non-network staff, training will be conducted initially prior to a data collection window, and refresher training will be offered once a year by the network on an as-needed basis. Trained non-SECN NPS staff will have the opportunity to ask questions and resolve any previously unresolved shoreline mapping issues when SECN staff pick up the original data forms later in the calendar year.

Currently, Cape Hatteras National Seashore (CAHA) and Cape Lookout National Seashore (CALO) are the only two parks where the network is relying on park staff for shoreline monitoring data collection. This may change in the future, and SECN staff may be collecting shoreline monitoring data at one or both parks. Other non-SECN NPS park staff have been trained and have offered to collect shoreline monitoring data; however, SECN staff will be conducting the shoreline monitoring data collection within the SECN's coastal park units in Georgia and Florida.

Target Audience

The target audience for SECN shoreline monitoring training is NPS park personnel, both SECN and non-SECN staff. These trained personnel will then establish a core team of qualified shoreline surveyors. Non-SECN NPS park staff are beneficial for the following reasons:

- Data collection is improved when conducted by surveyors with local knowledge.
- Local park personnel conducting the shoreline monitoring surveys face fewer logistical and travel constraints.
- Park personnel are more familiar with local events that may affect the ability to map the shoreline (e.g., fishing tournaments on Cape Hatteras causing access and crowd issues).
- Training park personnel may reduce problems related to network staffing or scheduling.

Training Syllabus

The purpose of training is to develop and maintain competence in the areas listed below. Each of the topics listed below is discussed in detail in the following SOPs, available as part of the shoreline monitoring protocol: SOP 1.3.21 *Survey Timing and GPS Mission Planning for Coastal Shoreline Monitoring—Version 1.0* (Baron 2018a); SOP 1.3.22 *Conducting the GPS Shoreline Survey—Version 1.0* (Baron 2018b); and SOP 2.3.10 *Post Survey GPS Data Processing—Version 1.0* (Baron 2018c). Once the information has been reviewed, a training course is set up that includes the various obstacles and data collection features that are covered in the SOPs. Each individual then maps the training course, moving through the shoreline mapping methods and noting issues that arise in the process. If issues do arise, the training individual should contact the SECN coastal ecologist for clarification. Once the training course and data collection have been completed, the training field data forms and GPS data should be e-mailed or given to the SECN coastal ecologist for review. The SECN coastal ecologist will then review the training data and information and address any issues, comments, or questions.

1. Southeast Coast Network Shoreline Monitoring Background

- a. What is shoreline monitoring?
- b. Where is the shoreline being monitored?
- c. When is the shoreline monitoring conducted?
- d. Why we are monitoring the shoreline?
- e. How we are monitoring the shoreline?

2. Mission Planning

- a. The tides and survey window are explained and provided by SECN staff
- b. The trainee is taught how to check for storm tides within the mapping window prior to data collection

3. Conducting the Survey

- a. How to detect the high tide swash line
- b. What to do when obstacles are encountered

4. Using the GPS

- a. GPS equipment and preparation
- b. GPS set up and operation
- c. Logging data
- d. Conducting a shoreline survey

- e. Collecting benchmark locations
- f. Ending the survey
- 5. Field Data Form
 - a. How to fill out the field data form
 - b. How to take notes
- 6. Post Survey processing
 - a. Download GPS data
 - b. Back up GPS data
 - c. Initial quality assurance and quality control (QA/QC)
 - d. For non-network staff:
 - i. Export the data to e-mail to SECN staff
 - ii. Scan and e-mail field data forms to SECN staff
 - iii. Retain original field data form until picked up by SECN staff

Literature Cited

- Baron, L. C. 2018a Survey timing and GPS mission planning. Southeast Coast Network Standard Operating Procedure NPS/SECN/SOP—1.3.21. Southeast Coast Network, Athens, Georgia. Available at: <https://irma.nps.gov/DataStore/Reference/Profile/2253892> (last accessed July 2018).
- Baron, L. C. 2018b. Conducting the GPS shoreline survey. Southeast Coast Network Standard Operating Procedure NPS/SECN/SOP—1.3.22. Southeast Coast Network, Athens, Georgia. Available at: <https://irma.nps.gov/DataStore/Reference/Profile/2253893> (last accessed July 2018).
- Baron, L. C. 2018c. Post survey GPS data processing. Southeast Coast Network Standard Operating Procedure NPS/SECN/SOP—2.3.10. Southeast Coast Network, Athens, Georgia. Available at: <https://irma.nps.gov/DataStore/Reference/Profile/2253896> (last accessed July 2018).
- Psuty, N. P., M. Duffy, J. F. Pace, D. E. Skidds, and T. M. Silveira. 2010. Northeast Coastal and Barrier Network geomorphological monitoring protocol part I—ocean shoreline position. Natural Resource Report NPS/NCBN/NRR—2010/185. National Park Service, Fort Collins, Colorado. Available at: <https://irma.nps.gov/DataStore/Reference/Profile/664308> (last accessed July 2018).