Southeast Coast Network

National Park Service
Inventory and Monitoring Division

Standard Operating Procedure 2.1.01

Revision of Southeast Coast Network Protocols and Standard Operating Procedures—Version 3.1

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Summary

This standard operating procedure (SOP) explains how to make and track changes to the narrative and standard operating procedures for monitoring protocols implemented by the Southeast Coast Inventory & Monitoring Network (SECN I&M). When editing the protocol narrative or any of the SOPs, follow these procedures. All staff with protocol revision responsibilities must be familiar with this SOP to ensure use of the most current methods.

Revision Log

Revision Date	Author	Changes Made	Reason for Change	New Version #
1/17/2013		Citation updated	Protocol publication	1.0
12/21/2016	Editor	Editorial Review	Protocol Publication	2.0
3/20/2019	M. B. Gregory	Updated text, added link to review guidance.	Protocol Publication	3.0
3/1/2021	W. Wright	Updated text to reflect administrative changes and use of formal operational review process	Annual review	3.1

Introduction

After protocols are approved and published all changes should be made as part of the formal operational review process required as of 2018 (Mitchell et al. 2018). Protocol leads should be familiar with the formal operational review process as well as the steps listed in this document. This document explains how to make and track changes to SECN monitoring protocols, protocol implementation plans, and their associated standard operating procedures (SOPs) once approved. Although current standardized methodology is used to develop approved protocols, all long-term monitoring programs need to be flexible to adapt to change. Update protocols as new technologies, methods, and equipment become available. Any edits to the protocol or protocol implementation plan and SOPs must follow this outlined procedure to obtain the correct approvals and document the history of changes. Any changes to protocol narratives and any substantive changes to SOPs, especially those that affect data handling and processing, must be reviewed and approved by the regional I&M chief. Minor changes to SOPs can be approved by the SECN program manager.

Southeast Coast Network protocols consist of four sections:

Protocol Narrative: This is the main body of the protocol, explaining the "who," "what," "when," and "why" and an overview of "how" to implement a protocol at each intended park. The protocol narrative follows a standard outline as detailed in Oakley et al. (2003), and along with appendices and associated standard operating procedures, is subject to external peer review and approval by the regional program manager prior to implementation. Protocol narratives may also be published as protocol implementation plans, or "PIPs."

Appendices: In-depth explanatory information related to a protocol narrative that is not expected to change over time. Depending on the content, appendices might require independent peer review and/or approval prior to review and approval of the overall protocol. Appendices may be published as part of the narrative, or they may be published separately as supplemental materials. Supplemental materials are not published online and are a suitable format for materials that contain sensitive information (e.g., location of exploited plants or monitoring sites) or third-party documents that cannot be made 508 compliant (e.g., equipment user manuals).

Standard Operating Procedures: Each protocol is accompanied by one or more (typically 10–15) standard operating procedures that detail "how" each protocol is to be implemented. Each protocol's SOP package covers aspects of field implementation, data management, analysis, reporting, safety, and equipment maintenance to ensure consistent implementation of methods over time. Standard operating procedures are intended to be "living documents" that are updated over time; in general, changes related to a protocol should be made at the SOP level rather than to the protocol narrative or supporting appendices. Standard operating procedures should be reviewed annually as part of the operational review (Mitchell et al. 2018) for protocol-related SOPs.

Key References: In some cases, SECN protocols include one or more externally published document critical to their implementation. These documents include reference manuals, user guides, field identification guides, or monitoring protocols developed by partnering agencies (e.g., USGS, EPA, and NOAA).

Revision of network protocols and associated documents will be the responsibility of the program manager in consultation with the managing editor, SECN protocol leads (terrestrial ecologist, coastal ecologist, aquatic ecologist, wildlife biologist, and data manager) as well as statisticians and editorial staff. Make all changes in a timely manner with the appropriate level of review. All changes require careful documentation and record keeping. This includes (1) summarizing and recording revisions at the start of each document, (2) retaining a library of previous versions, and (3) ensuring all published database metadata and reports document the correct version used and versions' dates of implementation. Completing these steps enables the SECN to maintain consistency in the collection, summary, analysis, and reporting of data.

Procedures

General Procedures

1. Prior to making changes, discuss proposed edits with the SECN program manager as part of annual operational review for protocol-related SOPs. Administrative SOPs may be revised as necessary and require review by the network program manager. If the proposed edits affect the database or data management procedures, also consult with the data manager. Plan and execute changes properly to avoid jeopardizing data set integrity. Also, because certain changes may require altering the database structure or functionality, advance notice of changes is important to minimize disruptions to project operations.

2. Before beginning edits, check with the managing editor to make sure the SOPs do not require a template update.

3. Attempt to incorporate the changes by first modifying only the SOP(s), without making changes to the protocol narrative. However, revise the narrative as well if necessary. Narrative revision (and certain SOP revisions) will require review by the regional I&M chief to determine if additional external peer review is necessary.

4. Official published versions of SECN standard operating procedures are stored on IRMA. Word and PDF versions of the **current** published version are kept on the SECN server at //INPSECNS01/SECNshare/Publications/Standard Operating Procedures. Verify with the document on IRMA that you have the most current version. You **must** use the track changes feature for all revisions. Tracked changes are required for operational reviews.

5. The revision history log is at the beginning of each protocol document and lists all edits to that document since the original publication date. Record the changes in the revision history log of the SOP or in the narrative, as appropriate. Include the date of revision, name of author(s), description of edits, and reason for the changes.

Record all changes to a protocol document (protocol narrative or SOP) in the document's revision history log, even minor edits (like fixing typos or formatting changes). It is not necessary to record the specific edits made, just the fact that changes were made. Minor revisions do not represent a change in the underlying methods or procedures used to generate data values for the protocol's existing data set. Minor revisions include small changes in, or clarification of, procedures. Version numbers increase incrementally by tenths (e.g. version 1.1, version 1.2, etc.) for minor changes. A revision is major if there were changes in methodology that could influence the resulting data values and thereby limit the ability to compare newly collected data with data collected using a previous version. Designate major revisions with the next whole number (e.g., version 2.0, 3.0). For actual protocol changes (e.g., changes in methods, equipment), assign a new version number in the revision history log. Record date of revision, author of the revision, and the reason for the changes along with the new version number (if applicable). Once all revisions are made and approved, the data manager will upload the new version to IRMA.

6. Distribute the revised version to all appropriate parties, including the members of the field crew and appropriate SECN staff.

7. Previous versions are archived on the SECN shared drive. Such historical information may be crucial for understanding, interpreting, and analyzing data.

8. All revisions require review and editing for clarity and technical soundness. Project cooperators and SECN staff may review small changes to existing documents (e.g., formatting, simple clarification of existing content, small changes in the task schedule or project budget, or general updates to information management handling SOPs) in-house. However, major changes to data collection, analysis techniques, sampling design, or response design necessitate an external peer review. **All updates to protocols or SOPs must go through managing editor and appropriate peer review manager!**

9. Narrative and SOP updates may occur independently. That is, a change in one SOP will not necessarily invoke changes in other SOPs; a narrative update may not require SOP modifications.

Additional Guidance for Updating Protocol Narratives and Appendices

1. In general, substantive changes to the protocol narrative should occur infrequently. The following are some acceptable (and expected) reasons for updating the protocol narrative:

    a. Changes to the sampling design or response design(s) following:

        i. Revisions based on a formal protocol review at the network, regional, or national level, or

        ii. Addition or subtraction of monitoring objectives.

b. Formal inclusion of assessment criteria in the network's analysis and reporting procedures. This will typically include a new monitoring objective to "determine the status and trends of the condition of resources."

2. All changes to protocol narratives require approval by the regional program manager prior to implementation.

Additional Guidance for Updating Standard Operating Procedures

1. Review and revise all SOPs as necessary prior to annual protocol implementation. This may be completed during the operational review process.

2. To ensure that within-park and within-year data are collected consistently, SOPs should not be updated or altered midway through a field season, except where required for safety purposes, or unless expanded to include relevance to other SECN protocols.

3. Standard operating procedures are published to IRMA as "standard operating procedure" document types so they can be linked to multiple protocols.

4. All changes to protocol narratives require approval by the SECN program manager and regional I&M chief.

Additional Methods and Review Guidance

The following concepts were adapted from *Inventory and Monitoring Division Protocol Review Guidance* (Mitchell et al. 2018).

Review Panel

One approach to making revisions is an annual protocol review. A review panel consisting of SECN staff and cooperators (if applicable) meets within a few months following the completion of the field season. Several weeks prior to the review panel, the SECN protocol lead distributes a draft outline of discussion topics to each panel member, and they are expected read it and give feedback to the protocol lead before the meeting. The protocol lead incorporates the panel members' comments and distributes a final version of the outline no later than the day before the review. This outline serves as the framework for the discussion during the meeting. Discussion topics cover, for example, lessons learned during the field season, field crew feedback, and potential SOP and data management changes that came up during the field season or at other times.

Revision Timeframe

Revisions should be made once per year, with the timing typically 3–6 months after field work is completed and following the annual review process. As minor changes are noted throughout the year, each user is expected to maintain a list for the annual review, or they can send potential changes as they arise to the protocol lead, who organizes and compiles them once a year to be included with the operational review documentation. For changes that potentially affect protocol databases, the protocol lead will work with the network data manager to ensure identified issues are tracked and feasible during or prior to the operational review.

Database Changes

The protocol lead should create a list of database-related issues and record ideas for proposed database changes for the network data manager. On this list, the protocol lead will provide a thorough description of their functional requirement, a suggested change that would address it (if they have an idea of this), why it is needed, and the level of urgency. This is intended primarily to document normal changes being recorded for protocol annual review. Any change needed that is imperative enough to require being addressed off-cycle should be entered and additional communication mechanisms will follow so involved network staff can develop an appropriate strategy.

Literature Cited

Mitchell, B., A. Chung-MacCoubrey, J. Comiskey, L. Garrett, M. MacCluskie, B. Moore, T. Philippi, G. Sanders, and J.P. Schmit. 2018. Inventory and Monitoring Division protocol review guidance. Natural Resource Report NPS/NRSS/IMD/NRR—2018/1644. National Park Service, Fort Collins, Colorado. Available at: https://irma.nps.gov/DataStore/Reference/Profile/2253227 (last accessed March 2021).

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