

Standard Operating Procedure (SOP) 13: Revising the Protocol, Version 2.0

Weather and Climate Monitoring Protocol

Arctic (ARCN), Central Alaska (CAKN), and Southeast Alaska (SEAN) Inventory and Monitoring Networks

Change History

Previous Version #	Revision Date	Revised By	Changes	Justification	New Version #
1.00 (SOP 24)	12/202006	P. Sousanes			1.01
1.01	March 2017	P. Sousanes	Now SOP 13, previously SOP 24. Updates to include ARCN and SEAN inclusion.	Compilation and simplification of SOPs	2.0

Please cite this Standard Operating Procedure as:

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Overview

This SOP explains how to make and track changes to the climate monitoring protocol package which consists of a Protocol Narrative, SOP Sets, Protocol Implementation Plans (PIPs), and Quality Assurance Plans (QAPs) or Data Quality Standards documents (DQSs). Program staff asked to edit any of these components need to follow this outlined procedure. It is designed to ensure users may identify which methodologies were used in generating data at particular times and take into account their possible affects on interpretation and analysis.

The Alaska Region Inventory and Monitoring (I&M) Program monitors climate on a large spatial scale within the four Alaska Network (Southeast, Southwest, Central, and Arctic). In 2006, when the climate monitoring protocols and SOPs were first drafted for the Central Alaska Network (CAKN) there were 12 NPS weather stations in three Alaska parks, there are now more than 50 stations in 13 Alaska parks. Attaining consistency among the Alaska networks is now critical as we accumulate more data with each passing year. It is imperative that the public, other scientists and researchers, and future NPS staff have a comprehensive perspective of what the climate monitoring program produces and how it operates. An accurate climate protocol package accomplishes this.

The set of Standard Operating Procedures for the CAKN climate monitoring protocol were updated and revised in 2017 to include ARCN and SEAN climate monitoring details. (SWAN may join the partnership at a later time.) The SOP changes generally reflect updates and upgrades in technology affecting the datalogger configuration, datalogger program software, and the data ingest system and associated metadata software.

The same SOP Set is used among the three networks. It is recognized there may occasionally be valid need for performing a task that is unique to a particular network. In this case the affected SOP clearly defines any such tasks and specifies the network they apply to.

Protocol Narratives, PIPs, QAPs, and DQSs are published in the NPS Natural Resource Report (NRR) series which is subject to formal peer review. SOP Sets are published informally to Data Store. Revised versions of them are not required to meet formal publication standards.

Considerations

1. Program deliverable WC_A includes all versions of Narrative, PIP, QAP, DQS, and SOP Set documents used by each network. They must all be published in Data Store in an appropriate manner. Each network maintains a Data Store reference for their WC_A which contains hyperlinks to all of these documents that have ever been used by their program. It is possible some documents originate outside a network (e.g., CAKN protocol narrative being used by SEAN) but the Data Store repository supports the necessary WC_A structure to reflect this.
2. The Climate Monitoring Protocol narrative for CAKN and shared Standard Operating Procedure set for the ARCN, CAKN, and SEAN climate vital signs have attempted to incorporate the soundest methodologies for collecting and analyzing climate data. However, all protocol narratives and SOPs, regardless of how sound, require editing as new and better techniques and technology become available. Required edits should be made in a timely manner and appropriate reviews undertaken.
3. All edits require review for clarity and completeness. Any revised version of a program document that is published as a Natural Resource Report must go through the formal review required following the standards in effect at the time publication is requested. Revised SOPs are not published as NRRs and currently require, at a minimum, internal review.
4. Individual SOPs must be revised in advance of the field season they impact – not during an active season. Since SOP changes may affect the way data should be interpreted by subsequent researchers, it is important the SOPs be enacted in a manner that makes it totally unambiguous as to which data records they apply to.

5. SOPs are published to Data Store as one combined “SOP Set” document capable of completely explaining every aspect of program operation at the time of its writing. The SOP Set is assembled by compiling all the most recent individual SOPs. The set takes its overall version designator from the year for which it will direct field activities (e.g., 2019). In the problematic case of more than one SOP Set being published that applies to one year, the second SOP Set will have “.2” appended to the designator (e.g., 2019.2), the third “.3”, etc.
6. The SOP Set identifier is to be embedded in all data products collected under its auspices, including individual records in databases. This allows users over the long term to be able to understand the specific methods employed in generating particular data they wish to interpret.
7. Protocol versioning must be documented in the Revision History Log in the preamble of the Protocol Narrative and of each SOP. Log changes in the Protocol Narrative or SOP being edited only. Version numbers increase incrementally by hundredths (e.g. version 1.01, version 1.02, etc.) for minor changes. Major revisions should be designated with the next whole number (e.g., version 2.0, 3.0, 4.0 ...). Record the previous version number, date of revision, author of the revision, identify paragraphs and pages where changes are made, and the reason for making the changes along with the new version number.
8. The principal investigator must inform the Data Manager about changes to the Protocol Narrative or SOP Set so the new version numbers can be incorporated in the metadata of the project database maintained by the data manager. Individual database records collected by the program may have to be edited by the Data Manager to reference new Protocol Narrative and SOP Set versions.

Procedure

1. In December of each year the principal investigators meet to decide whether a revision cycle is needed on any of the documents that form the protocol package. Typically PIPs, QAPs, and DQSs rarely need changing. Protocol Narratives sometimes need to be revised. SOP Sets frequently need revision.
2. For each of the five components requiring updates, the PI team agrees on one of their members to be lead. The lead solicits input for revisions and makes the first draft. The drafts circulate for review among the PIs until a final draft is agreed on by consensus.
3. The lead for each component that requires NRR publishing arranges for draft copy editing, presents it to the I&M Regional Program Manager to arrange appropriate review, brings review comments back to the PI team, oversees review response and finalization of the manuscript, obtains final approval, and submits it to the publications group. The publications group posts the final publication to Data Store.
4. The lead for a revised SOP Set arranges for draft copy editing, presents it to the affected I&M Network Program Managers to arrange appropriate review, brings review comments back to the PI team, oversees review response and finalization of the manuscript, obtains final approval from all affected program managers, and submits it to the publications group. The lead posts the final SOP Set document to Data Store in its own entry as reference type “Standard Operating Procedure”.
5. The PI for each network or their designees establish links to the new document(s) in the WC_A reference for their particular network. In order for the document to apply to the upcoming season

this final step must be completed no later than April. If it has not met this deadline, the networks must follow the existing protocol package as defined in Data Store.