

Standard Operating Procedure (SOP) #22

Reporting

Version 1.01 (July 22, 2019)

Change History

New Version #	Revision Date	Author	Changes Made	Reason for Change	Previous Version #
1.01	7/22/2019	Kim Weisenborn	Minor updates to content	To update outdated SOP references	1.0

Only changes in this specific SOP will be logged here. Version numbers increase incrementally by hundredths (e.g., version 1.01, version 1.02) 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, changes made, and reason for the change along with the new version number.

Purpose

This SOP provides an overview of the types of reports produced by the Pacific Island Network (PACN) Established Invasive Plant Species (EIPS) Monitoring Protocol. It also provides detailed information on generating the annual and five-year monitoring reports. The purpose of the annual report is to summarize data for the current year, as well as compare the data of the current year with data from previous years. The five-year analysis report takes a more comprehensive approach, examining data of each year with respect to other plant communities, parks, the PACN network, and if possible, the Pacific Region. These reports should be produced under the direction of the project lead.

Report Types

The annual and 5-year monitoring reports are part of a broad set of report categories, including (1) protocol reviews, (2) monitoring reports, (3) scientific writing and presentations, (4) management briefings, (5) website communication, and (6) interpretation and outreach. Table SOP 22.1 describes these report types and their purpose, audiences, responsible parties, production frequency, and review processes.

Table SOP 22.1. Summary of anticipated products from EIPS Monitoring Protocol, grouped by type and frequency.

Type of Report	Purpose of Report	Targeted Audience	Initiated by	Frequency of Reporting	Review Process
1. Protocol Review					
Protocol Review Reports	Document progress made and challenges encountered, where actual procedures fall short or exceed expectations, recommend necessary changes. Document changes since last protocol review report. Document the overall quality of protocol in terms of protocol objectives and implementation, effectiveness, and data management.	Superintendents, park resource staff, Inventory and Monitoring Program (I&M) staff, external scientists, partners	Project Lead	Preliminary report within 1-3 years of implementation and at 5-year intervals after each monitoring cycle. May be possible to include this review in the 5-year Monitoring Report.	Peer review at network and regional level
2. Monitoring Reports					
Vital Signs Reports, Including Status and Trend Information	Document annual monitoring activities and survey effort, describe current resource status, discuss patterns and trends of monitored resources, present data analysis results. Document changes in monitoring protocol, communicate monitoring efforts to resource managers. For the 5-year report, use a more comprehensive scale of analysis including multiple plant communities, parks, networks and regions. Also include an evaluation of sampling effort with respect to the monitoring objectives (i.e., power analysis).	Park resource staff, PACN staff, external scientists, partners	Project Lead	Annual reports compiled by April 30 each year. 5-year reports compiled by April 30 after each complete monitoring cycle.	Peer review at network level
Summary of Vital Sign Reports	Same as annual Vital Signs Reports above, but highlights key points for non-technical	Superintendents, NPS interpreters, public, partners	Project Lead	Annually, compiled by April 30 each year	Peer review at network level

Type of Report	Purpose of Report	Targeted Audience	Initiated by	Frequency of Reporting	Review Process
	audiences. Usually this is a bulleted list.				
PACN contribution to NPS-wide State of the Parks Report	Describes current conditions of park resources, reports interesting trends and highlights of monitoring activities, identifies resource issues of concern, explores future issues and directions	Congress, budget office, NPS leadership, Superintendents, general public	Compiled by the Washington Support Office (WASO) from data provided by networks	Annual	Peer review at national level
3. Scientific Writing and Presentations					
PACN Vital Signs Monitoring Conference	Review and summarize information on this Vital Sign, help identify emerging issues and generate new ideas	Park resource staff, network staff, external scientists, partners	Project Lead, park scientists	Biennial	Peer review at national level
Scientific journal articles and book chapters	Document and communicate advances in knowledge, provides a broader perspective on quality assurance and peer review	External scientists, Park resource managers, and professional staff	Project Lead, park scientists	Variable	Peer review according to journal or book standards
Other symposia, conferences and workshops	Review and summarize information on this Vital Sign, help identify emerging issues and generate new ideas	External scientists, professional staff, Park resource managers, and other resource managers.	Project Lead, park scientists	Variable (e.g., Hawai'i Conservation Conference)	Peer review at network level; for papers may also be peer reviewed
4. Management Briefings					
Executive briefings	Update Superintendents and other VIPs on park-specific findings and potential resource issues; suggest action items where appropriate	Individual Superintendents and other VIPs	Project Lead, Network Coordinator	As needed	Peer review by network and monitoring staff
5. Website Posting					

Type of Report	Purpose of Report	Targeted Audience	Initiated by	Frequency of Reporting	Review Process
Web-based media	Centralized repository of all final reports and information to ensure products are easily accessible in commonly used electronic formats (See SOP #20 Product Posting and Distribution)	Superintendents, Park resource staff, PACN staff, external scientists, partners, public	Typically, the Data Manager	As media is completed	Peer review at network level to NPS web standards as finalized, reviewed products
6. Interpretation and Outreach					
Science Days	Communicate main monitoring findings as well as underlying data; discuss potential significance for management, further monitoring, potential additional research needs, and for outreach	Superintendents, park resource staff, PACN staff, protocol managers, partners, public	Project Lead, Technicians, and others as needed	Variable by park, annual when possible	Meeting / presentation itself is a form of review
Interpretive Conversations	Interactive conversations with park interpretive staff to discuss main monitoring findings as well as underlying data; discuss potential significance for management, further monitoring, potential additional research needs, and for outreach	Park interpretive staff, environmental educators, PACN staff	Project Lead, Technicians, and others as needed	Variable by park, annual when possible	Meeting / presentation itself is a form of review
Park Interpretive / outreach sessions	Review and summarize information on PACN Vital Signs; engage and involve greater participation in monitoring efforts	Park staff, public, partners	Project Lead, Technicians, and others as needed	Variable	Peer review by network, PICRP staff
Park staff meetings (results synthesis)	Communicate results to non-technical audiences, discuss potential significance for management, receive feedback on resource and monitoring issues in park operations	All park staff, volunteers, and partners	Project Lead, Technicians, and others as needed	Annually for each network park	Peer review by network

Monitoring Reports

The annual and five-year monitoring reports are key elements in the reporting process. The list below provides information on producing these reports including minimal content requirements:

1. Reports should be written following the NPS Natural Resources Publications template, as described in SOP #19 Product Delivery Specifications.
2. The annual and five-year Inventory and Monitoring Program (I&M) reports should be completed by April 30 in the year following the field season. See SOP #19 Product Delivery Specifications for the complete schedule of deliverables.
3. Report the following monitoring parameters for the current year, at a minimum:
 - a. List of field crew members who performed the monitoring
 - b. Detail of the survey effort (number of fixed and random stations sampled in each plant community and park)
 - c. List of species detected in each plant community and park
 - d. Summary statistics (i.e., richness, abundance, etc.) listed in SOP #21 Statistical Data Analysis. If applicable, aggregate summary statistics for plant communities with more than one sampling frame (i.e., present statistics for each sampling frame and for the plant community as a whole).
 - e. Trend assessments for variables with asterisks next to them (see Table SOP 21.1, SOP #21 Statistical Data Analysis). Trend analysis should be conducted for these parameters after two years of data is available. The project lead should conduct or supervise this analysis, in consultation with a contract statistician if necessary.
 - f. The current-year parameter values should be added to a table that lists similar measures for all monitored years.
4. Reports should include or be accompanied by maps of all sampling plot locations, including a table of UTM coordinates for all surveyed plots. Ideally many of the above plant community parameters should be presented in thematic maps to provide an indication of how these parameters vary spatially.
5. The 5-year report should provide the same information as the annual report, as well as:
 - a. Comparisons between different plant communities, parks, the PACN network as a whole, and if possible the Pacific Region (e.g., comparisons between wet forest plant community parameters at NPSA and wet forest parameters at HAVO, or a comparison of trends in native species density for all PACN parks).

- b. A re-evaluation of sampling effort relative to the variability of parameters using standard power analysis to ensure that sample-size needs are sufficient to satisfy the sampling objectives. Power analysis should be used to determine if sampling effort should be adjusted to better achieve the objectives. Methods for power analysis as well as mathematical equations are provided in Appendix C: Sample Size and Power and SOP #21 Statistical Data Analysis in the PACN EIPS Monitoring Protocol.
 - c. An evaluation of the operational aspects of the monitoring protocol
- 6. The project lead should provide a copy of the report and associated data to the PACN data manager for archiving. See SOP #19 Product Delivery Specifications for additional details on managing digital data and reports.