Reporting Requirements
Standard Operating Procedure

Revision Log

Revision	Description of Change	Author	Effective Date
1	Original draft	G. Sanders	10/01/2005
1.1	Added documentation	G. Sanders	12/06/2005
2.0	Reworked in response to new WASO reporting requirements	G. Sanders	06/25/2007

Purpose

The purpose of this SOP is to inform cooperators and NPS staff about the National Capital Region Network (NCRN) Inventory and Monitoring Program's (I&M) reporting requirements as established in the Natural Resource Reporting Series. Two types of reports are described in this series: Natural Resource Reports (NRR) and Natural Resource Technical Reports (NRTR).

Natural Resources Reports: target a general, diverse audience, and may contain NPS policy considerations or address sensitive issues of management applicability. Examples of reports published in this series include vital signs monitoring plans; monitoring protocols; "how to" resource management papers; or newsletters.

Natural Resources Technical Reports: are used to disseminate the peer-reviewed results of scientific studies in the physical, biological, and social sciences for both the advancement of science and the achievement of the National Park Service's mission. The reports provide contributors with a forum for displaying comprehensive data that are often deleted from journals because of page limitations. Current examples of such reports include the results of research that addresses natural resource management issues; natural resource inventory and monitoring activities; and resource assessment reports.

This document is intended to only provide a broad overview of the requirements. Additional documents and websites exist to provide contributors with very detailed information on how to prepare reports for these reporting series.

Scope

This SOP applies to all reports prepared for the NCRN I&M Program. This includes reports prepared by cooperators as well as those prepared by programmatic personnel. Two tiers of report templates exist: the first is a single column word template which will be used for most reports and all annual monitoring reports. The second is a multi-column Adobe InDesign template which should be reserved for more formal reports such as multi-year trends and analysis reports. The general requirements described below apply to both reporting styles.

Reference Documents

- Natural Resource Publications Management Website (www.nature.nps.gov/publications/NRPM/index.cfm)

- o National Park Service. 2006. Instructions to Authors – Natural Resource Reports and Natural Resources Technical Report. Natural Resource Report NPS/NRPC/NRR – 2006/001. National Park Service, Fort Collins, Colorado. (www.nature.nps.gov/publications/NRPM/docs/Instructions_to_Authors.pdf)

- o National Park Service. 2006. Editorial Style Guide for *Park Science* and *Natural Resource Year in Review*. Natural Resource Report NPS/NRPC/NRR – 2006/004. National Park Service, Fort Collins, Colorado. (www.nature.nps.gov/publications/NRPM/docs/Editorial_Style_Guide.pdf)

Key Terms

NPS Key Official – The National Park Service staff member who is responsible for managing the project. In cases where the project is conducted by NCRN personnel, the Key Official will often also be the Project Leader. The NPS key official is responsible for ensuring that the cooperators and contractors are aware of all NPS requirements and guidelines.

Project Leader – The individual responsible for the "day-to-day" operation of the project. The project leader can be either NPS personnel or a cooperator working through a contract or agreement. In the cases where the project is conducted through a contract or agreement the project leader must work closely with the NPS key official to ensure that all standards are met.

Procedures and General Requirements

Document Preparation

Based on guidance developed by the Natural Resource Program Center in Fort Collins, CO, all documents generated to report findings from any I&M funded inventory or monitoring project should be prepared in accordance with the *Natural Resources Technical Report Series* (NRTR) requirements.

The "Instructions to Authors" document referenced above provides detailed instructions on preparing Natural Resource Technical Reports including formatting guidance on typing and page formatting and figures and table preparation and documentation. The following describes the basic content required for these reports:

- o *Front Cover* – Should include the title of the report along with a picture that is representative of the project. The following page (inside front cover) should contain the photo credits for the cover photo as well as a disclaimer if the report contains sensitive information and should not be circulated..

- o *Title Page* – Should include: title, report date, and authors as well as the report number. Also include complete current mailing address (including zip + four), email, phone and fax number of the person to whom correspondence should be sent.

- o *Table of Contents*

- o *List of Figures, Tables and Appendices*

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- *Keywords* - Below the abstract, provide 5-6 keywords that describe the subject of the paper; these need not duplicate words in the title.

- *Abstract/Executive Summary* – report can contain both but short reports normally contain a brief abstract of 250 words or less. Executive summaries are usually reserved for longer documents and should be a "stand alone" section of the document that summarizes the important points of the document.

- *Acknowledgements (optional)*

- *Introduction* – Should include the hypotheses and purpose of the investigation, research objectives, conditions under which the study was conducted, the general plan of treatment of the subject, and summary of previous work (literature review) that relates to the project.

- *Study Area* – describe the area(s) and habitat(s) included in the study. A map can be used in this section to aid in defining the study area.

- *Methods* – Present a detailed explanation of the methods, materials and analytical techniques that were used in the field, laboratory, and office during the study. The methods should be documented so that the investigation could be exactly repeated if necessary. Be sure to include a description of data analysis methods and what statistical tests were used, if any. Describe the processes used for determining whether the data met data quality objectives and, if not, what corrective actions were taken. Detailed QA/QC procedures for the data collection, verification and validation should be placed in an appendix.

- *Results* – In a logical sequence (e.g. by park), present the findings of the study that either support or provide contrary evidence against the hypotheses or that answer questions posed in the introduction. Basic, descriptive statistics (sample size, mean, max/min, trends etc.) are appropriate when clearly presented. Avoid highly technical discussions of complex statistical testing; instead refer readers to a separate appendix for additional information. Consider presenting results separately for each park.

- *Discussion* – The "Discussion" and the "Conclusion" sections are the most important sections of the report. Present a clear interpretation of the data that addresses the hypotheses, objectives, or purpose for which the study was conducted. Be sure to include how this research is applicable to each park where the study occurred and to other studies that have been conducted in that specific area of research. Other findings may be reported that would be of general interest to the scientific community.

- *Conclusions* – Provide a specific and detailed summation of the conclusions of the project.

  In addition the conclusion section should have three subsections that are of significant interest to the parks.

  - <u>Public Interest Highlights</u>: This section has significant potential to create interest and support for this and other resource management projects. Provide a bulleted list of highlights from this project. Resource managers may use these as talking points with other park staff including management. Interpretation staff may use these to highlight aspects of interest to the general public.

- Management Recommendations: If management recommendations are warranted, highlight them here. If the study was initiated due to specific park management needs, management implications should be emphasized and discussed.

- Research Recommendations: Summarize additional research needs. This section may serve as a way to develop priority research projects for the parks and to support future funding.

- *Literature Cited* - List literature citations alphabetically by the first author's last name in a literature cited section following the acknowledgments. Literature cited entries should use a consistent format and follow the format used by the journal Ecology. Carefully double-check citations against citations in the text. See Exhibit K in the "Instructions to Authors" document for examples..

- *Appendices* - Provide additional data as necessary, including a hard copy printout of the data contained in the electronic spreadsheet or database.

- *Back Cover* – The NPS TIC Number and report date are the only pieces of information that need to be added to the back cover of the report.

Refer to Appendix 1 for a report preparation checklist to help ensure that all reporting sections are included in the final product.

Document Submission:

Upon the completion of the draft report, all documents should be submitted to the NPS Key Official for review. At the time of submission of the draft report, the project lead should inform the NPS Key Official of whether the report contains information relating to sensitive resources (e.g. rare, threatened or endanger species, or specific sensitive habitat types). If the report does contain sensitive material it should be marked as such on the inside of the cover page.

The NPS Key Official will review and circulate the document for "peer review". Reviewers may include park managers, network level, regional level or national level NPS staff, or colleagues from other agencies or academia. The level of peer review required will be determined by the NPS Key Official and choice of reviewers may also be affected by whether the report contains information on sensitive resources. All review comments will be forwarded to the project lead who then should address the comments as necessary.

Once all of the review comments have been addressed, the NPS Key Official will obtain the appropriate series number and Technical Information Center (TIC) number for the report and provide these numbers to the project lead.

The project lead will ensure that all comments are addressed and that report numbers are added to the final document in the proper locations (cover page and title page). An electronic copy of the report will be submitted to the NPS Key Official as an MS Word file (preferably accompanied by a Adobe PDF version as well). The NPS Key Official will ensure that the document is properly posted for dissemination and added into the NatureBib database.

The project lead must submit the following:

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- Hard Copy: Submit two (2) hard copies of the report to the NPS Key Official.
- Electronic copy: Submit electronic copy in MS Word (version 2002 or higher) via e-mail or on CD/DVD to the NCRN Inventory and Monitoring Key Official.
- Copies of paper data sheets
- Electronic data including:
    - Raw field data (with metadata)
    - GIS data (with metadata)

Refer to Appendix 2 for a submission checklist to help ensure that all required products are submitted to the NPS Key Official.

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Appendix 1 – Report Checklist

	Report Checklist	
	Cover page includes all of the following:	
		Title
		Representative Photo
		Report Number (provided by NPS)
		Photo credits provided on following page
	Title page contains all of the following:	
		Title
		Report Number (provided by NPS)
		Authors (with addresses)
		Report date (month/year)
	Table of Contents properly references the various sections of the report.	
	Exhibits lists properly references all figures and tables throughout the report.	
	Abstract and /or Executive Summary are provided.	
	Body of document includes all of the following:	
		Introduction
		Description of Study Area
		Methods
		Results
		Discussion
		Conclusion
	Conclusion Section includes Public Interest Highlights.	
		Public interest highlights
		Management recommendations
		Research recommendations
	Tables, figures, maps, and illustrations have:	
		Descriptive titles
		Sequentially numbered
	Back cover includes TIC Number (provided by NPS)	
	Document has been reviewed for content, spelling and grammar.	
	Document is supported by scientific literature.	
	Literature Cited has been checked against the text.	

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Appendix 2 – Submission Checklist

	Submission Checklist	
	Two hard copies of the report.	
	Electronic copy is in MS Word Format (2002 or later) and/or Adobe PDF and is submitted on CD/DVD, or sent by email as an attachment.	
	All raw data have been submitted.	
		Field data sheets
		Electronic data
	Metadata is provided for all electronic databases (Data fields are defined and database structure is discussed).	
	Metadata is provided for any GIS data (following FGDC standards)	
	Photographs have been submitted along with permission for their use in brochures, websites, or other published materials.	
	Final Check	
	Checklist has been reviewed and all items checked off before final submission. Indicate YES or NO.	