

Arctic Network Inventory & Monitoring Program

U.S. Department of the Interior

**Data Management
Standard Operating Procedure**
NPS/ARCNDMSOP-2007-14



Overview of National Inventory and Monitoring Program Databases

*A quick introduction to national level databases
and data management resources*

Summary

The Inventory and Monitoring Program provides data management infrastructure that may be leveraged by individual networks. This document provides an overview of available resources.

Contents

Summary	1
Contents	1
Introduction	1
NatureBib	1
NPSpecies	2
Biodiversity Data Store	2
NPSTORET	2
Natural Resource Database Template	3
Natural Resource Monitoring Protocols Clearinghouse	3
NPS Data Store	3
References	4
About This Standard Operating Procedure	4
Revision History	4

Introduction

The Inventory and Monitoring Program provides data management infrastructure that may be leveraged by individual networks. This document provides an overview of available resources.

NatureBib

NatureBib is the master database for bibliographic references that merges a number of previously separate databases such as Whitetail Deer Management Bibliography (DeerBib), Geologic Resource Bibliography (GRBib), and others. It also contains citation data from independent databases like NPSpecies and the Dataset Catalog and NPS Data Store. It currently focuses on natural resource references, but may eventually be linked to references on cultural resources and other park operations. As with

Arctic Network Data Management Standard Operating Procedure

NPSpecies and NPS Data Store, it is possible to download data from the master web version into the MS Access desktop version that can be used locally on computers with limited internet connectivity (<http://www.nature.nps.gov/nrbib>).

NPSpecies

NPSpecies is the master species database for the NPS. The database lists the species that occur in or near each park, and the physical or written evidence for the occurrence of the species (e.g., references, vouchers, and observations). Taxonomy and nomenclature are based on ITIS, the interagency Integrated Taxonomic Information System. The master version of NPSpecies for each park or network can be downloaded from the master website into an MS Access version of NPSpecies. The internet-based version is the master database, which can be accessed via password-protected logins administered by park, network and regional data stewards assigned for each park and network. The master database requires that species lists are certified by networks before any data will be available to the public. NPSpecies is linked to NatureBib for bibliographic references that provide written evidence of a species' occurrence in a park and will be linked to NPS Data Store to document biological inventory products. The MS Access application and additional details can be found at the NPSpecies website (<http://science.nature.nps.gov/im/apps/npspp>).

Biodiversity Data Store

A digital repository of documents, GIS and other data sets that contribute to the knowledge of biodiversity in National Park units, including presense/absence, distribution and abundance (<http://science.nature.nps.gov/im/inventory/biology/index.htm>).

NPSTORET

STORET is an interagency water quality database developed and supported by the Environmental Protection Agency's (EPA) to house local, state, and federal water quality data collected in support of managing the nation's water resources under the Clean Water Act. STORET is used by NPS as a repository of physical, chemical, biological, and other monitoring data collected in and around national park units by park staff, contractors, and cooperators. The NPS operates its own service-wide copy of STORET and makes periodic uploads to the EPA STORET National Data Warehouse so that data collected by and for parks will be accessible to the public. NPS Director's Order 77 indicates that the NPS should archive water quality data in STORET, and the NPS Water Resources Division (WRD) requires that any data collected as part of a funded WRD project get archived in STORET. NPSTORET (also known as Water Quality Database Templates) the NPS master database designed to facilitate park-level standardized reporting for STORET. The database is still in development, but metadata, protocols, data dictionaries, and reporting capabilities are available through a front-end form. Upon implementation, network staff and cooperators will be able to use the MS Access version of NPSTORET either as a direct database for data entry and management, or as a means

Arctic Network Data Management Standard Operating Procedure

of submitting data for upload to STORET by WRD staff. The MS Access application and additional details can be found at: <http://www.nature.nps.gov/water/infodata.htm>. Additional information on STORET can be found at: <http://www.epa.gov/storet>.

Natural Resource Database Template

The Natural Resource Database Template (NRDT) is a flexible, relational database in MS Access for storing inventory and monitoring data (including raw data collected during field studies). This relational database can be used as a standalone database or in conjunction with the GIS software (e.g., ArcView or ArcGIS) to enter, store, retrieve, and otherwise manage natural resource information. The template has a core database structure that can be modified and extended by different parks and networks depending on the components of their inventory and monitoring program and the specific sampling protocols they use. Natural Resource Database Template is a key component of the I&M program's standardized monitoring protocols. These monitoring protocols include separate modules detailing different aspects of monitoring project implementation, from sampling design to data analysis and reporting, and include data management components that describe database table structure, data entry forms and quality checking routines. Approved monitoring protocols, including the databases that are based on the Database Template, are made available through a web-based protocol clearinghouse (see below). A description of the Database Template application, a data dictionary, and example implementations are located on the NR Database Template website (<http://science.nature.nps.gov/im/apps/template/index.htm>).

Natural Resource Monitoring Protocols Clearinghouse

The Natural Resource Monitoring Protocol Clearinghouse (i.e., Protocol Database) is a web-based clearinghouse of sampling protocols used in national parks to monitor the condition of selected natural resources. The database provides a summary of, and in many cases allows the user to download a digital copy of, sampling protocols that have been developed by the prototype monitoring parks or other well-established protocols used in national parks. The Protocol Database also makes it possible to download database components (e.g., tables, queries, data entry forms) in MS Access that are consistent with the Natural Resource Database Template that have been developed for a particular protocol. See the Protocol Database website for available protocols (<http://science.nature.nps.gov/im/monitor/protocoldb.cfm>).

NPS Data Store

The NPS Data Store is a key component of the data dissemination strategy employed by the I&M Program. The NPS Data Store is a graphical search interface that links dataset metadata to a searchable data server on which datasets are organized by NPS units, offices and programs. The interface allows customized public or protected searches of natural resource datasets, inventory products and GIS data produced by the I&M and Natural Resource GIS Programs. Each park or network is able to post and curate its data

Arctic Network Data Management Standard Operating Procedure

on the server. The NPS Data Store will be integrated with the master NPS Data Store to streamline programmatic data documentation and dissemination processes. The simple browse function of this server can be accessed at: <http://nrdata.nps.gov/>. See the NPS Data Store website for further information (<http://science.nature.nps.gov/nrdata>).

References

About This Standard Operating Procedure

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Author(s): Scott D. Miller, Data Manager, Arctic Network Inventory & Monitoring Program.

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Revision History

Version	Version Date	Revised By	Changes
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This table reflects changes to this document. Version numbers will be incremented by one (e.g., Version 1.3 to Version 2.0) each time there is a significant change in the process and/or changes are made that affect the interpretation of the data. Version numbers will be incremented after the decimal (e.g., Version 1.6 to Version 1.7...1.10....1.21) when there are changes to grammar, spelling, or formatting, or minor modifications in the process that do not affect the interpretation of data.