



Long-Term Data Management — And You!

The mandate of the National Park Service is clear: conserve parks unimpaired for enjoyment of future generations. To do this, The Inventory & Monitoring Division's (IMD) responsibilities extend beyond collecting data to include making our data and conclusions as useful and accessible as possible to our parks and the wider scientific community. In order to do this, IMD needs to modernize how it currently manages its data and we need your help.

Modern Data Management

Data in a modern world is alive and complex. It exists in its raw form, but at the same time is at work in processed formats such as reports and visualizations. In all forms, data should travel with complete and standardized instructions on how it was collected and its quality standards. It should be secure, while at the same time easy to discover and imminently accessible. Data should be in a format that facilitates automated ingestion by all interested parties. It should accommodate record-level protection to prevent the release of sensitive information. As it evolves, data should remain connected to all its former states through robust change tracking and versioning. And finally, data in a modern world needs to be housed in a modern data management system that accomplishes all these benefits while minimizing maintenance, thereby allowing IMD protocol leads to focus on science.

Calling all Scientists and Data Managers

Never has there been a better time to influence the course of how IMD information is stored, processed, and disseminated. Never has there been a better time to affect change in a way that will make your work easier while at the same time your data more valuable.

- Do you want web crawlers to find your data in Data Store?
- Do you want persistent identifiers (e.g., DOIs) for your reports and datasets that can be used by journals?
- Do you want to be able to easily match datasets with the version of the protocol narrative and SOPs used to collect them?

- Do you want a tool to assist with metadata creation?
- Do you want data and all its supporting documentation posted to Data Store to be directly available for use in visualization tools?

These are the types of decisions being debated and then turned into policy on the Long-Term Data Management (LTDM) Governance Board. The Governance Board implements its charge through small workgroups and membership is open to all who are interested. The goal is to have a minimum of two scientists and two data managers in each workgroup.



Get Involved!

With your help, we can just plain do things better. Get involved by [contacting](#) a Governance Board member.

Timeline and Accomplishments

In 2018, the LTDM Governance Board was formed to define, prioritize, and implement the IMD's plan to modernize the Data Store. In its first year, the Governance Board developed a 10-year plan with three phases. Phase 1 focuses on defining, posting, and tracking data packages (datasets, metadata, digital object identifiers). Phase 2 focuses on protocol packages (protocol, SOP, QAP, or DQS), how they are linked to associated data packages, and how both are displayed and shared in Data Store. Phase 3 focuses on maximizing the accountability and utility of all IMD science and information, both within and external to the National Park Service.



Work Group Descriptions

Metadata Work Group

Scope: Identify metadata standard(s) and define core fields for tabular and spatial data sets.

Why: To insure IMD data are properly documented to help consumers discover and understand basic information about the data and facilitate its usage.

Status: Finalizing recommendations

Data Submission Work Group

Scope: Define initial policy and guidance for submission of tabular data into the Data Store.

Why: Standardize documentation and submission format of authoritative datasets so that practice becomes consistent and supports long-term use.

Status: Finalizing recommendations

Data Quality Flagging Work Group

Scope (draft): Identify a strategy for implementing data quality flagging throughout I&M data assets, focusing primarily on data stored in columns and rows format.

Why: Elevate row-by-row transparency of data quality so that the end-user can independently determine the data's suitability for use.

Status: In progress

DOI Work Group

Scope (draft): Provide guidance for initiating the use of Digital Object Identifiers (DOI) in IMD.

Why: To assist researchers in demonstrating the value and scientific impact of their work by providing both persistent access to digital objects (e.g., reports, data sets) as well as help define the relationships between them.

Status: Finalizing scope

Machine-readable Data Format Work Group

Scope (draft): Define policy and develop practices and tools for IMD staff to use in converting their data into machine-readable formats (e.g., CSV, JSON, or XML).

Why: Open and machine readable data formats enhance the value, resiliency, and reach of IMD's long-term datasets by broadening the range of software, code, and data platforms that can consume them.

Status: Drafting scope

For more information, see our [InsideNPS page](#) and [SharePoint Site](#) with updates, documents, meeting notes, and presentations.