

Preparing an NSF Data Management & Sharing Plan (DMSP)

Last updated: July 2026

Important Policy Changes

NSF has updated its Data Sharing Policy (PAPPG 24-1 Supplement 2). These changes apply to any award issued on or after January 22, 2026.

1. Share your data when you publish.

Any data underlying an NSF-funded publication must be made available at the time the publication comes out. If you need an exception, you must justify it in your DMSP.

2. Share more than just data.

NSF expects you to make all research outputs publicly available — samples, physical collections, software, inventions, code, etc. Use permissive licenses so others can reuse your work.

3. Use NSF's official online tool to write your plan.

The [Research.gov DMSP form](#) is now live (launched April 27, 2026) and is directorate specific, so the version you see depends on your field. **Skip to page 2 of this document for guidance on how to fill out the form.**

What is a DMSP and why does it matter?

A Data Management and Sharing Plan (DMSP) tells NSF how you will handle, store, and share the data you collect. It's reviewed as part of your proposal and can affect your funding. The plan must be submitted via Research.gov and should address these areas:

- Types of data you'll produce
- Standards you'll use for formatting and documenting data
- Who can access the data and any limitations on sharing
- How others can reuse or redistribute the data
- Where, when, and how long you'll archive the data

NSF offers DMSP guidance specific to some directorates, offices, divisions, and programs:

- [Biological Sciences \(BIO\)](#)
- [Engineering \(ENG\)](#)
- [Geosciences \(GEO\)](#)
- [Mathematical and Physical Sciences \(MPS\)](#)
- [Office of Polar Programs \(OPP\)](#)
- [Social, Behavioral and Economic Sciences \(SBE\)](#)
- [STEM Education \(EDU\)](#)
- [Designing Materials to Revolutionize and Engineer our Future \(DMREF\)](#)

If guidance specific to a directorate, division, or program is not provided: follow the general requirements detailed in [PAPPG II.D.2\(ii\)](#) and [Policy Notice NSF 26-202](#).

Want feedback before submitting? Use the NSF template in [DMPTool](#) to draft and send to us for review, or email dla@whoj.edu.

Filling Out the New Research.gov Form

You'll fill out the Research.gov form for the primary Directorate you're applying to. The form is organized around "Data or Research Product Categories" that group your data by type into up to four categories. It's sufficient to list high-level categories that group several data types together. Each category should have its own entry.

The form is made up of eight sections. You'll fill these out for each Data or Research Product Category. Below, you'll find guidance for each section, including brief instructions on how to answer each field and examples.

Section 1: Data or Research Product Category

NSF Form Field: Data or Research Product Category Title

What to do: Try to pick the closest option from the dropdown. If none fit, use "Add New" and write a clear, descriptive title. This selection will determine the options displayed in the later "Data Standards and Metadata" and "Public Archiving" sections.

Example Research Product Categories
Shipboard sensor data
Physical samples
Model outputs and derived data products
Code and analysis scripts
Imagery and video data

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NSF Form Field: Description of Data or Research Product Category

What to do: Write 2-4 sentences describing what the data is, how it will be collected or generated, and approximate size if known.

Example Description
Continuous physical oceanographic measurements collected underway and at stations using a CTD rosette system, including temperature, salinity, dissolved oxygen, and fluorescence profiles, along with underway meteorological data (wind speed/direction, air temperature, barometric pressure). Approximately 50–80 CTD casts are expected over the cruise period, generating an estimated 2–5 GB of raw and processed data. CTD data will be recorded in the Sea-Bird.cnv format. ADCP data will be recorded using NetCDF.

Section 2: Access Policies and Limitations

NSF requires you to share your data publicly. This section is where you declare any exceptions — reasons why certain data cannot or should not be shared. If you have data that cannot be shared publicly:

- You can have up to six exceptions. Select each one that applies to your data
- Consider any directorate-specific guidance regarding the exceptions
- If your selection isn't listed in the dropdown options, select "Add New" to add your own. See the available exception categories in the table below
- *You must* enter an explanation and justification of each exception in the text box that appears below the dropdown

NSF Form Field — Access Limitation(s)/Exception(s)

What to do: If all your data will be shared openly, select "Not Applicable". If some data can't be shared, select all exceptions that apply and complete the written explanation below each selection.

Example Explanation

The high-resolution bathymetric and acoustic data cannot be shared because it poses a dual-use risk to national security by exposing sensitive undersea navigation. Instead, we'll keep the raw data in a secure repository and make it available to qualified researchers only through a restricted-use agreement.

Available Exception Categories

NSF Term	What It Actually Means
Data Sovereignty	Data collected from or about Indigenous communities (e.g., tribal lands, Native species with cultural significance). May be governed by tribal agreements.
Dual Use Concerns	Any of a set of considerations related to the potential misuse of shared data for purposes that might harm individual human rights or national interest.
Human Data Protection	Data involving human subjects that require additional consideration of their privacy and rights. Examples: surveys, health information, identifiable personal data.
Legal Considerations	A contract, law, or regulation prevents sharing, e.g., a non-disclosure agreement, HIPAA data, or international treaties.
National Competitiveness	Sharing would harm US national security or economic interests.
Natural Resource Protection	Sharing location or similar data could harm critical natural resources such as ecosystems or endangered species. Example: precise coordinates of endangered coral populations or rare species nesting sites.
Resource Limitations	Sharing is too expensive or technically impractical because of things like computing costs and lack of personnel. Use sparingly and include thorough justification. NSF expects this to be rare.

Section 3: Data Standards and Metadata

Metadata is the description of your data — what it is, how it was collected, what the units are, who collected it, and when. A metadata standard is an established guideline or framework that defines how the metadata is structured, formatted, and shared across different systems.

Example

A CSV file of temperature readings is data. The metadata tells you: sea surface temperatures in °C, measured by a thermosalinograph on R/V Atlantis in the North Atlantic, August 2024. The metadata standard followed is ISO 19115-2.

A few commonly used standards are NetCDF CF Conventions, ACDD, Darwin Core, ISO 19115-2, IOOS DMAC, and SeaBASS.

Not sure which standard to use? Contact the DLA at dl@who.edu or check with your target repository. Search the [RDA Metadata Standards Directory](#).

NSF Form Field — Data/Metadata Standard

Note: the dropdown options shown here depend on which Data Category you selected in Section 1.

What to do: Select the data/metadata standard for this category. Check what your repository requires first because they often specify a standard. If no standard exists for your data type, use “Add New”.

Section 4: Data or Research Product Provenance

What is provenance?

Provenance simply means where your data came from. Did you collect it yourself? Reuse an existing dataset? Pull from a large database?

NSF Form Field — Data Source

What to do: Select the option that best fits your data source, or “add new” if none fit. If data is coming from an existing resource, you must indicate this. The options to choose from are:

- New data collection: collected or generated during the project
- Existing dataset: reusing data already collected and shared. Example: data published by a colleague in 2024
- Existing data resource: data downloaded from a large established database like World Ocean Atlas, NCEI, etc.

Section 5: Public Archiving

Not sure where to archive your data?

Below is a non-exhaustive list of data repositories that are commonly used in the WHOI community. There are many other options out there! re3data.org is a registry of data repositories that can help you sort through them. The DLA is also happy to help: dla@whoi.edu.

Some recommended data repositories for WHOI researchers:

- [BCO-DMO](#)
- [WHOI's Dataverse](#)
- [National Centers for Environmental Information](#)
- [CLIVAR and Carbon Hydrographic Data Office \(CCHDO\)](#)
- [Arctic Data Center](#)
- [Interdisciplinary Earth Data Alliance](#)

NSF Form Field — Data Sharing Location

What to do: Specify the repository (or repositories) where your data will be made publicly available. Some directorates and programs require a specific repository. If yours doesn't, choose the repository most appropriate for your data type. If your repository isn't listed, use “Add New”.

Section 6: Timeline for Public Accessibility

NSF Form Field — Data Sharing Timeline

What to do: Select when the data will be shared publicly or choose “Not Applicable” if it will not be shared. NSF's expectation for most projects is that data will be shared at the time of publication of the associated paper.

Note: “Not Applicable” requires a justified exception in Section 2.

Section 7: Data Availability

NSF Form Field — Data Availability Period

What to do: Specify how long the data will remain available. Select the longest period that applies or select “Add New” if the duration isn’t listed. Check your repository’s policies to confirm. If you select “Less than 2 years”, you must provide written justification.

Section 8: Accountability

NSF Form Field — Responsible Personnel

What to do: Select the PI or Co-PI from the dropdown. Only PI and Co-PI names listed in Research.gov will appear. You can add personnel from the “Manage Personnel and Subaward Organizations” page to populate the dropdown. For separately submitted collaborative proposals, non-lead proposals must be linked for the personnel to display in the dropdown.

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Questions? Get Help.

WHOI Data Library & Archives (DLA)

dla@whoi.edu

Data management plans, repository selection, metadata standards, general DMSP questions, and much more