

Please provide the following information, and submit to the NOAA DM Plan Repository.

Reference to Master DM Plan (if applicable)

As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

1. General Description of Data to be Managed**1.1. Name of the Data, data collection Project, or data-producing Program:**

NOAA Continuously Operating Reference Stations (CORS) Network

1.2. Summary description of the data:

The National Geodetic Survey (NGS), an office of NOAA's National Ocean Service, manages a network of Continuously Operating Reference Stations (CORS) that provide Global Navigation Satellite System (GNSS) data consisting of carrier phase and code range measurements in support of three dimensional positioning, meteorology, space weather, and geophysical applications throughout the United States, its territories, and a few foreign countries. This is called the NOAA CORS Network (NCN)

Surveyors, GIS users, engineers, scientists, and the public at large that collect GPS or GNSS data can use NOAA's CORS data to improve the precision of their positions. CORS enhanced post-processed coordinates approach a few centimeters relative to the National Spatial Reference System, both horizontally and vertically.

The NCN network is a multi-purpose cooperative endeavor involving government, academic, and private organizations. The sites are independently owned and operated. Each agency shares their data with NGS, and NGS in turn analyzes and distributes the data free of charge. As of February 2025, the NCN provides data from approximately 2,000 active sites. NCN data holdings to include decommissioned stations, comes to a total of 2,908 sites. These sites are contributed by over 230 different organizations, and the network continues to expand.

The DOI referenced is for the archived NCN data holdings.

1.3. Is this a one-time data collection, or an ongoing series of measurements?

Ongoing series of measurements

1.4. Actual or planned temporal coverage of the data:

1994-04-21 to Present

1.5. Actual or planned geographic coverage of the data:

W: -180, E: 180, N: 73, S: -50

1.6. Type(s) of data:

(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)

Point data

1.7. Data collection method(s):

(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)

Instrument: GPS (Global Positioning System)

Platform: Global Positioning System (GPS)

1.8. If data are from a NOAA Observing System of Record, indicate name of system:

1.8.1. If data are from another observing system, please specify:

2. Point of Contact for this Data Management Plan (author or maintainer)

2.1. Name:

NGS Communications and Outreach Branch

2.2. Title:

Metadata Contact

2.3. Affiliation or facility:

NGS Communications and Outreach Branch

2.4. E-mail address:

ngs.infocenter@noaa.gov

2.5. Phone number:

(301) 713-3242

3. Responsible Party for Data Management

Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.

3.1. Name:

3.2. Title:

Data Steward

4. Resources

Programs must identify resources within their own budget for managing the data they produce.

4.1. Have resources for management of these data been identified?

Yes

4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):

Unknown

5. Data Lineage and Quality

NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.

5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible

(describe or provide URL of description):

Lineage Statement:

NCN data is processed by NGS operations at an hourly or daily cadence, dependent a particular stations' retrieval frequency. Hourly data is deleted from Partners are deleted two days after daily file is created. Hourly data from NGS-owned stations are kept. NCN data is harvested daily by NESDIS/NCEI, and then archived after a 30-day period, and distributed via the NCEI archive at the Comprehensive Large Array-data Steward ship System (CLASS).

Process Steps:

- GPS or GNSS data that are received in either binary or Receiver INdependent EXchange (RINEX) format, and are processed by NGS into a compressed daily RINEX formatted file. Other files made available include navigation/ephemeris, station logs, NGS coordinates and may include other observations, such as meteorological files. (Citation: NOAA CORS Network (NCN))
- RINEX data is posted online at the at-sampling rate for a period of 30 days (Citation: NOAA CORS Network (NCN))
- At-sampling daily RINEX data is concurrently staged at NCEI for archive. (Citation: NOAA CORS Network (NCN))
- After 30 days, NCN at-sampling daily RINEX data (when available) is archived. (Citation: NOAA CORS Network (NCN))
- After 30 days, NGS online daily RINEX data are decimated to a 30-second sampling rate. (Citation: NOAA CORS Network (NCN))

5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:

5.2. Quality control procedures employed (describe or provide URL of description):

NGS defines thresholds during processing.

6. Data Documentation

The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.

6.1. Does metadata comply with EDMC Data Documentation directive?

No

6.1.1. If metadata are non-existent or non-compliant, please explain:

Missing/invalid information:

- 3.1. Responsible Party for Data Management

6.2. Name of organization or facility providing metadata hosting:

NMFS Office of Science and Technology

6.2.1. If service is needed for metadata hosting, please indicate:

6.3. URL of metadata folder or data catalog, if known:

<https://www.fisheries.noaa.gov/inport/item/39662>

6.4. Process for producing and maintaining metadata

(describe or provide URL of description):

Metadata produced and maintained in accordance with the NOAA Data Documentation Procedural Directive:

https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.pdf

7. Data Access

NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.

7.1. Do these data comply with the Data Access directive?

Yes

7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?

7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:

7.2. Name of organization of facility providing data access:

NGS Communications and Outreach Branch

7.2.1. If data hosting service is needed, please indicate:

7.2.2. URL of data access service, if known:

<https://geodesy.noaa.gov/CORS/data.shtml>

<https://noaa.maps.arcgis.com/apps/webappviewer/index.html?id=190385f9aadb4cf1b0dd8759893032>

7.3. Data access methods or services offered:

<https://geodesy.noaa.gov/CORS/>

<https://geodesy.noaa.gov/corsdata/>

<https://geodesy.noaa.gov/UFCORS/>

<https://noaa-cors-pds.s3.amazonaws.com/index.html>

7.4. Approximate delay between data collection and dissemination:

Hourly or Daily

7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:

Data distribution happens from two data centers: NOAA/NGS (operational) and NESDIS/NCEI (archive) at different cadences.

The NCN operational data is harvested by NGS at an hourly or daily cadence, according to how the collaborating Partners distributes data. Data is available at NGS online operations hourly or daily.

The long term archive is distributed by NESDIS/NCEI. This data is made available to the public on the 31st prior to the current day. This 30 day delay is to allow collaborating partners to assure full data integrity and quantity before archive.

NGS makes every effort to archive missing data.

8. Data Preservation and Protection

The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

8.1. Actual or planned long-term data archive location:

(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)

NCEI_NC

8.1.1. If World Data Center or Other, specify:**8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:****8.2. Data storage facility prior to being sent to an archive facility (if any):**

National Geodetic Survey - Silver Spring, MD

8.3. Approximate delay between data collection and submission to an archive facility:

30 days for RINEX

8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection

NCN RINEX archive data is held and staged at the National Centers for Environmental Information (NCEI) for 30 days prior to archive. NGS is allowed to make changes to that data holding at NCEI within the 30 day window. NCEI transfers data for archive to NOAA's Comprehensive Large Array-data Stewardship System (CLASS) after the 30 day period. NGS is the authority on the NCN data set, and can replace or remove archived files at its discretion.

9. Additional Line Office or Staff Office Questions

Line and Staff Offices may extend this template by inserting additional questions in this section.