NOAA Environmental Data Management
Summary of Environmental Data Management Policies & Procedures
September 2015

Background:

An important outcome from the 2014 Environmental Disasters Data Management Workshop [Link] was to provide a summary of existing federal and NOAA applicable data management policies pertaining to data collected compiled and used during an environmental disaster or response related activity. However, the scope of this document is applicable to broader NOAA & NOS data management communities and pertains to all federal agencies handling environmental data.

Purpose:

This document provides a summary of the overarching Environmental Data Management related policies applicable for scientists and data managers to use during environmental disasters, response activities, and/or any other handling of environmental data as it pertains to our NOAA and NOS scientific mission activities.

Data Management Policies

OMB Executive Order (M-13-13): Open Data Policy – Managing Information as an Asset

- **Date:** May 9, 2013
- **Description:** This Memorandum requires agencies to collect or create information in a way that supports downstream information processing and dissemination activities. This includes using machine-readable and open formats, data standards, and common core and extensible metadata for all new information creation and collection efforts. It includes agencies ensuring information stewardship through the use of open licenses and review of information for privacy, confidentiality, security, or other restrictions to release. Additionally, it involves agencies building or modernizing information systems in a way that maximizes interoperability and information accessibility, maintains internal and external data asset inventories, enhances information safeguards, and clarifies information management responsibilities.
- **References:**
  - Open Data Policy Memorandum:
    http://www.whitehouse.gov/sites/default/files/omb/memoranda/2013/m-13-13.pdf
  - Open Data Policy Implementation: Project Open Data [https://project-open-data.cio.gov] serves as an open online repository of tools and best practices to assist agencies in integrating the Open Data Policy into their operations.
  - Open Government Data - Cross Agency Priority Goal (CAP) [http://goals.performance.gov/opendata]
- **Points of Contact:**
  - OMB: Questions on the Memo, email: datause@omb.eop.gov
  - NOAA/OCIO: David Layton, Chief Enterprise Architect, [david.layton@noaa.gov]
  - NOS POC: Kim Jenkins (NOS/ACIO), [kim.jenkins@noaa.gov]
- **Responsible Party:**
  - Agency: Zach Goldstein, NOAA CIO
- **Other information (*Why do I care?*):**
  - The term "open data" refers to publicly available data which are structured in a way that enables these data to be fully discoverable and useable by end users. In general, open data is consistent with

the following principles: public, accessible, described, reusable, complete, timely, and managed post-release (attributes defined in Open Data Policy).

- o Digital Government Strategy: http://www.whitehouse.gov/sites/default/files/omb/egov/digital-government/digital-government.html
- o Executive Order, Making Open and Machine Readable the New Default for Government Information, available at *http://www.WhiteHouse.gov/the-press-office/2013/05/09/executive-order-making-open-and-machine-readable-new-default-government-*

NOAA Administrative Order (NAO) 212-15, *Management of Environmental Data and Information*

- **Description**: This NAO establishes the Department of Commerce (DOC) National Oceanic and Atmospheric Administration (NOAA) Environmental Data Management Policy. This policy provides high-level direction that guides procedures, decisions, and actions regarding environmental data and information management throughout NOAA. Further guidance on how this policy is to be implemented will be provided in procedural directives that address the full data lifecycle of all domains of NOAA environmental information and records.
- **Reference:** http://www.corporateservices.noaa.gov/ames/administrative_orders/chapter_212/212-15.html
- **Points of Contact:**
  - o NOAA: Jeff DLB (NESDIS/TPIO), [jeff.delabeaujardiere@noaa.gov]
  - o NOS POC: Kim Jenkins (NOS/ACIO), [kim.jenkins@noaa.gov]
- **Responsible Party:**
  - o Agency: NOAA Observing Systems Council (NOSC) and NOAA CIO Council
  - o Line Offices: NOAA EDMC line office representatives [link]
- **Other information/resources (*Why do I care?*):**
  - o This is the overarching policy for all the NOAA Environmental Data Management Committee's Procedural Directives (Note – see below for more details on the NOAA EDMC Procedural Directives).

NOAA Environmental Data Management Procedural Directives

- **Description**: The NOAA EDMC is responsible for developing and issuing NOAA Procedural Directives for Environmental Data Management across NOAA. Currently there are four NOAA PD's which are summarized below. All of the NOAA PD's can be downloaded from the EDMC website here: https://www.nosc.noaa.gov/EDMC/PD.all.php and additional resources to support implementation of each PD's is found on the EDM Wiki site here: https://drive.google.com/drive/#folders/0Bwl6f-PNVtnndG0yOUJ5cGU0RGs

  - o **NOAA Data Documentation Procedural Directive (Version 1.0)** - dated 10/28/11
    - ▪ Purpose: This procedural directive states that NOAA's environmental data and information must be carefully documented using international metadata standards. It applies to metadata and documentation for all existing and new NOAA environmental data, information and services, as well as to the personnel and organizations that collect and manage them.
    - ▪ References:
      - EDMC PD Home page - https://www.nosc.noaa.gov/EDMC/PD.DD.php
      - Data Documentation PD Resource page (Wiki) - https://geo-ide.noaa.gov/wiki/index.php?title=Data_Documentation_PD

  - o **NOAA Data Management Planning Procedural Directive (Version 2.0.1)** – dated 2/11/15
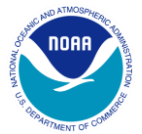
- Purpose: The purpose of this procedural directive is to expand upon this requirement for Data Management Plans (DMPs), direct managers of all data production projects and systems to write data management plans, and provide detailed guidance on who should write them and how to write them. It contains a Data Management Plan template with questions to be considered and addressed in planning all data production projects.
- Reference:
    - NOAA Data Management Planning PD Home page – https://www.nosc.noaa.gov/EDMC/PD.DMP.php
    - NOAA Data Management Planning PD Resource page (Wiki) - https://geo-ide.noaa.gov/wiki/index.php?title=Data_Management_Planning_PD
    - NOAA Data Management Plan Repository - https://drive.google.com/drive/#folders/0Bwl6f-PNVtnndG0yOUJ5cGU0RGs
    - Data Management Plan template (Appendix A from Directive)

- **NOAA Data Sharing Policy for Grants and Cooperative Agreements Procedural Directive (Version 2.0)** – dated 5/29/12
    - Purpose: The Data Sharing Policy requires that all NOAA Grantees must share data produced under NOAA grants and cooperative agreements in a timely fashion, except where limited by law, regulation, and policy or security requirements. Grantees must address this requirement formally by preparing a Data Sharing Plan as part of their grant project narrative. Sharing data refers to making data visible, accessible, and independently understandable to users in a timely manner at minimal cost to users. NOAA facilities that archive data and make the data openly available should be considered first for the disposition of the data.
    - References:
        - NOAA Data Sharing Policy for Grants and Cooperative Agreements Procedural Directive **-** https://www.nosc.noaa.gov/EDMC/PD.DSP.php

- **NOAA Procedure for Scientific Records Appraisal and Archive Approval –** dated August 15, 2008
    - Purpose: This document defines the procedure by which NOAA decides what scientific records (environmental and geospatial data) are preserved in a NOAA archive.
    - References:
        - NOAA Scientific Records Appraisal and Archive PD Home page - https://www.nosc.noaa.gov/EDMC/documents/NOAA_Procedure_document_final_12-16-1.pdf

- **NOAA Data Access Procedural Directive (Version 1.0)** - dated 02/11/15
    - Purpose: The purpose of this Directive is to declare that all NOAA environmental data (with limited exceptions, upon approval of a waiver) shall be made discoverable and accessible via the Internet in a timely fashion.
    - References:
        - NOAA Data Access PD Home page - https://www.nosc.noaa.gov/EDMC/PD.DA.php
        - NOAA Data Access PD Resource page (Wiki) - https://geo-ide.noaa.gov/wiki/index.php?title=Data_Access_PD
        - NOAA Data Access Technical Recommendations - https://geo-ide.noaa.gov/wiki/index.php?title=Data_Access_Technical_Recommendations

- o **NOAA Data Citation Procedural Directive (Version 1.0)** – dated 5/15/2015
    - ▪ <u>Purpose:</u> This Procedural Directive establishes the requirements for obtaining persistent identifiers for data archived at the NOAA National Centers for Environmental Information (NCEI), the procedure for creating landing pages providing dataset information and access instructions and the recommendations regarding citation of NOAA data by internal and external users.
    - ▪ <u>References:</u>
        - • NOAA Data Citation PD Home page - https://www.nosc.noaa.gov/EDMC/PD.DC.php
        - • NOAA Data Citation Resource page (Wiki) - https://geo-ide.noaa.gov/wiki/index.php?title=Data_Citation_PD

Response Policies

National Contingency Plan

- • **Date:** September 15, 1994
- • **Description:** The National Oil and Hazardous Substances Pollution Contingency Plan, more commonly called the National Contingency Plan or NCP, is the federal government's blueprint for responding to both oil spills and hazardous substance releases. The NCP is the result of efforts to develop a national response capability and promote coordination among the hierarchy of responders and contingency plans. The plan also established a response headquarters, a national reaction team and regional reaction teams (precursors to the current National Response Team and Regional Response Teams).
- • **References:**
    - o National Contingency Plan (NCP) Overview - http://www2.epa.gov/emergency-response/national-oil-and-hazardous-substances-pollution-contingency-plan-ncp-overview
    - o National Contingency Plan (NCP) full text version - http://www.ecfr.gov/cgi-bin/text-idx?SID=f7cd5cf77fe84292d78d1ac1edf92a95&mc=true&node=pt40.28.300&rgn=div5
- • **Points of Contact:**
    - o NOAA
    - o Others / US Coast Guard?
- • **Responsible Party:**
    - o NOAA
    - o Others / US Coast Guard?
- • **Other information (*Why do I care?*):** The NCP is the result of efforts to develop a national response capability and promote coordination among the hierarchy of responders and contingency plans. Congress has broadened the scope of the NCP over the years. As required by the Clean Water Act of 1972, the NCP was revised to include a framework for responding to hazardous substance releases, as well as oil spills. Following the passage of Superfund legislation in 1980, the NCP was broadened to cover releases at hazardous waste sites requiring emergency removal actions. Over the years, additional revisions have been made to the NCP to keep pace with the enactment of legislation. The latest revisions to the NCP were finalized in 1994 to reflect the oil spill provisions of the Oil Pollution Act of 1990.
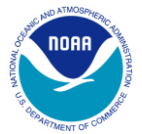
Additional Overarching Policies

Freedom of Information Act (FOIA)

- **Description**: Since 1967, the Freedom of Information Act (FOIA) has provided the public the right to request access to records from any federal agency. It is often described as the law that keeps citizens in the know about their government. Federal agencies are required to disclose any information requested under the FOIA unless it falls under one of nine exemptions which protect interests such as personal privacy, national security, and law enforcement.
- **References:**
    - FOIA Home Page - http://www.foia.gov
    - NOAA FOIA Website - http://www.noaa.gov/foia
- **Points of Contact / Responsible Party:**
    - NOAA: Robert Swisher (NOAA/OCIO), [FOIA@noaa.gov]
- **Other information/resources (*Why do I care?*):**

Privacy Policy

- **Description**: Information about how NOAA handles Privacy when anyone visits **NOAA.gov**:
If you do nothing during your visit but browse through the website, read pages or download information, we will gather and store certain information about your visit automatically. This information does not identify you personally. We automatically collect and store information such as the following concerning your visit:
    - The Internet domain (for example, "xcompany.com" if you use a private Internet access account, or "yourschool.edu" if you connect from a university's domain);
    - Your IP address (an IP address is a number that is automatically assigned to your computer whenever you are surfing the Web) from which you access our website.
    - The type of browser and operating system used to access our site;
    - The date and time you access our site;
    - The pages you visit; and
    - If you linked to our website from another website, the address of that website.

    We use this information to help us make our site more useful to visitors — to learn about the number of visitors to our site and the types of technology our visitors use.

- **References:**
    - OMB Privacy Policy - https://www.whitehouse.gov/omb/privacy_website_privacy
    - NOAA Privacy Policy Website - http://www.noaa.gov/privacy.html
- **Points of Contact / Responsible Party:**
    - NOAA: NOAA Webmaster (?)
- **Other information/resources (*Why do I care?*):**

NOAA IT Security Policy

- **Description**: The National Oceanic and Atmospheric Administration (NOAA) has established and implemented an Information Technology (IT) Security Program which provides reasonable and acceptable assurance that IT systems are performing as specified; that information is provided adequate protection;
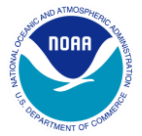
that data and software integrity is maintained; and, that unplanned disruptions of processing will not seriously impact mission accomplishment.

The NOAA IT Security Program implements policies, standards, and procedures which are consistent with government-wide laws and regulations, to assure an adequate level of protection for IT systems whether maintained in-house or commercially. Office of Management and Budget (OMB) Circular A-130 requires all federal agencies to plan for the security of all IT systems throughout their life cycle. OMB Circular A-130 also establishes a minimum set of controls to be included in Federal IT security programs. The circular directs agencies to assure:
  o That IT systems operate effectively and accurately;
  o That there are appropriate technical, personnel, administrative, physical, environmental, and telecommunications safeguards in IT systems;
  o That the continuity of the operations of IT systems that support critical agency functions is preserved.

On December 17th, 2002 the President signed into law the E-Government Act (P.L. 107-347) with includes Title III, the Federal Information Security Management Act (FISMA), replacing and transitioning from the Government Information Security Reform Act (GISRA). FISMA permenently reauthorizes the framework set forth in GISRA, to addresses the program management and evaluation aspects of IT security and strengthen the minimum standards for agency systems.

NOAA IT Security Program policies represent management's commitment to assuring confidentiality, integrity, availability and control of NOAA's IT resources. NOAA established a formal incident response capability named the NOAA Computer Incident Response Team (N-CIRT) in 1999. The N-CIRT operational duties include incident response, sharing of common vulnerabilities to the NOAA community, training on proper configurations for security, etc. The N-CIRT coordinates incident response and is responsible for acting as a source of expertise and information regarding vulnerabilities and responses to them, as pertains to the NOAA environment.

- **References:**
  o NOAA IT Security Office Policies, Regulations and Laws - https://www.csp.noaa.gov/policies
  o Federal Information Security Management Act (FISMA) - http://www.dhs.gov/federal-information-security-management-act-fisma
- **Points of Contact / Responsible Party:**
  o NOAA: NOAA IT Security Officer, Lawrence Reid (NOAA/OCIO)
  o NOAA IT Security Officers - https://www.csp.noaa.gov/noaa/itso/index.xhtml
  o NOS: NOS IT Security Officer, John D. Parker (NOS/ACIO)
- **Other information/resources (*Why do I care?*):**
  o Because security will impact everything you do or want to do with data!