



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL ENVIRONMENTAL SATELLITE, DATA,  
AND INFORMATION SERVICE

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TO: NOAA Satellite and Information Service  
Office and Center Directors

FROM: Mary E. Kicza *Mary E. Kicza*  
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Satellite and Information Services

SUBJECT: Policy on Access and Distribution of Environmental  
Satellite Data and Products

I am forwarding for your information the NOAA Satellite and Information Service (NESDIS) Policy on Access and Distribution of Environmental Satellite Data and Products. This policy is effective February 17, 2011. The purpose of this policy is to establish guidance and standards for setting priorities and managing user access to NESDIS operational environmental satellite data and products as provided by the Office of Satellite and Product Operations (OSPO). This policy is needed for the effective management of OSPO resources and to ensure compliance to Department of Commerce Information Technology system security requirements.



**National Oceanic and Atmospheric Administration  
National Environmental Satellite, Data, and Information Service**

**Policy**

**Access and Distribution of Environmental Satellite Data and Products**

**1. Effective Date:**

This policy directive is effective upon issuance.

**2. Purpose:**

To establish guidance and standards for setting priorities and managing user access to and distribution of operational environmental satellite data and products provided by the National Environmental Satellite Data and Information Service (NESDIS) through the Office of Satellite and Product Operations (OSPO). This policy directive is intended to help ensure the effective management of Federal Government fiscal, personnel and information resources used in the processing and distribution of operational environmental satellite data and products.

**3. Background:**

NESDIS recognizes that NOAA environmental satellite systems and the resulting data and products are important elements of the international Global Earth Observation System of Systems (GEOSS). GEOSS, and the many participating national and international satellite and in situ data providers, cooperate with the goal to share freely environmental data that are used for the benefit of society in nine areas including disasters, health, energy, climate, water, weather, ecosystems, agriculture and biodiversity. NESDIS operates environmental satellite data processing and distribution systems in support of federal statutes, NOAA mission and other agreements. NESDIS provides level-1 calibrated and navigated environmental satellite data, level-2+ automated environmental satellite products and interpretative satellite-based environmental analyses in support of the NOAA Programs, other Federal Government agencies, international and intergovernmental organizations, state and local governments, commercial organizations and the general public. To allow for the effective use of resources, this NESDIS policy will be used to manage user access while fulfilling IT security control requirements and the expectations of authorized Government and non-Government users.

**4. Rescissions:**

None

**5. Authorities and Reference Documents:**

- Paperwork Reduction Act (44 U.S.C. §§ 3501-3520) - requires that agencies ensure the public has timely and equitable access to their public information and that agencies not, except where authorized by statute, establish exclusive or restricted distribution arrangements; restrict or regulate use, resale or re-dissemination of information by the public; charge users fees or royalties for resale or re-dissemination of public information; or establish user fees for public information that exceeds the cost of dissemination .

- Office Management and Budget (OMB) Circular A-130 (61 FR6428) - Management of Federal Information Resources: establishes policy for the management of Federal information resources throughout the information lifecycle to minimize cost and maximize usefulness to users; requires agencies to consider the effects of decisions on the public and state/local governments and maintain an information dissemination system that promotes free and open access to the public. OMB A-130 Appendix III also requires the Federal Government agencies to establish interconnection agreements and obtain written management authorization before connecting their IT systems to other systems, based on an acceptable level of risk.
- NIST Special Publication (SP) 800-47: Security Guide for Interconnecting Information Technology Systems - provides guidance on how to develop the various documents required for authorization of interconnections between two IT systems owned or operated by different organizations.
- Federal Information Security Management Act of 2002 (44 U.S.C. §§ 3541-3549): is a U.S. Federal law enacted as part of the E-Government Act that recognizes the importance of information security to economic and national security interests of the United States; the act requires each federal agency to develop, document, and implement an agency-wide program to provide information security for the information and information systems that support the operations and assets of the agency; requires management accreditation of all information systems that store process or transmit federal data.
- NESDIS Guide for Determining Minimum Documentation Requirements for System Interconnections version 1.0 (2009): defines the minimum set of documents required for requesting authorization by NOAA/NESDIS management for any system interconnection to/from a NESDIS owned or operated information system.
- NOAA Administrative Order 212-15 (2008) - Management of Environmental and Geospatial Data and Information: This Order establishes a National Oceanic and Atmospheric Administration (NOAA) policy for acquiring, integrating, managing, disseminating, and archiving environmental and geospatial data and information obtained from worldwide sources to support the mission of NOAA.
- NOAA Administrative Order 216-112 (2006) - Policy on Partnerships in the Provision of Environmental Information: recognizes that the nation's environmental information enterprise consists of services provided by the government, academic and private sectors; commits NOAA to give due consideration to the capabilities of these sectors and consider the effects of its decisions on these entities.
- World Meteorological Organization Resolution 40 (1995): recognizes that members shall provide free and unrestricted access to essential data and products which are necessary for the provision of services in support of the protection of life and property and the well-being of nations, particularly those data and products required to describe and accurately forecast weather and climate in support of WMO programs; recognizes that data and products from operational meteorological satellites, with agreement between the WMO and satellite operators, are to be exchanged without charge and conditions.

- Environmental Satellite Processing Center (ESPC) Access Control Policy (2010): establishes uniform authority, responsibility and compliance for IT system access control in the Office of Satellite Data Processing and Distribution; provides systems specific guidance for configuring controls in accordance with NIST SP 800-48 and NIST 800-53.
- Rules Schedule for Fees for Access to NOAA Environmental Data (15 CFR Part 950) (2009): Defines rules for users to have the ability to access data offline, online and through the NESDIS eCommerce System (NeS) online store. Ability to provide these data, information and products and services depends on user fees.
- Group on Earth Observations (GEO) - Global Earth Observation System of Systems (GEOSS) 10-Year Implementation Plan (2005): includes Data Sharing Principles that there will be full and open exchange of data, metadata and products shared within GEOSS, recognizing relevant international instruments and national policies and legislation; all shared data, metadata and products will be made available with minimum time delay and at minimum cost; and free of charge or no more than cost of reproduction will be encouraged for research and education.
- GEO Implementation Guidelines for the GEOSS Data Sharing Principles (DSP) (2009): Acknowledges that the DSP are not legally binding and that all data are welcome in GEOSS. Defines “full and open exchange” as data and information made accessible with minimal time delay and with as few restrictions as possible, on a nondiscriminatory basis, at minimum cost for no more than the cost of reproduction and distribution (or the marginal cost of fulfilling the user request).

## 6. Applicability and Scope:

NESDIS operational environmental satellite data and products are provided by a variety of distribution methods in support of the core NOAA mission to understand and predict changes in the Earth’s environment and in a manner consistent with the NOAA Administrative Order 216-112 Partnership Policy and OMB Circular A-130.

This policy directive applies to the following types of data access requests:

- Operational environmental satellite data and higher level products provided by the NESDIS Office of Satellite and Product Operations (OSPO).
- 3<sup>rd</sup> party satellite data and products that are distributed by NESDIS/OSPO.
- Satellite data and products that are considered experimental and/or pre-operational and being processed and distributed by NESDIS/OSPO.
- Direct connections of IT systems for purposes of sharing data
- Remote e-authentication of individual users requiring access to NESDIS/OSPO IT data processing systems (one way access and not an exchange of data).

This policy directive does not apply to the following types of data access requests or under the following circumstances:

- Experimental satellite products still under development and testing on IT systems operated by the NESDIS Center for Satellite Applications and Research (STAR), their research partners, Cooperative Institutes and NESDIS program managers such as the NESDIS Office of Systems Development (OSD). Guidelines for interacting with the NESDIS research community and program managers are contained in their websites at <http://www.star.nesdis.noaa.gov/star/index.php> and <http://www.osd.noaa.gov>.
- NESDIS Data Center (NCDC, NGDC, NODC) archive products such as climate data records or products that require reprocessing of long-term temporal data and thus are not deemed an operational product by NESDIS/OSPO. Guidelines for interacting with the NESDIS Data Center communities are contained in their websites located at <http://www.nodc.noaa.gov>, <http://www.ncdc.noaa.gov/oa/ncdc.html> and <http://www.ngdc.noaa.gov>.
- NOAA satellite broadcast services such as Search and Rescue (SARSAT), Data Collection Systems (DCS), Low and High Rate Information Transmission (LRIT/HRIT), Emergency Managers Weather Information Network (EMWIN), GOES VARIable format imagery (GVAR) or GEONETCast Americas.
- During periods of data denial with respect to environmental satellite data per agreement with other satellite data providers or during periods of national crisis or war.
- Remote access control to NESDIS/OSPO internal data processing systems for the purposes of maintaining, modifying and/or testing of product software applications.

*NOTE:* Any request for new or enhanced satellite data or product that cannot be met with NOAA's current suite of products/services, must be addressed through the NOAA/NESDIS Satellite Products and Services Review Board (SPSRB). More information relating to the SPSRB and its charter can be found at <http://projects.osd.noaa.gov/spsrb>.

## **7. Definitions:**

**Direct access** – point to point connection of a user IT system to a NESDIS IT system for the purpose of accessing satellite data and products.

**Experimental satellite data and products** – new or enhanced satellite data and products that are in the research and development phase of the satellite product lifecycle. These products are maintained by best effort only.

**Global Telecommunication System (GTS)** – a global network supported by the World Meteorological Organization for the transmission of environmental data from surface-based weather stations, satellites, and numerical weather prediction centers.

**IT system interconnections** – the direct connection between two or more IT systems for the purpose of sharing data, products or other information resources.

**Interpretative satellite-based analyses** – satellite analysis products, generated by humans, that are tailored to improve accuracy and value to the user.

**Information Systems Security Officer (ISSO)** – An individual that ensures that all NESDIS information systems have access controls that limit direct system access to authorized users and processes or devices acting on behalf of authorized users.

**Level-0** – reconstructed unprocessed instrument data at full resolution; and any and all communications artifacts (e.g., synchronization frames, communications headers) removed.

**Level-1a** – level-0 data with all supplemental information appended for use in subsequent processing

**Level-1b** – level-0 data with radiometric and geometric correction applied to produce parameters in physical units

**Level-2** – derived environmental variables (e.g., sea surface temperature, surface winds, snow) at a comparable temporal and spatial resolution to the Level 1 source.

**Level-2+** – all level 2 and higher products

**Level-3** – data or retrieved environmental variables which have been spatially and/or temporally re-sampled. Such re-sampling may include averaging and/or compositing.

**Level-4** – model output or results from analysis of lower level data (data that are not directly measured by the instruments, but are derived from these measurements)

**Long-term archive** – satellite data and products that are acquired and stored for extended periods of time. Users, without stringent timeliness requirements, can obtain satellite data and products from NOAA/NESDIS Data Center and other facilities.

**Operational satellite data and products** – production and distribution of near real-time satellite data and products that are maintained 24 hours a day and 7 days per week. Near real-time satellite data are data provided to the user within 1-2 hours from time of initial observation.

**Pre-operational satellite data and products** – new or enhanced satellite data and products that have been promoted from the research and development phase and are in the process of being evaluated by users. Pre-operational data and products are maintained by best effort and are expected to achieve operational status within 12 months.

**Product** – collection of one or more geophysical variables derived from remotely sensed data that is uniformly packaged, processed and formatted and made available to a user with associated ancillary data. Products may be classified as Level 0, 1a, 1b, 2+, 3 or 4 depending on their degree of processing.

**Remote access** – access by a user from one IT system to the ESPC data processing system.

**Remote e-authentication** – confirming the identity of a user, based on the reliability of their credentials.

**Satellite broadcast services** – transmission of satellite data and products directly from satellites in orbit to receiving ground stations. Any user with the appropriate ground station equipment can acquire the signal and receive the broadcast.

Satellite Products and Services Review Board (SPSRB) – a NESDIS executive decision board that manages the lifecycle of new or enhanced satellite products from research and development to implementation into operations.

Third party satellite data and products – data and products obtained from non-NOAA satellites via agreements with other satellite data providers. 3<sup>rd</sup> party data are often not processed by NESDIS/OSPO and simply distributed, as it is received, from interagency or international partners. In some cases, OSPO may tailor the data or products before sending it to secondary users.

User requests -- the process for users to request specified data and products from NOAA/NESDIS.

## **8. Policy:**

NESDIS will implement the standards and principles described below in the manner prescribed. OSPO will review the standards on an annual basis and make modifications to the policy as appropriate.

### **ESPC Data Access Policy Standards and Principles:**

- a) In accordance with the authorities referenced in section 5 above, NESDIS recognizes the need for full and open exchange of environmental satellite data, metadata and products, as provided for by relevant international and national laws and policies, agreements, organizational policies and the availability of resources.
- b) The primary and preferred method to distribute NESDIS satellite data and products to users are through publicly available distribution services such as the Global Telecommunication System (GTS), NOAA satellite direct broadcast services, public Internet websites, and the NOAA Data Centers including the Comprehensive Large Array data Stewardship System (CLASS).
- c) In special cases, users will be authorized direct access to NESDIS data distribution systems for environmental satellite data and products. In these cases, access will be granted with: (a) an approved user request, (b) documented compliance with appropriate NOAA IT security regulations governing remote access and interconnections of IT systems, and (c) a determination, in writing by NESDIS, that direct access by the organization will not exceed IT system resource availability and capacity limitations.
- d) NESDIS data distribution servers will not serve as a long-term archive for operational satellite data and products. NESDIS will provide only minimal temporary storage and does not guarantee that users can recover older satellite data and products. Organizations with requirements for older and/or time series of satellite data and products will be directed to NOAA Data Centers or other entities with long-term satellite data archives.
- e) NESDIS generally will refer users requesting access to 3<sup>rd</sup> party satellite data and products to the originating data provider as the preferred means of distribution. However, by agreement, NESDIS may distribute satellite data and products from NOAA and non-NOAA satellites that are not processed by NESDIS. NESDIS will recognize and adhere to all lawful data sharing restrictions and proprietary rights regarding the re-distribution of 3<sup>rd</sup> party data and products.

f) In the event of the failure of a primary NESDIS data processing system and activation of an alternative processing site, direct data access and distribution may be restricted to pre-determined, approved data and products.

g) Detailed procedures governing direct access to environmental satellite data and products will be maintained by OSPO.

**9. Roles and Responsibilities:**

NESDIS OSPO will be responsible for maintaining and proposing updates to this data access policy. OSPO will develop and maintain procedures for implementing this policy. The OSPO Information Systems Security Officer (ISSO) will ensure that all NESDIS information systems implement access controls that limit direct system access to authorized users, processes or devices acting on behalf of authorized users and allow direct access only as necessary to support authorized business activities.

**10. Inquiries:**

All questions and inquiries should be addressed to the National Oceanic and Atmospheric Administration, Satellite Products and Services Division Chief, World Weather Building, Room 607, 5200 Auth Road, Camp Springs, MD 20746. Telephone: (301) 763-8051.

**11. Review Date:**

The NESDIS OSPO will review this policy annually from the date of issuance to assess its effectiveness.

**Approved By:**

*Mary E. Kicza*

*2/17/2011*

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Mary Kicza  
NOAA Assistant Administrator for Satellite and Information Services

Date