



**NESDIS
Policy
Directive**

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NOAA/NESDIS



NESDIS

SYSTEMS ENGINEERING AND PROGRAM/PROJECT MANAGEMENT POLICY

July 29, 2016

COMPLIANCE IS MANDATORY



Prepared by:

**U.S. Department of Commerce
National Oceanic and Atmospheric Administration (NOAA)
National Environmental Satellite, Data, and Information Service (NESDIS)**



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Approval Page

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1. POLICY

a. This document provides the statement of policy and responsibilities for all of the systems engineering and program/project management disciplines under the purview of the NESDIS Assistant Administrator, including NESDIS Procedural Requirements covering systems engineering and program/project management of all Programs, Projects, and Activities, enterprise architecture and advanced planning,; and information technology.

b. Acquisition. It is NESDIS policy to comply with the NOAA Acquisition Manual, which provides the acquisition policy established by the NOAA Senior Bureau procurement official (SBPO). The NESDIS Acquisition Management Guide (TBD) provides a consistent acquisition management process for all NESDIS acquisitions.

c. Program/Project Management. It is NESDIS policy to apply program and project management procedural requirements to plan, track progress, and accomplish mission objectives. Programs and projects are managed in the logical progression of four processes: formulation, approval, implementation, and evaluation. All programs and projects follow the procedural requirements and life-cycle reviews unique to their investment area as defined by the following documents:

Identify program management requirements documents.

d. Systems Engineering. It is NESDIS policy to apply the systems engineering processes across the life cycle of products and components. Systems engineering is a methodical, disciplined approach for the design, realization, technical management, operations, and retirement of a system. NESDIS systems engineering processes are broadly classified into two groups: Enterprise level systems engineering processes and Office/Program level systems engineering processes. NESDIS procedural requirements for systems engineering are found in NPR 7123.1 and apply to the NESDIS Enterprise, NESDIS offices, and Program Offices.

e. Safety and Assurance. It is NESDIS policy to design, develop, manage, and operate NESDIS' systems and assets in a manner which protects the public, NESDIS workforce, integrity of data and information, space environments, high-value equipment, and property from harm.

f. Checks and Balances. It is NESDIS policy to utilize checks and balances that assures compliance with NESDIS directives, procedural requirements, and applicable standards. Dissenting opinions shall be respected throughout NESDIS and properly dispositioned according to a common process without fear of retribution. Checks and balances shall include the following:

(1) Independent Reviews. Conduct independent programmatic and technical reviews covering scope, cost, schedule, risks, or functional acceptability. "Independence" in this context requires reviewers who are not under the supervision, direction, advocacy, or control of the Program/Project or Major initiative.

(2) Compliance Assessments. Conduct periodic assessments within NESDIS and its contractor community to check compliance against requirements (i.e., engineering and program/project management policies, procedural requirements, and invoked standards) to assure requirements are implemented when conducting NESDIS funded work.



2. APPLICABILITY

- a. This NPD is applicable to all of NESDIS including NESDIS Offices and Program Offices.

3. AUTHORITY

- a. Administrative, 40 U.S.C. 121(c)(2), Pub. L. 107-217, § 1, Aug. 21, 2002, 116 Stat. 1062.
- b. Reorganization Plan No. 4 of 1970, 3 C.F.R. xx (1970), reprinted in 84 Stat. 2090-93 (1970), and in 35 Fed. Reg. 15627-30 (1970), and reprinted with amendments in 5 U.S.C. app. at 1557-61 (1994).
- c. Creation, Maintenance, and Use of Records, 41 CFR pt. 102-193.25(c).

4. APPLICABLE DOCUMENTS AND FORMS

- a. National Environmental Policy Act, NEPA (42 U.S.C. §§ 4321 et seq.).
- b. 40 CFR 1500-1508, Regulations for Implementing the National Environmental Policy Act.
- c. DAO 216-6, Implementing the National Environmental Policy Act.
- d. Department Of Commerce (DOC) Policy on Commerce Acquisition Project Management,
- e. NOAA Administrative Order (NAO) 216-6A, April 22, 2016.
- f. NOAA Business Operations Manual (BOM), May 13, 2015.
- g. Inspector General Act of 1978, as amended, 5 U.S.C. app.
- h. NPD 1001.0, NESDIS Strategic Plan.
- i. NPR 1400.1, NESDIS Directives and Charters Procedural Requirements.

5. RESPONSIBILITY

- a. The OSAAP Director, other NESDIS Office Directors and Program Directors, and the NESDIS Chief Information Officer (CIO) are responsible for promoting policies, standards, best practices, and guidance in their areas of responsibility under this NPD. They shall coordinate efforts to maximize the commonality, clarity, and effectiveness of direction and guidance.

- b. The OSAAP Director shall:

Add responsibilities from the position description.



c. The NESDIS Chief Information Officer shall, in addition to responsibilities described in other NESDIS Directives:

Add responsibilities from the position description.

d. NESDIS Office Directors and Program Directors shall:

Add responsibilities from the position description.

e. The Chief Financial Officer shall:

Add responsibilities from the position description.

f. The EEO/Program Manager shall provide assistance, advice, and coordination to ensure compliance with equal opportunity requirements regarding the accessibility of electronic information and information technology, including software, for persons with disabilities.

6. DELEGATION OF AUTHORITY

None.

7. MEASUREMENT/VERIFICATION

a. Compliance with this NPD and its associated NPRs are verified through periodic benchmarks and assessments conducted under the authority of the OSAAP. Results from these benchmarks and assessments are communicated to senior management who ensure corrective actions are identified, implemented, and tracked to closure. Measurement data on compliance is collected and tracked over time by OSAAP.

8. CANCELLATION

None.



ATTACHMENT A: Definitions

A.1 Activity - Any of the project components or research functions that are executed to deliver a product or service or provide support or insight to mature technologies.

A.2 Authoritative Data - Data that has been designated as valid for specific official program/projects. The designated data is controlled by processes.

A.3 Deviation - A documented authorization releasing a program or project from meeting a requirement before the requirement is put under configuration control at the level the requirement will be implemented.

A.4 Engineering - Work required to define, develop, realize, deploy, operate, and sustain useful and cost-effective NESDIS systems by engineering disciplines and scientific and other non-technical functions.

A.5 Evaluation - The continual self evaluation and independent assessment of the performance of a program or project and incorporation of the evaluation findings to ensure adequacy of planning and execution according to plans.

A.6 Formulation - The identification of how the program or project supports the Agency's strategic needs, goals, and objectives; the assessment of feasibility, technology and concepts; risk assessment, team building, development of operations concepts and acquisition strategies; establishment of high-level requirements and success criteria; the preparation of plans, budgets, and schedules essential to the success of a program or project; and the establishment of control systems to ensure performance to those plans and alignment with current Agency strategies.

A.7 Implementation - The execution of approved plans for the development and operation of the program/project, and the use of control systems to ensure performance to approved plans and continued alignment with the Agency's strategic needs, goals, and objectives.

A.8 Independent Verification and Validation - Verification and validation performed by an organization that is technically, managerially, and financially independent of the development organization.

A.9 Program - A strategic investment that has a defined architecture and/or technical approach, requirements, funding level, and a management structure that initiates and directs one or more projects. A program defines a strategic direction that NESDIS has identified as critical.

A.10 Project - A specific investment having defined goals, objectives, requirements, life-cycle cost, a beginning, and an end. A project yields new or revised products or services that directly address NESDIS' strategic needs. They may be performed wholly in-house; by Government, industry, academia partnerships; or through contracts with private industry.

A.11 Reconciled - A reconciled life-cycle cost estimate is the Independent Cost Estimate after the independent estimators and the project staff has thoroughly reviewed respective estimates and understands the differences.



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A.12 Waiver - A documented authorization releasing a program or project from meeting a requirement after the requirement is put under configuration control at the level the requirement will be implemented.



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ATTACHMENT B: Acronyms



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ATTACHMENT C: References

- Department Of Commerce (DOC) Scalable Acquisition Project Management Guidebook
- NOAA/NESDIS Space Flight Program Management requirements for Assisted Acquisitions, NQP-4101, Revision 01, September 12, 2013 (In Internal Review)NPD 7120.4D, NASA Engineering and Program/Project Management Policy
- NASA/SP-2007-6105, NASA Systems Engineering Handbook



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