



# NASA Procedural Requirements

**COMPLIANCE IS MANDATORY**

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## Subject: Technical Standards for NASA Programs and Projects

Responsible Office: Office of the Chief Engineer

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## Chapter 3. Selection and Use of Technical Standards

*Note: A technical standard is not "self-imposing," i.e., it is not mandatory for use by a performing entity unless: (1) Cited as a requirement within a NASA directive or U.S. law, or (2) Invoked by other NASA requirements documents (e.g., contracts, including, but not limited to, the JPL (an FFRDC) contract and program/project documents). Requirements in technical standards and specifications are identified by using the word "shall" and denote mandatory compliance by programs and projects.*

### 3.1 Selection of Technical Standards

3.1.1 Program and project managers, in conjunction with the appropriate Technical Authority, shall select technical standards based on currency and applicability for use as program/project requirements according to the following order of priority:

- a. Technical standards required by legal requirements.
- b. Technical standards designated as mandatory by NPDs and NPRs.
- c. Technical standards necessary to promote mission success and engineering excellence. When all other factors are the same, select in the following order of precedence:

- (1) Voluntary consensus standards, domestic and international.
- (2) NASA technical standards or other Government agency technical standards.<sup>1</sup>

3.1.2 Program and project managers, in conjunction with the appropriate Technical Authority, shall select current versions of technical standards except when justified as impractical or incompatible with requirements.

*Note: Promote commonality in the use of technical standards across NASA.<sup>1</sup>*

3.1.3 Program and project managers shall review lessons learned, including but not limited to, those in the NASA Lessons Learned Information System, for applicability to current technical standards applications.

3.1.4 Program and project managers, NASA Headquarters offices, and Center Directors shall give preference to performance standards over prescriptive standards.

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<sup>1</sup> Consider NASA-endorsed technical standards, accessible at <https://standards.nasa.gov>, first.

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### 3.2 Tailoring of Technical Standard

3.2.1 NASA Headquarters offices and program and project managers shall:

- a. Tailor, when necessary, technical standards and document necessary changes to meet specific application needs

and to avoid over- or under-specification of requirements.

b. In the case when a technical standard is invoked by a NASA directive or other NASA requirements document (e.g., a contract), document the traceability of the tailored requirements to the original standard and obtain approval from the appropriate Technical Authority as required by NPR 7120.5, NPR 7120.7, NPR 7120.8, NPR 8900.1, Health and Medical Requirements for Human Space Exploration, and for Safety and Mission Assurance, by NPR 8715.3, NASA General Safety Program Requirements, and NASA-STD-8709.20.

*Note: Tailoring of technical standards required by law or Federal regulation requires General Counsel and Technical Authority involvement.*

c. Ensure that requirements from voluntary consensus standards, other Government agencies, and NASA technical standards used as requirements in program and documentation are traceable to the original standards and track changes for review and potential revision to program/project requirements.

### 3.3 Use of Technical Standards

3.3.1 Program and project managers shall:

- a. Use established voluntary consensus standards, both domestic and international, in lieu of other Government agency standards and NASA technical standards as program/project requirements unless use of such standards would be inconsistent with applicable laws or NASA NPDs/NPRs, technically inadequate, or otherwise impractical.
- b. Evaluate NASA-endorsed technical standards for use when selecting program and project requirements.
- c. Register to receive notification of changes to technical standards imposed as requirements at <https://standards.nasa.gov>.
- d. Review changes to imposed technical standards to determine the need for revision of program/project requirements.

### 3.4 Agency's Annual Report on Standards

3.4.1 NASA Headquarters offices and Center Directors, or their designees, shall submit to the NASA Chief Engineer input for NASA's annual report to NIST as required by OMB Circular No. A-119 describing NASA's use of voluntary consensus standards, participation in the development of voluntary consensus standards and voluntary consensus standards bodies, and conformity assessment based on guidance issued by the Secretary of Commerce.

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