

Glenn Research Center, Environmental Programs Manual

Chapter 2 - NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

NOTE: The current version of this Chapter is maintained and approved by the Environmental Management Office (EMO). The last revision date of this chapter is July 2004. If you are referencing paper copies, please verify that it is the most current version before use. The current version is maintained on the Glenn Research Center (GRC) intranet at <http://osat-ext.grc.nasa.gov/emo/pub/epm/epm-contents.pdf>. Approved by: EMO Chief, Michael Blotzer {<mailto:Michael.J.Blotzer@nasa.gov>}.

GENERAL

This chapter describes the National Environmental Policy Act Program at GRC. This chapter conforms to the GRC Environmental Management System (EMS) as defined in this Manual [Chapter 1](#). This chapter supports GRC Environmental Policy, which promotes pollution prevention, regulatory compliance, and continuous improvement.

NEPA is Federal legislation that establishes the national policy for protecting the human environment. The Act requires Federal agencies to consider the environmental effects of their actions before beginning a project and to examine alternative actions that would reduce any threat or harm posed to the environment. Environmental, technical, and socioeconomic factors are to be considered. NEPA is also an environmental disclosure statute and provides procedural requirements to ensure available information be adequately addressed and made available to NASA decision makers in a timely manner so they can consider the environmental consequences of the proposed action or activity. Through NEPA, environmental information must also be made available to the public as well as other Federal, state, and local agencies. It is important to note that NEPA does not require that the proposed action or activity be free of environmental impacts, but requires the decision maker to consider environmental impacts as one factor in the decision to implement a program, project, action, or activity.

PURPOSE

This chapter establishes procedures at GRC to:

- Ensure the minimum requirements of GRC's NEPA review of proposed programs, projects, actions, and activities are met and comply with applicable Federal, state, and local regulations, Presidential Executive Orders, and NASA and GRC NEPA and Environmental Policies and Requirements.
- Identify and assess the environmental impact(s) of proposed programs, projects, actions, and activities.
- Assist in new project, program, actions, and activities planning to determine NEPA documentation requirements, and environmental impacts and alternatives of proposed projects, programs, actions, and activities.

POLICY

It is GRC policy to:

- Comply with all Federal, state, and local environmental regulations, Presidential Executive Orders, and NASA and GRC policies and requirements
- Use all practical means, consistent with statutory authority, available resources, and national policy, to protect and enhance the quality of the environment
- Ensure that environmental impacts are given appropriate consideration in the planning of all GRC proposed programs, projects, actions, or activities, including those performed under contract, grant, lease, or permit
- Use systematic and timely processes and procedures that will ensure the integrated use of planning and decision making for actions that may have an impact on the environment

- Initiate and use ecological and other environmental information in the planning and development of programs, projects, actions, and activities
- Coordinate input, when appropriate, from Federal, State, local, and regional authorities and the public in the NEPA planning, environmental review, and decision making processes
- Incorporate pollution prevention principles and techniques in NEPA planning and decision making processes.

APPLICABILITY

This chapter is applicable to all proposed GRC programs, projects, actions or activities. It is applicable to GRC employees, contractors, and guest personnel at all levels who in any way participate in the initiation, development, and implementation of GRC programs, projects, actions, or activities. GRC refers to both Lewis Field in Cleveland, Ohio and Plum Brook Station in Sandusky, Ohio.

DEFINITIONS

Categorical Exclusion (CatEx):

An exclusion that is granted for a category of actions that does not individually or cumulatively have a significant effect on the human environment, and that the given Federal agency has specifically identified in its regulations, and for which, therefore, neither an Environmental Assessment (EA) nor an Environmental Impact Statement (EIS) is required, except under extraordinary circumstances.

Specific NASA actions that normally can be covered by a CatEx include (as listed in 14 CFR 1216.305(d)):

1. Research and development activities in:
 - Space science (other than specific spacecraft development and flight projects)
 - Space and terrestrial applications (other than specific spacecraft development and flight projects)
 - Aeronautics and space technology and energy technology applications (other than experimental projects that have the potential for substantial environmental impacts)
 - Space transportation systems engineering and scientific and technical support operations, routine transportation operations, and advanced studies
 - Space tracking and data systems.
2. Facility planning and design (funding).
3. Minor construction of new facilities including rehabilitation, modification, and repair. (See Section 2.16 for definition of Minor Facility Project.)
4. Continuing operations of a NASA installation at a level-of-effort, or altered operations, provided the alterations induce only social or economic results but no (or minimal) natural or physical environmental effects.

Even though an action may be categorically excluded from the need for a formal EA or EIS, it is not excluded from the requirement for an environmental analysis conducted during the earliest planning phases.

Cooperating Agency:

A Federal agency, other than the lead agency, that has legal jurisdiction or special expertise to comment on the proposed actions of a lead agency. A State or local agency of similar qualifications or, when the effects are on a reservation, an Indian Tribe, may, by agreement with the lead agency, become a cooperating agency.

Cumulative Effects:

Effects resulting from incremental consequences of an action, when added to other past, present, and reasonably foreseeable future actions, regardless of which agency (Federal or non-Federal), or public or private organization, or person that undertakes such actions.

Effects:

- Direct effects, which are caused by the action or activity and occur at the same time and place.
- Indirect effects, which are caused by the action or activity and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

Effects and impacts as used in NEPA are synonymous. Effects include ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial.

Environmental Analysis:

The analysis of the environmental effects of proposed actions. The analysis is carried out from the very earliest planning studies for the project, program, action or activity and form, if necessary, the basis from which the more formal EA's and/or EIS's are developed. The analysis is recorded on a NEPA Checklist (NASA Form C-150) and Record of Environmental Consideration, or supporting documents, as necessary.

Environmental Assessment (EA):

A concise public document, which a Federal Agency is responsible for preparing or overseeing the preparation of, that:

1. briefly provides sufficient evidence and analysis for determining whether to prepare an EIS or a Finding Of No Significant Impact (FONSI);
2. is proof of an agency's compliance with NEPA when an Environmental Impact Statement is not necessary; and
3. facilitates preparation of a statement when one is necessary.

The EA shall briefly describe the need for the proposed action and alternatives and the environmental impacts of the proposed action and alternatives, and it shall list the agencies and persons consulted. It forms the basis of the decision to prepare a FONSI or a Notice of Intent (NOI) to prepare an EIS. Specific NASA actions that normally require an EA include, but are not limited to:

- Specific spacecraft development and flight projects in space science
- Specific spacecraft development and flight projects in space and terrestrial applications
- Specific experimental projects in aeronautics and space technology and energy technology applications which may have a substantial effect on the human environment
- Development and operation of new space transportation systems and advanced development of new space transportation and spacecraft systems
- Reimbursable launches of non-NASA spacecraft or payloads
- Major Construction of Facilities projects (see Section 2.14)
- Actions to alter ongoing operations at NASA installations that could lead, either directly or indirectly, to natural or physical environmental consequences.

Environmental Impact Statement (EIS):

A document that is prepared for an action that may have significant impact(s) on the quality of the human environment or that has the potential for controversy in environmental effects. It is a report that provides a full and fair discussion and informs decision makers and the public of the reasonable alternatives that would avoid or minimize adverse consequences or enhance the quality of the human environment. An EIS ensures that the policies and goals of NEPA are integrated into NASA projects, programs, actions, and activities. An EIS is filed with the Environmental Protection Agency, published, and distributed widely for public comment.

Specific NASA actions that normally require an EIS include but are not limited to:

- Development and operation of new launch vehicles
- Development and operation of space vehicles likely to release substantial amounts of foreign materials into Earth's atmosphere or space

- Development and operation of nuclear systems, including nuclear reactors and thermal devices used for propulsion and power generation, or both.

Environmental Mitigation & Monitoring Report:

A document, prepared at the end of a project by the project manager that summarizes environmental impact mitigation efforts during the project and deviations from mitigation plans.

Environmental Resources Document (ERD):

A Center-wide report that characterizes all aspects of the installation's environment at the time of report preparation and describes the environmental consequences of the installation's existing operations. The ERD is used to assess the significance of subsequent proposed actions on the environment and is required by NASA regulation as a reference source for the preparation of Environmental Assessments and Environmental Impact Statements.

Finding of No Significant Impact (FONSI):

A public document prepared by the Environmental Management Office that briefly reflects the agency's final decision and reasons an action will not have a significant effect on the human environment and for which an EIS will not be prepared. It is published in the *Federal Register* by NASA Headquarters.

Human Environment:

Human environment shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment. This means that economic or social effects are not intended by themselves to require preparation of an EA or EIS. When an EA or EIS is prepared and economic or social and natural or physical environmental effects are interrelated, then the EA or EIS will discuss all of these effects on the human environment.

Impacts: See Effects.

Lead Agency:

The agency or agencies preparing or having taken primary responsibility for preparing the EA or EIS.

Major Facility Project:

Based on an October 2, 2002 memo written by NASA Headquarters Environmental Management Division, "major" construction projects as defined by NASA NEPA regulations are not necessarily equated with monetary limits but with the scope of the project and the context and intensity of environmental impacts. (Construction of Facilities defines a major C of F project as construction in excess of \$750,000.00; repair, rehabilitation, and modification in excess of \$1,000,000.00, and land acquisition and emergency repair approved under the provisions of Section 308(b) of the National Aeronautics and Space Act of 1958 (as amended) at any cost.) Requires a detailed environmental analysis and may require further NEPA documentation.

Major Federal Action:

Major Federal action includes actions with effects that may be major and which are potentially subject to Federal control and responsibility. Major reinforces but does not have a meaning independent of significant.

Minor Facility Project:

Based on an October 2, 2002 memo written by NASA Headquarters Environmental Management Division, "minor" construction projects as defined by NASA NEPA regulations are not necessarily equated with monetary limits but with the scope of the project and the context and intensity of environmental impacts. (Construction of Facilities defines a minor C of F project as construction in excess of \$200,000.00 and not exceeding \$750,000.00; repair and rehabilitation in excess of \$200,000.00 and not exceeding \$1,000,000.00.) Requires a detailed environmental analysis.

Notice of Availability (NOA):

A written notice published in the *Federal Register* and/or local news media that announces the availability of a draft or final EIS for public review.

Notice of Intent (NOI):

A public notice that a draft or final EIS will be prepared. It summarizes issues discussed in the Environmental Assessment, if one was done. The notice shall briefly (1) describe the proposed action and alternatives; (2) describe the Agency's proposed scoping process including whether, when, and where any scoping meeting will be held; and (3) state the name and address of a person within the lead Agency who can answer questions about the proposed action and the EIS. This notice is required by law to allow interested parties to participate in the EIS development or to review it upon completion.

Record of Decision (ROD):

A public document that reflects the agency's final decision, rationale behind that decision, and commitments to monitoring and mitigation for a particular program, project, action, or activity. The ROD is signed by the GRC Center Director and Headquarters Code OJE, and kept in the GRC NEPA Document Manager's official files. It is not published in the Federal Register, but is made available upon request.

Record of Environmental Consideration (REC):

A document prepared by the Environmental Management Office that outlines the level of documentation a project needs to satisfy NEPA requirements.

Significant:

As used in NEPA requires considerations of both context and intensity:

- Context. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term, direct, indirect, and cumulative effects are relevant.
- Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action.

RESPONSIBILITIES**All Directorates:**

1. Identify projects, programs, actions, and activities that may affect the human environment
2. Coordinate with EMO early in the project, program, action, or activity development
3. Ensure the NEPA process is complete before taking any action that would have an adverse environmental impact or limit the choice of reasonable alternatives
4. Prepare Environmental Analysis Checklist, Form C-150 for all projects, programs, actions or activities regardless of anticipated environmental impacts. Completion of additional NEPA documentation and associated technical studies may be required
5. Initiate additional NEPA documentation if required
6. Review the REC for the project/program after completion of the REC by EMO.
7. Maintain environmental documentation in project file
8. Notify EMO if the scope of the project changes after NEPA documentation has been completed
9. Fund all EA's, EIS's, and technical studies associated with Directorate projects

Center Director:

1. Approve and sign all FONSI's (EA's) and ROD's (EIS's).

Community and Media Relations Office:

1. Assist in ensuring that environmentally significant activities are disclosed to the public and that public opinion is taken into consideration during the NEPA process.
2. Serve as the liaison between EMO and media outlets to ensure public disclosure of the NEPA process.

Environmental Management Office (EMO):

1. Review and concur on all NEPA Documentation including Checklists, Statement of Work Review and Concurrence Forms (Form 8095), Grant Selection Forms, and Safety Permits for NEPA issues. Determine if additional review or documentation is required for the proposed project, program, action, or activity.

2. Prepare and sign REC's and submit copies to proposing organization and other interested parties
3. Coordinate with FD NEPA Coordinator on all CoF Projects and with FD Preservation Officer as necessary on non-CoF projects. .
4. Review EA's and EIS's before final submission to the SHEB
5. Provide agency and public notification of EAs, FONSI's, EIS's, and RODs.
6. Assist the project/program initiator as needed in preparing NEPA documentation.
7. Serve as the point-of-contact for all required external NEPA coordination (NASA Headquarters, other Federal agencies, state and local agencies, public organizations, etc.)
8. Prepare an annual Environmental Mitigation & Monitoring Report that contains the necessary environmental documentation for a given fiscal year, if necessary.
9. Process EAs and FONSI's in accordance with NPR 8580.1 to include the following actions:
 - a. Review Draft EA for adequacy
 - b. Prepare FONSI
 - c. Coordinate approval with GRC Center Director and approving officials at NASA Headquarters
 - d. Publish notices in local papers. Coordinate the distribution of the FONSI with other Federal, state, and local agencies, as well as with organizations and individuals (FONSI's that are state and/or local in scope shall be published in a regional or local newspaper. FONSI's on actions that are national in scope shall also be published in the *Federal Register*.) The public shall be allowed 30 days to comment on the finding, and supporting information and documentation shall be readily available upon request.
 - e. Maintain mailing lists
 - f. Respond to public comments
10. Process EIS's and RODs in accordance with NPR 8580.1 to include the following actions:
 - a. Prepare Notice of Intent (NOI) to prepare an EIS
 - b. Coordinate approval with NASA Headquarters Code OJE for publication of NOI in the *Federal Register*
 - c. Publish notices in local papers
 - d. Organize public scoping meetings
 - e. Assist in scoping and review of technical studies as needed
 - f. Assist in developing Draft EIS and Final EIS
 - g. Participate in internal review of Draft EIS and plan for coordination with other Federal, state, and local agencies, organizations, and individuals
 - h. Maintain mailing lists
 - i. Submit Draft EIS to EPA through NASA Headquarters Code OJE. Subsequent to NASA Headquarters Code OJE approval, the public shall have a minimum of 45 days from the date the EPA's public Notice of Availability (NOA) of the Draft EIS is published in the *Federal Register* to comment.
 - j. Publish NASA's NOA of Draft EIS in the *Federal Register* and/or local news media.
 - k. Coordinate review of the Draft EIS and Final EIS by other Federal, state, and local agencies, organizations, and interested parties
 - l. Hold public comment meetings, as needed
 - m. Prepare or review responses to comments on both the Draft EIS and Final EIS
 - n. Prepare, coordinate, and approve the ROD with NASA Headquarters Code OJE following completion of the Final EIS.
11. Maintain and update the GRC ERD as needed
12. Maintain and update the NASA NETS NEPA module for GRC
13. Attend NASA GRC Strategic Management Office Program Management Council meetings at least on a quarterly basis for NEPA / environmental planning purposes
14. Submit Cooperating Agencies Report to NASA Headquarters Code OJE on a semi-annual basis.

Safety, Health, and Environmental Board (SHEB):

1. Review all NEPA documentation, including EA's, FONSI's, EIS's, and ROD's prior to submittal for signature.

Facilities Division – NEPA Coordinator:

1. Assist FD Construction of Facilities (CoF) Project Managers in preparing NEPA Checklists and supporting documents

2. Submit NEPA documents through the Facilities Preservation Officer to the EMO NEPA Coordinator
3. Coordinate with EMO NEPA Coordinator on current and future project, program, action, or activity schedule.

Facilities Division – Project Managers:

1. Prepare NEPA Checklist, Form C-150, for all projects, programs, actions or activities regardless of anticipated environmental impacts. Submit to FD Coordinator who will process and submit the C-150 to EMO during the initial stages of project design, prior to submittal of Forms 1509/1510 to NASA Headquarters, but after the Project Requirements Document is complete. Completion of additional NEPA documentation and associated technical studies may be required
2. Provide funding for additional NEPA documentation if necessary
3. Notify FD Coordinator if the scope of the project changes after NEPA documentation has been completed. FD Coordinator will in turn notify and coordinate with EMO.
4. Develop an Environmental Mitigation & Monitoring Report in conjunction with EMO at the conclusion of a project, if necessary.
5. Notify the FD NEPA Coordinator of any new proposed project, action or activity.
6. Review the REC for the project/program after the REC has been completed by EMO and submitted back to the initiating office.

Research and Support Directorates:

1. Prepare Environmental Analysis Checklist, Form C-150 for all projects, programs, actions, or activities regardless of anticipated environmental impacts. Completion of additional NEPA documentation and associated technical studies may be required
2. Provide funding for additional NEPA documentation if required
3. Coordinate with EMO in the earliest stages of program or project development
4. Notify EMO if equipment associated with programs, projects, actions, or activities will be used off-site in the natural environmental or unusual impacts are anticipated
5. Review the REC for the project/program after the REC has been completed by EMO and submitted back to the initiating office.

Legal Office:

1. Review EAs, FONSI, EISs, and RODs prior to submittal to NASA Headquarters Code OJE for review and approval.

NEPA REQUIREMENTS

Required Actions:

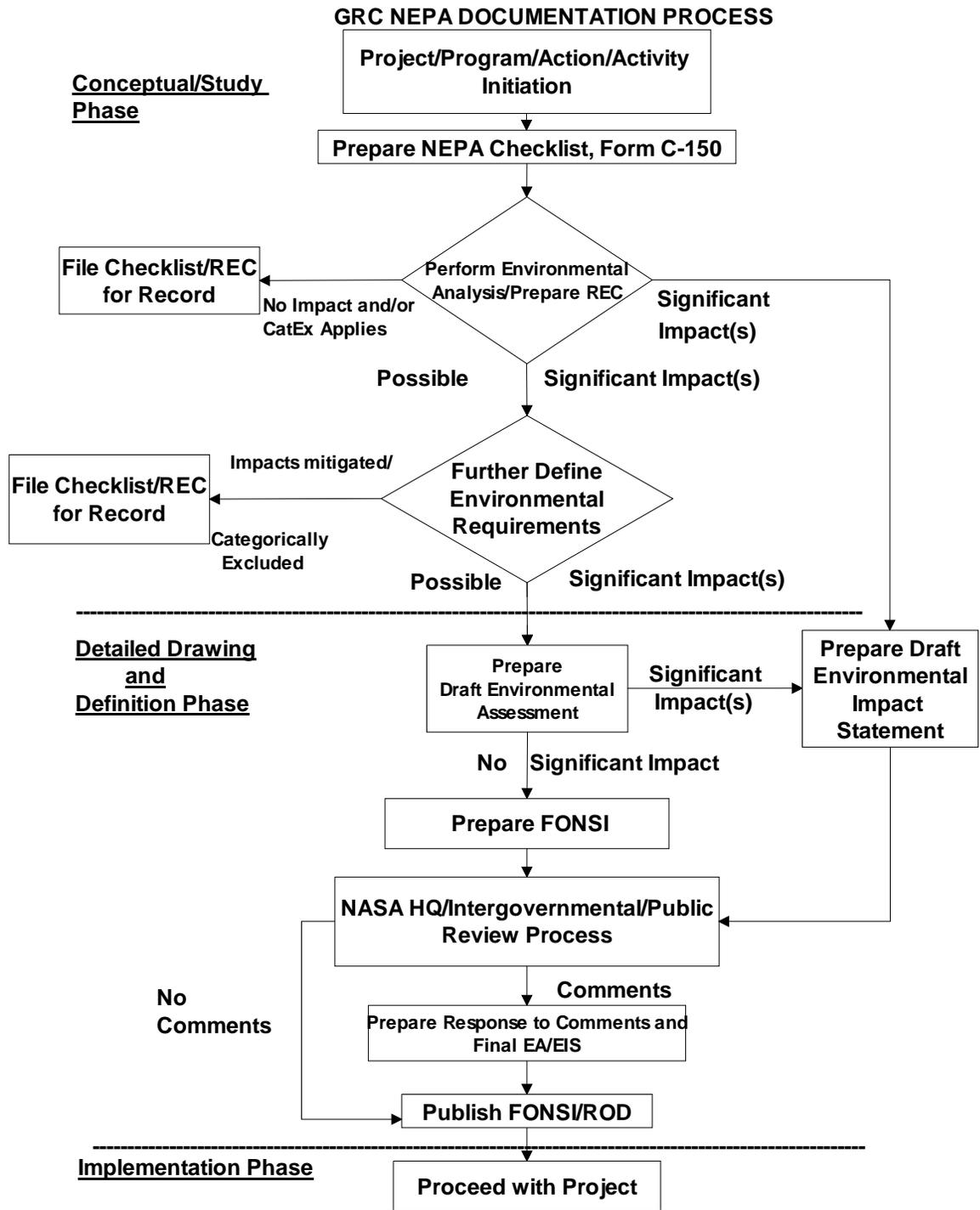
All directorates initiating projects, programs, actions, or activities shall comply with NEPA regulations and requirements and with GRC policy. For every proposed project, program, action or activity, researchers, and project or program managers shall submit a completed NEPA Checklist to the EMO NEPA Document Manager for review. The EMO NEPA Document Manager monitors projects, programs, actions, and activities to ensure compliance with NEPA. The EMO NEPA Document Manager will determine if additional NEPA documentation is required. If so, the program or project manager will be informed and shall provide funding for further required documentation for submittal to EMO.

Project Implementation:

No construction or implementation of any Federal action requiring NEPA review may commence prior to finalization of NEPA documentation. This includes the mandatory 30-day public review period following finalization of a FONSI for an EA or ROD for an EIS. Per NPR 7120.5B, Section 4.6.5.3, the program or project manager shall complete the NEPA process before taking any action that would either 1) have an adverse environmental impact or 2) limit the choice of reasonable alternatives. It is recommended that program and project managers complete the NEPA process before the final design is approved to avoid substantial cost and schedule impacts.

NEPA PROCESS FLOWCHART

A generalized flowchart of the NEPA Documentation Process at GRC is shown in the following flowchart:



RECORDS

- NEPA Checklist, Form C-150
- SOW Requirements Review & Concurrence, Form C-8095
- Safety Permits
- Congressional Notification of Grants Forms
- Record of Environmental Consideration
- Finding of No Significant Impact
- Environmental Assessments
- Environmental Impact Statements
- Notice of Availability
- Notice of Intent
- Record of Decision
- EA or EIS Administrative Record Packet

AUTHORITY

- NPR 8580.1 Implementing The National Environmental Policy Act And Executive Order 12114
- NPR 7120.5B NASA Program and Project Management Processes and Requirements
- The National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321-4345)
- Executive Order 12114: Environmental Effects Abroad of Major Federal Actions
- Council on Environmental Quality Regulations (40 CFR Part 1500)
- NASA NEPA Regulations (14 CFR Part 1216)

Safety and Assurance Directorate [SAAD](#)

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