(2) Represent NASA in working with other governmental agencies and interagency organizations to formulate, revise, and achieve uniform understanding and application of governmentwide policies relating to the environment;

(3) Develop and ensure the implementation of agencywide standards, procedures, and working relationships for protection and enhancement of environmental quality and compliance with applicable laws and regulations;

(4) Develop, as an integral part of NASA's basic decision processes, procedures to ensure that environmental factors are properly considered in all proposals and decisions;

(5) Establish and maintain working relationships with the Council on Environmental Quality, Environmental Protection Agency, and other national, state, and local governmental agencies concerned with environmental matters;

(6) Acquire information for and ensure the preparation of appropriate NASA reports on environmental matters.

(b) Officials-in-Charge of Headquarters Offices and NASA Field Installation Directors are responsible for:

(1) Identifying matters under their cognizance which may affect protection and enhancement of environmental quality and for employing the proper procedures to ensure that necessary actions are taken to meet the requirements of applicable laws and regulations;

(2) Coordinating environmental quality-related activities under their cognizance with the Associate Administrator for Management; and

(3) Supporting and assisting the Associate Administrator for Management on request.

(c) Officials-in-Charge of Headquarters Offices are additionally responsible for:

(1) Giving high priority, in the pursuit of program objectives, to the identification, analysis, and proposal of research and development which, if conducted by NASA or other agencies, may contribute to the achievement of beneficial environmental objectives; and

(2) In coordination with the Associate Administrator for Management, making available to other parties, both governmental and nongovernmental, advice and information useful in protecting and enhancing the quality of the environment.

(d) NASA Field Installation Directors are additionally responsible for:

(1) Implementing the NASA policies, standards and procedures for the protection and enhancement of environmental quality and supplementing them as appropriate in local circumstances;

(2) Specifically assigning responsibilities for environmental activities under the installation's cognizance to appropriate subordinates, while providing for the coordination of all such activities; and

(3) Establishing and maintaining working relationships with national, state, regional and governmental agencies responsible for environmental regulations in localities in which the field installations conduct their activities.

[44 FR 44485, July 30, 1979, as amended at 53 FR 9760, Mar. 25, 1988]

Subpart 1216.2—Floodplain and Wetlands Management

AUTHORITY: E.O. 11988 and E.O. 11990, as amended; 42 U.S.C. 2473(c)(1).

SOURCE: 44 FR 1089, Jan. 4, 1979, unless otherwise noted.

§ 1216.200 Scope.

This subpart 1216.2 prescribes procedures to:

(a) Avoid long- and short-term adverse impacts associated with the occupancy and modification of floodplains and wetlands;

(b) Avoid direct or indirect support of floodplain and wetlands development wherever there is a practicable alternative;

(c) Reduce the risk of flood loss;

(d) Minimize the impact of floods on human health, safety and welfare;

(e) Restore, preserve and protect the natural and beneficial values served by floodplains and wetlands;

(f) Develop an integrated process to involve the public in the floodplain and wetlands management decision-making process;

(g) Incorporate the Unified National Program for Flood Plain Management; and,

(h) Establish internal management controls to monitor NASA actions to assure compliance with the Orders.

§1216.201 Applicability.

These procedures are applicable to Federal lands and facilities under the management control of NASA Headquarters and field installations regardless of location.

§1216.202 Responsibility of NASA officials.

(a) Directors of Field Installations and, as appropriate, the Associate Administrator for Management at NASA Headquarters, are responsible for implementing the requirements and procedures prescribed in §§1216.204 and 1216.205.

(b) The Assistant Associate Administrator for Facilities Engineering, NASA Headquarters, is responsible for overall coordination of floodplain and wetlands management activities, and for conducting periodic on-site reviews of each Installation's floodplain and wetlands management activities, and for conducting periodic on-site reviews of each Installation's floodplain and wetlands management activities to assure compliance with the Executive orders.

[53 FR 9760, Mar. 25, 1988, as amended at 56 FR 50506, Oct. 7, 1991]

§1216.203 Definition of key terms.

(a) *Action*—any NASA activity including, but not limited to, acquisition, construction, modification, changes in land use, issuance of facilities use permits, and disposition of Federal lands and facilities.

(b) *Base flood*—is that flood which has a one percent chance of occurrence in any given year (also known as a 100-year flood). This term is used in the National Flood Insurance Program (NFIP) to indicate the minimum level of flooding to be used by a community in its floodplain management regulations.

(c) *Base floodplain*—the 100-year floodplain (one percent chance floodplain). Also see definition of floodplain.

(d) *Critical action*—any activity for which even a slight chance of flooding would be too great, such as storing lunar samples or highly toxic or water reactive materials.

(e) *Facility*—any item made or placed by a person including buildings, structures and utility items, marine structures, bridges and other land development items, such as levees and drainage canals.

(f) *Flood or flooding*—a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland and/or tidal waters, and/or the unusual and rapid accumulation or runoff of surface waters from any source.

(g) *Flood fringe*—that portion of the floodplain outside of the regulatory floodway (often referred to as ''floodway fringe'').

(h) *Floodplain*—the lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year. The base floodplain shall be used to designate the 100-year floodplain (one percent chance floodplain). The critical action floodplain is defined as the 500-year floodplain (0.2 percent chance floodplain). A large portion of NASA coastal floodplains also encompasses wetlands.

(i) *Floodproofing*—the modification of individual structures and facilities, their sites, and their contents to protect against structural failure, to keep water out or to reduce the effects of water entry.

(j) *Minimize*—to reduce to the smallest possible amount or degree.

(k) *One percent chance flood*—the flood having one chance in 100 of being exceeded in any one-year period (a large flood). The likelihood of exceeding this magnitude increases in a time period longer than one year, e.g., there are two chances in three of a larger flood exceeding the one percent chance flood in a 100-year period.

(l) *Practicable*—capable of being done within existing constraints. The test of what is practicable depends upon the situation and includes consideration of the pertinent factors, such as environment, cost or technology.

(m) *Preserve*—to prevent modification to the natural floodplain environment or to maintain it as closely as possible to its natural state.

(n) *Regulatory floodway*—the area regulated by Federal, State or local requirements; the channel of a river or other watercourse and the adjacent land areas that must be reserved in an open manner; i.e., unconfined or unobstructed either horizontally or vertically to provide for the discharge of the base flood so the cumulative increase in water surface elevation is no more than a designated amount (not to exceed one foot as set by the National Flood Insurance Program (NFIP)).

(o) *Restore*—to re-establish a setting or environment in which the natural functions of the floodplain can again operate.

(p) *Wetlands*—those areas that are frequently inundated by surface or ground water and normally support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, river overflows, mud flats, wet meadows, and natural ponds. Because all NASA wetlands lie in floodplains, and for purposes of simplifying the procedures of this subpart, floodplains will be understood as to encompass wetlands, except in cases where wetlands factors require special consideration. (Also, see definition of floodplain.)

(q) *Support*—actions which encourage or otherwise provide incentives to undertake floodplain or wetlands development, such as extending roads or utilities into or near a floodplain, therefore making floodplain development more feasible.

§ 1216.204 General implementation requirements.

(a) Each NASA Field Installation shall prepare, if not already available, an Installation base floodplain map based on the latest information and advice of the appropriate District Engineer, Corps of Engineers, or, as appropriate, the Director of the Federal Emergency Management Agency. The map shall delineate the limits of both the 100-year and 500-year floodplains. A copy of the map, approved by the Field Installation Director, will be provided to the Assistant Associate Administrator for Facilities Engineering, NASA Headquarters, by February 28, 1979. The map will conform to the definitions and requirements specified in the Floodplain Management Guidelines for Implementing Executive Order 11988.

(b) For any proposed action or critical action, as defined in § 1216.203(a), using the approved floodplain map, the Field Installation Director, while concurrently seeking to avoid the floodplain, shall determine if the proposed action *will* or *will not* be located in, or may indirectly impact or indirectly support development in, the base (substitute ''500-year'' for ''base'' in critical action cases) floodplain and proceed accordingly:

(1) If the action or critical action *will* be located in the base floodplain or may indirectly impact or indirectly support floodplain development, and is not excepted under § 1216.204(h), field installations will adhere to the procedures prescribed in § 1216.205.

(2) If such action or critical action *will not* be located in the base floodplain, or is the type of action that will clearly nor indirectly impact or indirectly support floodplain development, the action may be implemented without further review or coordination, provided all other applicable NASA requirements and policies have been met.

(c) Any request for new authorizations or appropriations transmitted to the Office of Management and Budget shall indicate, on a case-by-case basis, if the action proposed will be located in a floodplain and whether the proposed action is in accordance with Executive Orders 11988 and 11990.

(d) Each field installation shall: Take floodplain management and wetlands protection into account when formulating its water and land use plans—and when evaluating like plans of others—as an integral part of its facilities master planning activities; Restrict the use of land and water resources appropriate to the degree of flood hazard involved; and, Incorporate recommended Federal and State actions for the continuing unified program for

planning and action at all levels of government to reduce the risk of flood losses in accordance with the Unified National Program for Flood Plain Management (U.S. Water Resources Council, 1978).

(1) Descriptive documentation supporting these planning matters shall be included in the ''land use'' section of each field installation's facilities master plan, as prescribed in NASA Management Instruction 7232.1, Master Planning of NASA Facilities. The evaluation and quantification of flood hazards should be expressed in terms of:

(i) Potential for monetary loss;

(ii) Human safety, health, and welfare;

(iii) Shifting of costs, damage or other adverse impacts to off-site properties; and,

(iv) Potential for affecting the natural and beneficial floodplain values.

(2) NASA shall provide appropriate guidance to applicants for facilities use permits and grants to enable them to similarly evaluate, in accordance with the Orders, the effects of their proposals in floodplains and wetlands. This evaluation will be a precondition of any NASA approval of such permit or grant involving floodplains or wetlands.

(e) Facilities to be located in floodplains will be constructed in accordance with the standards and criteria promulgated under the National Flood Insurance Program (NFIP). Deviations are allowed only to the extent that these standards are inappropriate for NASA operations, research and test activities. Because construction of NASA facilities will rarely be necessary in floodplains and wetlands, expertise in the latest flood proofing measures, standards and criteria will not be normally maintained within the NASA staff. To assure full compliance with the NFIP regulations, and that the Order's key requirement to minimize harm to or within the floodplain or wetlands is met, field installations will:

(1) Consult with the appropriate local office of the Corps of Engineers or Federal Emergency Management Agency and/or U.S. Fish and Wildlife Service, as applicable, on a regular basis throughout the facility design or action planning phase. Documentation of this consultation will be recorded in the Field Installation's project file.

(2) Submit evidence of the successful completion of this consultation to the Assistant Associate Administrator for Facilities Engineering, NASA Headquarters, prior to the start of project construction.

(f) If NASA property used or visited by the general public is located in an identified flood hazard area, the Installation shall provide on structures, in this area and other places where appropriate (such as where roads enter the flood hazard area), conspicuous delineation of the 100-year and 500-year flood levels, flood of record, and probable flood height in order to enhance public awareness of flood hazards. In addition, Field Installations shall review their storm control and disaster plans to assure that adequate provision is made to warn and evacuate the general public as well as employees. These plans will include the integration of adequate warning time into such plans. The results of this review shall be submitted to the Assistant Associate Administrator for Facilities Engineering, NASA Headquarters, by February 28, 1979.

(g) When property in floodplains is proposed for lease, permit, out-grant, easement, right-of-way, or disposal to non-Federal public or private parties, the field installation shall:

(1) Reference in the conveyance document (prepared by the General Services Administration in disposal actions) those uses that are restricted under identified Federal, State, and local floodplain regulations, such as State coastal management plans.

(2) Except where prohibited by law, attach other appropriate restrictions, equal to the Order's in scope and strictness, to the uses of properties by the grantee or purchaser and any successors which assure that:

(i) Harm to lives, property and floodplain values are identified; and

(ii) Such harm is minimized and floodplain values are restored and preserved.

(3) Withhold such properties from conveyance if the requirements of paragraphs (g)(1) and (2) of this section cannot be met.

(h) The NASA Administrator has determined that certain types of actions taken in coastal floodplains and wetlands typically do not possess the potential to result in long- or short-term adverse impacts associated with the occupancy or modification of floodplains, or result in direct or indirect support of floodplain development. Nevertheless, in undertaking these actions, any opportunities to minimize, restore, and preserve floodplain and wetlands values must be considered and implemented. With this understanding, for the following types of actions, Directors of Field Installations in coastal locations may determine that undertaking such actions does not warrant full application of the procedures prescribed in § 1216.205.

(1) Hazard mitigation actions taken by a field installation on an emergency basis to reduce and control hazards associated with established NASA test or operations activities in accordance with the field installation's approved Safety Plan. Any such action must be approved in writing by the Field Installation's Safety Officer, and the approval document retained in the Safety Office files.

(2) Repair, maintenance or modification to existing roadways, bridges and utility systems in coastal floodplains or wetlands which provide long-term support for major NASA operations and test facilities (usually located out of the base floodplain), provided such repair, maintenance or modification activities are of a routine or emergency nature for which the ''no action'' alternative is not practicable; and it is ostensibly evident that:

(i) The proposed action would not impact the floodplain or wetlands.

(ii) The only alternative would be to construct new duplicate facilities near the same site with attendant impacts on the floodplain or wetlands area.

(3) Rehabilitation and modification of existing minor technical facilities (such as camera pads, weather towers, repeater buildings), including the repair of such damaged facilities to a condition closely matching the original construction, provided it can be readily determined by Directors of Field Installations that there is no practicable alternative but to continue the activity in its current coastal floodplain site. In such cases, the sitings of such facilities must be rigidly constrained by nationally recognized master planning criteria, such as ''line-of-sight, quantity-distance, and acoustic sound-pressure-level'' factors. In addition, certification of these determinations by Directors of Field Installations will be retained in the project file.

[44 FR 1089, Jan. 4, 1979, as amended at 56 FR 50506, Oct. 7, 1991]

§ 1216.205 Procedures for evaluating NASA actions impacting floodplains and wetlands.

(a) Before taking any action a determination shall first be made whether the proposed action will occur in or may adversely affect a floodplain or wetlands, using the method prescribed in § 1216.204(b).

(b) These procedures apply only to evaluations of those proposed actions which are to be located in or may adversely impact floodplains. These evaluations shall be made at the earliest practicable stage of advance planning, such as during facilities master plan development or when preparing preliminary engineering reports. These evaluations shall include analyses of harm to lives and property, the natural and beneficial values of floodplains and wetlands, and the cumulative impacts of multiple actions over the long term.

(1) Early public notice is the next step in the evaluation process and will normally be accomplished using only the appropriate Single State Point of Contact and coordinating with that party pursuant to Executive Order (E.O.) 12372, as amended, ''Intergovernmental Review of Federal Programs,'' as appropriate. If, however, actions involving land acquisition or a major change in land or water use is proposed, the overall public audience will be as broad as reasonably possible including, but not limited to, adjacent property owners and residents, near-by floodplain residents and local elected officials. To assure their continuous interaction and involvement, the Field Installation will issue public notices and newsletters, and hold public hearing and/or work shops on a formalized

scheduled basis to provide the opportunity for public input and understanding of the proposed action. Regardless of the scope of action proposed, initially a notice will be provided to the appropriate State Single Point of Contact pursuant to E.O. 12372 that will not exceed three pages and will include:

(i) A location map of the proposed action.

(ii) The reasons why the action is proposed to be located in a floodplain.

(iii) A statement indicating whether the action conforms to applicable state and local floodplain protection standards.

(iv) A list of any NASA identified alternatives to be considered.

(v) A statement explaining the timing of public notice review actions to provide opportunities for the public to provide meaningful input.

(2) Working with the appropriate State Single Point of Contact pursuant to E.O. 12372 and, if applicable, other public groups and officials, to identify practicable alternatives in addition to those already identified by NASA. The alternatives will include:

(i) Carrying out the proposed action at a location outside the base floodplain (alternative sites).

(ii) Other means which accomplish the same purpose as the proposed action (alternative actions).

(iii) Taking no action, if the resulting hazards and/or harm to or within the floodplain overbalances the benefits to be provided by the proposed action.

(3) The costs and impacts of all practicable alternatives must now be fully determined to properly assess the practicability of avoiding the base floodplain, or of minimizing harm to the floodplain if alternatives directly or indirectly support floodplain development or have other adverse impacts.

(i) The basic criteria to be used in determining the impacts of the various alternatives appear in the Floodplain Management Guidelines for Implementing Executive Order 11988 (43 FR 6030). These criteria discuss in detail the three basic types of impacts which are to be addressed:

(A) Positive and negative impacts (beneficial and harmful);

(B) Concentrated and dispersed impacts (impacts on-site, near-site, and remote from the installation); and

(C) Short and long-term impacts (include temporary changes and those that take the form of delayed changes resulting from the cumulative effects of many individual actions).

(ii) Also to be determined is the nature of resulting hazards and risk to lives and property; and the restoration and preservation of natural and beneficial floodplain and wetlands values.

(iii) In determining the type, magnitude, costs, timing factors, etc., of the impacts, it is emphasized that subjective assessments have little value. To qualify for inclusion in the evaluation process, an impact must be fully described and quantified in a measurable way compatible with good scientific or engineering practice. Briefly stated, an impact is effected by or based on, and limited to, a quantified alteration of existing coastal or riverine systems including:

(A) Anticipated flood levels, sheet flow, coursing and velocity of flood caused surface water;

(B) Ground water flows and recharge;

(C) Tidal flows;

(D) Topography; and,

(E) Ecology, including water quality, vegetation and the terrestrial and aquatic habitats.

(4) For the proposed action and those alternatives which will impact the floodplain or wetlands, additional analysis must be undertaken to minimize, restore and preserve the natural and beneficial floodplain or wetlands values. Because NASA does not retain expertise in these areas of floodplain management, field installations will consult, on a case-by-case basis, with the appropriate local office of the U.S. Fish and Wildlife Service to assure that, for each of the above alternatives, methods are prescribed which will:

(i) Minimize harm to lives and property from flood hazards;

(ii) Minimize harm to natural and beneficial values of floodplains and wetlands; and

(iii) Restore floodplains or wetlands values, if applicable, to the proposed action.

(5) The proposed action and alternatives shall now be comparatively evaluated taking into account the identified impacts, the steps necessary to minimize these impacts and opportunities to restore and preserve floodplain and wetlands values. The comparison will emphasize floodplain values.

(i) If this evaluation indicates that the proposed action in the base floodplain is still practicable, consider limiting the action so that a non-floodplain site could be more practicable.

(ii) If the proposed action is outside the floodplain but has adverse impacts or supports floodplain development, consider modifying or relocating the action to eliminate or reduce these effects or even taking no action.

(6) If, upon completing the comparative evaluation, the Field Installation Director determines that the only practicable alternative is locating in the base floodplain, a statement of fundings and public explanation must be provided to all those who have received the early public notice, and specifically to the appropriate State Single Point of Contact pursuant to E.O. 12372, and will include as a minimum:

(i) The reasons why the proposed action must be located in the floodplain.

(ii) A statement of all significant facts considered in making the determination including alternative sites and actions.

(iii) A statement indicating whether the actions conform to applicable State and local floodplain protection standards.

(iv) In cases where land acquisition or major changes in land use are involved, it may also be appropriate to include:

(A) A provision for publication in the FEDERAL REGISTER or other appropriate vehicle.

(B) A description of how the activity will be designed or modified to minimize harm to or within the floodplain.

(C) A statement indicating how the action affects natural or beneficial floodplain or wetlands values.

(D) A statement listing other involved agencies and individuals.

(7) After a reasonable period (15 to 30 days) to allow for public response, the proposed action may proceed through the normal NASA approval process, or if disposal is anticipated, the action can be implemented in accordance with Federal Property Management Regulations real property disposal procedures. If, however, significant new information is revealed in comments by the public, the field installation shall reevaluate the proposed action in accordance with the provisions of paragraph (b)(5) of this section.

(8) For major NASA actions significantly affecting the quality of the human environment, the evaluations required above will be included in any statement prepared under Section 102(2)(C) of the National Environmental Policy Act.

(9) In accordance with § 1216.202(b), the Assistant Associate Administrator for Facilities Engineering, NASA Headquarters, will conduct periodic on-site reviews to assure that the action is carried out in accordance with the stated findings and plans for the proposed action, in compliance with the Executive orders.

[44 FR 1089, Jan. 4, 1979, as amended at 56 FR 50506, Oct. 7, 1991]

Subpart 1216.3—Procedures for Implementing the National Environmental Policy Act (NEPA)

AUTHORITY: The National Aeronautics and Space Act of 1958, as amended (42 U.S.C. 2451 *et seq.*); the National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S.C. 4321 *et seq.*); the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 *et seq.*); sec. 309 the Clean Air Act, as amended (42 U.S.C. 7609); E.O. 11514 (Mar. 5, 1970, as amended by E.O. 11991, May 24, 1977); the Council on Environmental Quality NEPA Regulations (40 CFR part 1500–1508); and E.O. 12114, Jan. 4, 1979 (44 FR 1957).

SOURCE: 44 FR 44485, July 30, 1979, unless otherwise noted.

§ 1216.300 Scope.

This subpart sets forth NASA procedures implementing the provisions of section 102(2) of the National Environmental Policy Act (NEPA). The NASA procedures of this subpart supplement the regulations of the Council on Environmental Quality (43 FR 55978) which