

CECW-PR  Regulation No. 1165-2-26	Department of the Army U.S. Army Corps of Engineers Washington, DC 20314-1000	ER 1165-2-26  30 Mar 84
	Water Resources Policies and Authorities  IMPLEMENTATION OF EXECUTIVE ORDER 11988 ON FLOOD PLAIN MANAGEMENT	
	<b>Distribution Restriction Statement</b> Approved for public release; distribution is unlimited.	

DEPARTMENT OF THE ARMY  
U.S. Army Corps of Engineers  
Washington, D. C. 20314

DAEN-CWR-R

Regulation  
No. 1165-2-26

30 March 1984

Water Resources Policies and Authorities  
IMPLEMENTATION OF EXECUTIVE ORDER 11988  
ON FLOOD PLAIN MANAGEMENT

1. Purpose. The purpose of this regulation is to set forth general policy and guidance for Corps of Engineers implementation of Executive Order 11988, Floodplain Management, as it pertains to the planning, design and construction of Civil Works projects, to activities under the operation and maintenance program, and to the real estate program of the Corps. Policy and guidance for implementation of Executive Order 11988 as it pertains to the Corps' regulatory program are contained in 33 CFR 320-330.
2. Applicability. This regulation is applicable to all HQUSACE/OCE and to all field operating activities having civil works responsibilities.
3. Reference.
  - a. Executive Order 11988, Floodplain Management, 24 May 1977.
  - b. Water Resources Council, Floodplain Management Guidelines for Implementing E.O. 11988, 10 February 1978 (43 FR 6030).
  - c. Water Resources Council, A Unified National Program for Flood Plain Management, September 1979.
  - d. P.L. 84-99
  - e. ER 1105-2-10, EP 1105-2-15
  - f. ER 1105-2-20
  - g. ER 1105-2-30, EP 1105-2-35

---

This regulation supersedes ER 1165-2-26, 15 May 1979

4. Definitions.

a. "Action" is any Federal activity, including (1) acquiring, managing, and disposing of Federal lands and facilities; (2) providing Federally undertaken, financed, or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, and licensing activities.

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 to indicate the minimum level of flooding to be used by a community in its flood plain management regulations.

c. "Base Flood Plain" is the one percent chance flood plain.

d. "Channel" is a natural or artificial watercourse of perceptible extent with a definite bed and banks to confine and conduct continuously or periodically flowing water.

e. "Critical Action" is any activity for which even a slight chance of flooding would be too great. The critical action flood plain is defined as the 500-year flood plain (0.2 percent chance flood plain).

f. "Flood Fringe" is that portion of the flood plain outside of the regulatory floodway (often referred to as "floodway fringe").

g. "Flood Plain" is the lowland and relatively flat areas adjoining inland and coastal waters including floodprone areas of offshore islands; and including, at a minimum, that area subject to a one percent chance of flooding in any given year.

h. "Minimize" is to reduce to the smallest possible amount or degree.

i. "Practicable" is 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.

j. "Preserve" is to prevent adverse modification to the existing flood plain environment or to maintain it.

k. "Restore" is to reestablish a setting or environment in which the natural functions of the flood plain can again operate.

l. "Regulatory Floodway" is 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 from encroachment does not exceed one foot as set by the National Flood Insurance Program.

m. "Natural and Beneficial Values" include but are not limited to water resources values (natural moderation of floods, water quality maintenance, and ground water recharge), living resource values (fish, wildlife and plant resources), cultural resource values (open space, natural beauty, scientific study, outdoor education and recreation) and cultivated resource values (agriculture, aquaculture and forestry).

n. "Direct support" of flood plain development is an action in the flood plain that encourages, allows, serves or otherwise facilitates additional flood plain development.

o. "Facility" is any man-made or manplaced item other than a structure.

p. "Structures" are walled or roofed buildings, including mobile homes and gas or liquid storage tanks that are primarily above ground.

5. Background. Executive Order 11988, Floodplain Management, signed 24 May 1977, revoked and replaced Executive Order 11296 issued 10 August 1966. The new Order adds emphasis to the environmental aspects of flood plain management that was not present in Executive Order 11296. The Order requires Federal agencies to recognize the significant values of flood plains and to consider the public benefits that would be realized from restoring and preserving flood plains. The conceptual framework of flood plain management as set out in Reference 3c is to be incorporated in agency procedures. The unified program has as a goal sound flood plain management that embodies the "wise use, conservation, development and utilization of interrelated land and water resources to serve objectives of economic efficiency, environmental quality and social well-being as consonant with responsibilities assigned to respective levels of government by law." Floodplain Management Guidelines for Implementing Executive Order 11988 were published in the Federal Register on 10 February 1978 (43 FR 6030) (Reference 3b). The guidelines were developed for the purpose of explaining key terms in the Executive Order, flood plain management concepts and procedures for complying with the Order. The guidelines have been utilized in preparing this Corps of Engineers policy regulation and other affected Corps regulations and procedures.

6. Objective of the Order. The Executive Order has as an objective the avoidance, to the extent possible, of long-and short-term adverse impacts associated with the occupancy and modification of the base flood plain and the avoidance of direct and indirect support of development in the base flood plain wherever there is a practicable alternative. Under the Order, the Corps is required to provide leadership and take action to:

a. Avoid development in the base flood plain unless it is the only practicable alternative;

b. Reduce the hazard and risk associated with floods;

c. Minimize the impact of floods on human safety, health and welfare; and

d. Restore and preserve the natural and beneficial values of the base flood plain.

7. General Policy. It is the policy of the Corps of Engineers to formulate projects which, to the extent possible, avoid or minimize adverse impacts associated with use of the base flood plain and avoid inducing development in the base flood plain unless there is no practicable alternative. The decision on whether a practicable alternative exists will be based on weighing the advantages and disadvantages of flood plain sites and non-flood plain sites. Factors to be taken into consideration include, but are not limited to, conservation, economics, aesthetics, natural and beneficial values served by flood plains, impact of floods on human safety, locational advantage, the functional need for locating the development in the flood plain, historic values, fish and wildlife habitat values, endangered and threatened species, Federal and State designations of wild and scenic rivers, refuges, etc. and, in general, the needs and welfare of the people. The test of practicability will apply to both the proposed Corps action and to any induced development likely to be caused by the action. Identification and evaluation of practicable alternatives shall include consideration of alternative sites (carrying out the proposed action outside the flood plain); alternative actions (other means which accomplish the same purpose as the proposed action); and no action. When a determination is made that no practicable alternative to undertaking an action in the flood plain exists, it will be appropriately documented and the features or qualities of the flood plain that make it advantageous over alternative non-flood plain sites shall be described and adequately supported.

8. General Procedures. Listed below are the general procedures to be followed for implementing Executive Order 11988. These procedures are the "decision making process" and are graphically depicted in Reference 3b. The general procedures are to be incorporated in the planning, design and construction of civil works projects and in activities under the operation and maintenance programs.

- a. Determine if the proposed action is in the base flood plain.
- b. If the action is in the base flood plain, identify and evaluate practicable alternatives to the action or to location of the action in the base flood plain as outlined in paragraph 7 above.
- c. If the action must be in the flood plain, advise the general public in the affected area and obtain their views and comments.
- d. Identify beneficial and adverse impacts due to the action and any expected losses of natural and beneficial flood plain values. Where actions proposed to be located outside the base flood plain will affect the base flood plain, impacts resulting from these actions should also be identified.
- e. If the action is likely to induce development in the base flood plain, determine if a practicable non-flood plain alternative for the development exists, as outlined in paragraph 7, above.
- f. As part of the planning process under the Principles and Guidelines, determine viable methods to minimize any adverse impacts of the action including any likely induced development for which there is

no practicable alternative and methods to restore and preserve the natural and beneficial flood plain values. This should include reevaluation of the "no action" alternative.

g. If the final determination is made that no practicable alternative exists to locating the action in the flood plain, advise the general public in the affected area of the findings.

h. Recommend the plan most responsive to the planning objectives established by the study and consistent with the requirements of the Executive Order stated in paragraph 6 above.

9. Assessment and Evaluation of Impacts. The determination called for in 8d above requires an assessment of the likely adverse and beneficial impacts of an action. Impact identification and assessment apply to both the Corps action and to any induced development likely to occur in the base flood plain with the proposed action. Existing procedures and guidance for identifying, assessing and evaluating impacts are contained in the WRC Principles and Guidelines, which are incorporated totally in Corps planning regulations (ER 1105-2-series). Impact identification, assessment and evaluation procedures required thereby are to be relied upon for compliance with the intent of the Executive Order.

10. Minimize. Whenever there is no practicable alternative to undertaking an action in the flood plain, steps should be taken to minimize the impact of floods on human safety, health and welfare, beneficial flood plain values, and any induced development likely to occur as a result of the action. Minimize, by definition, is broad and open-ended; however, there is an implicit acceptance of practical limitations which makes it consistent with the Principles and Guidelines. All practical means and measures should be utilized to minimize any adverse impacts likely to occur because of an action in the flood plain. For example, consideration shall be given to deletion of separable segments of a plan when such segments protect undeveloped land and would likely induce development in the flood plain for which another practicable non-flood plain alternative may exist.

11. Restore and Preserve. Restoration and preservation are methods of enhancing or maintaining the natural and beneficial values of flood plains. These are primarily environmental values. Examples of actions that could be taken are:

a. Relocate non-conforming structures and facilities out of the base flood plain.

b. Reestablish damaged flood plain ecosystems.

c. Restore and preserve wetlands, marshes, and related natural habitat.

d. Implement measures that will enhance fish and wildlife values (e.g., establish suitable vegetation for habitat on levees, cut slopes and disturbed construction areas).

e. Restore and revegetate damaged beaches and dunes.

To the extent that sensitive designs and layouts for considered Corps project works can contribute to restoration and preservation of flood plain values, recommendations for such works should embody those designs and layouts. If separable measures not within the existing authorities of the Corps would be worthwhile, reports should describe how such measures might be implemented.

12. Real Estate Activities. When property in flood plains is proposed for outgrant or disposal to non-Federal public or private parties, the Corps shall reference in the outgrant or conveyance those uses that are restricted under Federal, State and local flood plain regulations and attach other restrictions to uses of the property as may be appropriate. In the event the proposed use is incompatible with good flood plain management, the Corps shall consider withholding such properties from outgrant or conveyance.

13. Reporting Requirements and Public Involvement. When a determination has been made that no practicable alternative to locating an action in the flood plain exists, the EO requires the reporting of this finding. The Order requirements generally include reporting procedures that are presently being accomplished under existing Corps regulations, with some minor exceptions. The following additional information shall be included in existing reporting requirements, as appropriate, for general investigation studies, projects in engineering and design stages, studies under the special continuing authorities program, and activities under the operations and maintenance program.

a. Section 2(a)(2) of Executive Order. If there is no practicable alternative to locating an action in the flood plain, a public notice shall be prepared and circulated to the general public. The notice shall include the following: (1) an explanation of why the action must be located in the flood plain; (2) a description of significant facts considered in making the determination to locate in the flood plain, including alternative sites and actions considered and any tradeoffs that were made; and (3) a statement indicating whether the proposal conforms to applicable State or local flood plain protection standards. The public notice issued by the District Commander upon completion of a study action or its equivalent will serve as the means to satisfy this requirement of the Order. Public notices should provide specific information pertaining to items (1), (2) and (3) above, and be disseminated to the general public in the affected area.

b. Section 2(a)(3) of Executive Order. OMB Circular A-95 was rescinded by EO 12372. Requirements and procedures for coordination with state entities as set forth in ER 1105-2-30 shall be relied upon for compliance with the intent of Executive Order 11988 in this respect. Notices to the state, where applicable, should include the specific information required in paragraph 13a above.

c. Section 2(b) of Executive Order. Requests for new authorizations or appropriations for new construction starts transmitted to the Office of Management and Budget will provide information on whether a proposed action is located in the flood plain. If the action is located in the flood plain the transmittal will include information on whether the action complies with the EO.

d. Statement of Findings. Since Corps actions in the flood plain are subject to NEPA, the Statement of Findings that is required as part of the conclusions in feasibility reports and required for actions pertaining to operations and maintenance will include, in addition to existing requirements, the following:

(1) Reasons why the proposed action must be located in the flood plain.

(2) Facts considered in making the determination to locate in the flood plain, including alternative sites and actions considered.

(3) Statement on whether the proposed action conforms to applicable State or local flood plain protection standards.

(4) Statement on whether the action affects the natural and beneficial values of the flood plain.

(5) Steps taken to design or modify the proposed action to minimize potential harm to or within the flood plain; and

(6) A general listing of involved agencies, groups, and organizations.

e. Public Involvement. To insure that adequate information and opportunities are provided early in the decision-making process to allow the public to participate effectively in flood plain management decisions, a public involvement program should: (1) include as broad an audience as possible; (2) provide continuous interaction and involvement opportunities for the public in the planning and decision-making process; (3) provide information which promotes the fullest understanding of the proposed action; and (4) provide timely opportunities for all segments of the public to affect a proposed action or plan before alternative actions have been precluded. The policies and objectives for public involvement contained in EP 1105-2-35 parallel those of the Order. Public participation programs guided thereby will also include early, specific reference to Executive Order 11988 and its objectives.

14. Application of Executive Order to Civil Works Program. The provisions of this regulation are applicable to civil works activities as outlined below.

a. Preauthorization Studies. Where a flood plain may be affected, the policy and procedures of this regulation shall be incorporated in the multi-objective planning process (ER 1105-2-20, ER 1105-2-30) from the outset, to a scope and level of detail appropriate for preauthorization studies.

b. Advanced Engineering and Design. Reporting officers should insure that projects in the advanced engineering and design stages comply with the intent and objectives of the Executive Order as set forth in this regulation.

c. Continuing Authorities Program (ER 1105-2-10). Where a flood plain may be affected, the policies and procedures of this regulation are applicable to the planning and design of projects under the continuing authorities program.



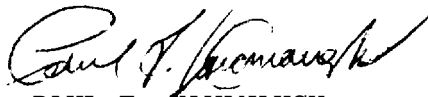
ER 1165-2-26  
30 Mar 84

d. Projects under Construction. The minimization, restoration and preservation requirements of the Executive Order shall apply to projects under construction. Construction activities should be performed in such manner that harm to the existing flood plain environment is minimized; environmental values of a flood plain construction site are restored to the extent practicable; and existing and beneficial flood plain values of an undisturbed flood plain construction site are preserved and protected to the extent possible.

e. Operation and Maintenance Activities. The policies and procedures of this regulation are applicable to operation and maintenance activities of the Corps of Engineers within the base flood plain. District Commanders should insure that future actions at projects operated and maintained by the Corps comply with the policies and procedures set forth in this regulation and 33 CFR 209.145.

f. Emergency Activities. Emergency flood-related activities essential to saving lives and protecting property and public health and safety, are exempt from the provisions of the Order. Post flood rehabilitation activities performed under P.L. 84-99 by the Corps shall comply with the intent of the Executive Order.

FOR THE COMMANDER:



PAUL F. KAVANAUGH  
Colonel, Corps of Engineers  
Chief of Staff