# Department of Transportation
## Office of the Secretary
## Washington, D.C.

# ORDER

DOT 5650.2

4-23-79

SUBJECT: FLOODPLAIN MANAGEMENT AND PROTECTION

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1. PURPOSE. This Order prescribes policies and procedures for ensuring that proper consideration is given to the avoidance and mitigation of adverse floodplain impacts in agency actions, planning programs, and budget requests.

2. AUTHORITY. This Order is issued pursuant to the following statutes and executive order:

   a. The National Environmental Policy Act of 1969 (NEPA) (P.L. 91-190) establishes a national policy to, among other things, "...promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man...." NEPA requires preparation of an environmental impact statement (EIS) for any major Federal action significantly affecting the quality of the human environment. DOT 5610.1B, Procedures for Considering Environmental Impacts, of 9-30-74, Attachment 2, paragraph 11, requires that information on flood hazards, if relevant, be included in the EIS.

   b. The National Flood Insurance Act of 1968, Title XIII of the Housing and Urban Development Act of 1968 (P.L. 90-448, 8-1-68), provides previously unavailable flood insurance protection to property owners in flood-prone areas. Section 1302(c) of the Act stipulates that "the objectives of a flood insurance program should be integrally related to a unified national program for flood plain management...."

   c. Executive Order 11988 - Floodplain Management, promulgated on 5-24-77, links the need to protect lives and property with the need to restore and preserve natural and beneficial floodplain values. Federal agencies are directed to avoid conducting, allowing, or supporting

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actions on the base floodplain unless the agency finds that the base floodplain is the only practicable alternative location, and to issue procedures for implementing the requirements of the Executive Order.

d. The Flood Disaster Protection Act of 1973 (P.L. 93-234, 87 Stat. 975) requires the purchase of flood insurance as a condition of receiving any form of federal or federally-related financial assistance for acquisition or construction purposes with respect to insurable buildings and mobile homes within an identified special flood, mudslide, or flood-related erosion hazard area.

3. POLICY. It is the policy of the Department of Transportation (DOT) (1) to encourage a broad and unified effort to prevent uneconomic, hazardous, or incompatible use and development of the Nation's floodplains, (2) to avoid, where practicable, encroachments by Departmental actions, (3) to minimize the adverse impacts which such actions may have on base floodplains, including direct or indirect support for development, and (4) to restore and preserve natural and beneficial floodplain values that are adversely affected by such actions.

4. DEFINITIONS.

a. Action - the construction or reconstruction of a federal or federally-financed, licensed, or approved transportation improvement (including any relocation housing built or moved to a new site); and the acquisition, management, or disposition of Departmental lands and facilities.

b. Base Flood - that flood having a one percent chance of being exceeded in any given year (commonly known as a 100-year flood).

c. Base Floodplain - the area which would be inundated by a base flood.

d. Encroachment - an action within the limits of the base floodplain.

e. Environmental Impact Statement - the detailed statement mandated by section 102(2)(C) of the National Environmental Policy Act of 1969 (ref: DOT 5610.1B).

f. Facility - any element of the built environment other than a walled or roofed building.

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 of Record - the largest historical flood event which has been reliably determined and recorded.

h. Floodplain - the lowland areas adjoining inland and coastal waters which are periodically inundated by flood waters, including flood-prone areas of offshore islands.

i. Floodproofing - the incorporation of design features in, or modifications to, individual structures and facilities, their sites and their contents to protect against structural failure, to keep water out, or to reduce effects of water entry, so that threats to human life and property are reduced.

j. Minimize - to reduce to the smallest practicable amount or degree.

k. Natural and Beneficial Floodplain Values - include but are not limited to: natural moderation of floods, water quality maintenance, groundwater recharge, fish, wildlife, plants, open space, natural beauty, scientific study, outdoor recreation, agriculture, aquaculture, and forestry.

l. Negative Declaration - a determination by the responsible official that a particular action does not significantly affect the quality of the human environment.

m. Practicable - capable of being done within natural, social, and economic constraints.

n. Restore - to establish a setting or environment in which the natural and beneficial values impacted by the transportation agency action can again operate. In some situations, a transportation improvement may represent a positive enhancement or negligible use of natural and beneficial floodplain values.

o. Risk - the adverse consequences associated with the probability of flooding attributable to an encroachment, specifically including the potential for property loss and the hazard to life.

p. Significant Encroachment - an encroachment resulting in one or more of the following construction or flood-related impacts:

(1) a considerable probability of loss of human life;

(2) likely future damage associated with the encroachment that could be substantial in cost or extent, including interruption of service on or loss of a vital transportation facility; and

(3) a notable adverse impact on "natural and beneficial floodplain values", as defined in item k, above.

It is not contemplated that detailed design would be necessary in order to determine whether there is a significant encroachment.

q. Support Base Floodplain Development - to encourage, allow, serve, or otherwise facilitate additional development in a base floodplain. Direct support results from an action on the base floodplain. Indirect support results from actions out of the base floodplain.

5. APPLICATION.

a. Paragraph 3 of this Order applies to all actions affecting base floodplains. The other provisions apply, except as indicated in subparagraphs b and c below.

b. The provisions of this Order do not apply to or alter decisions, approvals, or authorizations which were given by the Department or its elements pursuant to directives in effect before the date of this Order's publication in the Federal Register, nor do they apply to transportation projects where:

(1) the final EIS is filed with the Environmental Protection Agency within 12 months after the date of this Order's publication in the Federal Register; or any public hearings have been held and a negative declaration has been approved, within 120 days after that publication date; or

(2) the only step being taken in the floodplain is the relocation of persons into existing housing units, except that potential occupants shall be advised at the appropriate stage if the relocation housing is located in a base floodplain and be offered alternative comparable housing at their option.

c. DOT elements may develop categories of projects which are not subject to the requirements of this Order due to their negligible potential, alone or cumulatively, for resulting in adverse impacts associated with the occupancy or modification of floodplains, or the direct or indirect support of floodplain development.

6. FLOODPLAIN IDENTIFICATION. Base floodplain limits shall be determined and encroachments delineated for reasonable alternative actions through the following sources:

a. Federal Insurance Administration (FIA) maps shall be used as the primary reference for establishing base floodplain limits (obtain maps from the U.S. Department of Housing and Urban Development sources listed in 43 FR 6050).

(1) A Flood Insurance Rate Map (FIRM) or Flood Insurance Study Report (FIS) shall be consulted first.

(2) If a FIRM or FIS is not available, a Flood Hazard Boundary Map (FHBM) may be available from the same sources. These approximate maps shall be used to determine if the alternatives under consideration are clearly out of the floodplain. If one or more of the alternatives appears to be near or inside the indicated base floodplain boundary, more detailed information on the floodplain boundary shall be developed or obtained.

b. If a FIRM, FIS, or floodplain delineation from other agency sources as listed in 43 FR 6049-51 is not available and current, or if the site is near or inside the FHBM boundaries, base floodplain limits shall be established by the best available method meeting acceptable professional engineering standards.

c. The delineation of floodplain limits shall take proper account of previous alterations to the floodplain by flood retention works or other elements of the built environment.

7. PUBLIC INVOLVEMENT. Where any of the alternatives identified for accomplishing an action are proposed in the base floodplain, opportunity shall be provided for early public review and comment. The following steps shall be made a part of existing review procedures (including the EIS review process) as appropriate to the nature of the encroachment.

a. Public hearing presentations shall include identification of encroachments.

b. If one or more alternatives under consideration include significant encroachments, any public notices, public hearing notices, notices offering an opportunity for a hearing, and notices of availability for negative declarations shall make reference to that fact.

8. ENVIRONMENTAL REVIEW PROCESS. Whenever appropriate, the procedures established in DOT 5610.1B, Procedures for Considering Environmental Impacts, of 9-30-74, shall be the vehicle through which implementation of this policy is documented.

a. Draft environmental review documents (draft EISs[1/] and any preliminary versions of negative declarations) shall cover the items below for all alternatives involving encroachments:

(1) any risk to, or resulting from, the transportation action;

(2) the impacts on natural and beneficial floodplain values; and

(3) the degree to which the action provides direct or indirect support for development in the base floodplain.

b. Draft environmental review documents shall also include sufficient discussion to permit an initial review of the adequacy of methods proposed to minimize harm, and, where practicable, to restore and preserve the natural and beneficial floodplain values affected.[2/] In most cases, conceptual design (as opposed to detailed engineering studies) should be sufficient to help establish the adequacy of mitigation measures. Commitments to later compliance with special flood-related design criteria or the imposition, in advance, of protective conditions may be warranted in some situations.

c. Final environmental review documents (final EISs and final versions of negative declarations) reflecting a decision on the preferred alternative shall clearly identify the floodplain concerns and impacts associated with that alternative and cover the items listed in subparagraphs a and b above.

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1/ DOT elements shall follow a rule of reason in determining how much floodplain information needs to be incorporated in draft EISs circulated during a six-month period after the date of the Order's publication in the Federal Register.

2/ Guidance and examples regarding methods for minimizing harm to floodplains and for restoring and preserving the natural and beneficial floodplain values affected can be found in 43 FR 6047-48.

9. ONLY PRACTICABLE ALTERNATIVE FINDING. Where it is proposed to conduct, support, or allow an action involving a significant encroachment, the final EIS or final version of the negative declaration shall reflect consideration of alternatives to avoid such encroachment, and to reduce its adverse base floodplain impacts.

   a. A preferred alternative involving a significant encroachment shall not be approved unless the responsible official can make a finding, in writing, that the proposed significant encroachment is the only practicable alternative, together with:

      (1) A description of why the proposed action must be located in the floodplain, including the alternatives considered and why they were not practicable.

      (2) A statement indicating that the action conforms to applicable State and/or local floodplain protection standards.

   b. The finding shall be incorporated into, or attached to, the final environmental review document.

   c. On occasion, a proposal for which an environmental review document is unnecessary may nevertheless have the potential for causing a significant encroachment. Under such circumstances, the above written finding shall still be made and included with the project records.

   d. The above written finding, within or together with any final EIS prepared for the proposed action, shall be provided to State and areawide clearinghouses and other interested parties.

   e. A determination that a given action outside of a floodplain is or is not practicable requires a careful balancing and application of individual judgment. While such balancing should include the full range of environmental, social, economic, and engineering considerations, special weight should be given to floodplain management concerns.

10. PROGRAM DIRECTIVES

   a. DOT elements which have programs potentially affecting base floodplains shall include adequate provision consistent with this Order for the evaluation and

consideration of flood hazards and measures to avoid or minimize floodplain impacts. As appropriate, modifications shall be made to regulations and operating procedures for licenses, permits, and loan or grant-in-aid programs to accomplish this purpose. These changes should be submitted to the Assistant Secretary for Policy and International Affairs for review within 120 days after the date of this Order's publication in the Federal Register.

b. Each DOT element shall have the option of applying this Order directly to its programs and activities within 120 days of its date of publication in the Federal Register or of issuing its own floodplain regulations or procedures, consistent with this Order. Such regulations or procedures shall be submitted within the same 120-day period, to the Assistant Secretary for Policy and International Affairs for concurrence.

c. DOT elements may elect to develop project-related engineering design standards reflecting flood hazard and floodplain considerations, for their individual programs.

11. BUDGET REQUESTS. Any requests for new authorizations or appropriations transmitted to the Office of Management and Budget shall indicate, if a specific proposal will involve significant encroachment upon a floodplain, that the proposed action is in accord with Executive Order 11988.

12. FEDERAL REAL PROPERTY AND FACILITIES. Departmental elements with responsibilities for Federal real property and facilities shall take the following measures, in addition to those specified in the other sections of this Order.

a. The construction of walled or roofed buildings or other facilities shall be consistent with the intent of the standards and criteria promulgated under the National Flood Insurance Program, and shall deviate only to the extent that the standards of the Flood Insurance Program are demonstrably inappropriate for the given case.

b. If, after compliance with the requirements of this Order, new or rehabilitated buildings are to be located in a floodplain, accepted floodproofing and other flood protection measures shall be applied. To achieve flood

protection, DOT elements shall elevate the buildings above the base flood level, wherever practicable, rather than filling in land.

c. If property used by the general public has suffered flood damage or is located in an identified flood hazard area, the responsible DOT element shall provide on buildings or other places, where appropriate, conspicuous delineation of the level of the base flood and flood of record (if larger), in order to enhance public awareness of flood hazards.

d. When property in floodplains is proposed for lease, easement, right-of-way, or disposal to nonfederal parties, the responsible DOT element shall indicate if a flood hazard exists and (1) identify in the conveyance those uses that are restricted under Federal, State, or local floodplain regulations; and (2) attach other restrictions consistent with this Order to the uses of properties by the grantee or purchaser and any successors, except as prohibited by law; or (3) withhold such properties from conveyance.

13. RESPONSIBILITIES.

a. The Assistant Secretary for Administration and Heads of Operating Administrations shall assure that the requirements of this Order are met and that appropriate steps are taken to implement it.

b. The Assistant Secretary for Policy and International Affairs shall oversee the implementation of the policy set forth in paragraph 3, review and concur in any floodplain procedures of the operating administrations, and recommend any modifications of procedures that may be appropriate. The Assistant Secretary shall consult periodically with the Council on Environmental Quality, the Water Resources Council, and FIA to evaluate the Department's implementation of these policies and shall be responsible for the preparation of any required reports on floodplain management, including such monitoring of the floodplain evaluation process as may be appropriate.

14. UNIFIED NATIONAL PROGRAM FOR FLOODPLAIN MANAGEMENT. This Order incorporates by reference "A Unified National Program for Flood Plain Management," a report to the Congress by the Water Resources Council, July 1976 (available from the U.S. Government Printing Office, Documents Department, Washington, D.C. 20402, Order Number GPO 052-045-00047, price $1.95), and future revisions.

15. FLOOD DISASTER PROTECTION ACT. The Flood Disaster Protection Act contains certain provisions which can affect DOT programs. Basically, the Act mandates the purchase of flood insurance as a condition of receiving Federal assistance for the construction or repair of buildings located in areas having special flood hazards as identified by FIA. The requirement also applies when Federal assistance is being used to purchase equipment which will be housed in buildings which are located in such special flood hazard areas. Flood-prone communities may arrange for flood insurance through FIA's National Flood Insurance Program. DOT elements shall take steps to assure full compliance with this requirement (set forth in section 202(a) of the Act), where applicable.

16. EMERGENCY PROVISIONS. Nothing in this Order shall prevent the timely provision of assistance or funds for emergency repairs essential to save lives and to protect property and public health and safety. However, a reasonable effort to comply with the Order shall be made during and/or after the emergency period.

FOR THE SECRETARY OF TRANSPORTATION:

Alan Butchman
Deputy Secretary