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EXECUTIVE ORDER

FLOODPLAIN MANAGEMENT

By the authority vested in me by the Constitution and statutes of the United States of America, and as President of the United States of America, in furtherance of the National Environmental Policy Act of 1969, as amended (42 USC 4321 et seq.), The National Flood Insurance Act of 1968, as amended (42 USC 4001 et seq.), the Disaster Protection Act of 1973 (Public Law 93-234, 87 Stat. 975), The Coastal Barrier Resources Act of 1982 as amended (16 USC 3501 et seq.), the Coastal Zone Management Act (16 USC 1451 et seq.) the Coastal Barrier Improvement Act of 1990 (Public Law 101-591; 104 Stat. 2931), and the Endangered Species Act of 1973, as amended (15 USC 1531 et seq.) and in recognition that floods have caused a greater loss of life and property and have devastate more families and communities in the United States than all other natural hazards combined and that activity in the flood plain has caused significant damage to the natural environment, it is hereby ordered as follows:

PART 1 – PREAMBLE

Thirty-two years ago, Executive Order 11988 established a vision of the role of Federal departments and agencies (agencies) in management of the nation's riverine and coastal floodplains. Since then, important advancements in have been made in the understanding of floodplain management. However, the nation continues to experience alarming increases in flood damages, challenges to public safety, and reductions in the condition, productivity, and function of many riverine and coastal ecosystems. The resultant financial drain, impacts on public health and welfare, and environmental degradation, are threats to our nation's future sustainability and long term interests. Based on past experienced, projected climate change, increases in population and resultant growth in urban centers and coastal areas and losses of the natural resources and functions of our floodplains and coastal areas, the Federal government recognizes that more vigorous action and greater commitment to management of floodplains and coastal areas is essential to a sustainable future.

While the responsibility of implementing cost-effective and environmentally-sound floodplain management is shared among Federal, State, tribal and local governments, this executive order recommits agencies to a path of leadership and example in the prudent management of the nation's floodplains. It directs agencies to coordinate with and encourage State and local governments, tribes and other entities to undertake collaborative management of these areas. It fosters an atmosphere in which the nation will be able to manage its floodplains to minimize the risks associated with unwise encroachment and maximize the benefits associated with protection and restoration of natural systems.

The Federal Government must hold itself accountable to take no actions that would create or transfer adverse flooding impacts to others, and encourage the American people do likewise. Agencies must commit to maintain and restore the natural resources and functions of our floodplains and coastal areas for current economic, social and environmental benefit and the well being of future generations. Finally, they must inform and promote action by governments at all levels, the private sector, and the people who live and work in the floodplain to better understand and deal appropriately with the risks they face.

The Federal government must lead by example in a coordinated and consistent manner, and urge State governments to similarly craft an approach that will guide their actions. Agencies must support local governments, individuals, and the private sector in achieving the prudent use of our floodplains. Ultimately, it is their actions that will allow the nation to meet the objectives of sound floodplain management.

PART 2 – PURPOSE AND APPLICABILITY

Section 201, Purpose, This order directs Federal agencies to provide leadership and take action to:

- a. Reduce the loss of life and property caused by floods **and encourage flood control improvements.**
- b. Protect and restore the *natural resources and functions of floodplains*. (The definitions of italicized words or phrases are found in Part 3.)
- c. Avoid the short and long-term *adverse effects* of occupying and modifying *Floodplains* **without proper flood protection.**

- d. Avoid direct or indirect support to development in or adversely affecting a *floodplain*, whenever there is a *practicable* alternative.
- e. Promote and implement a cost-effective and environmentally sound integrated systems approach to *floodplain management*.
- f. Consider the effect that climate change and anticipated future conditions might have on the extent and frequency of flooding.
- g. Use scientifically credible flood information in Federal decision making.

Section 202. Covered Actions This order applies when Federal agencies

- a. Acquire an interest in, manage, or dispose of lands, structures and *facilities (except flood control facilities)*.
- b. Construct or substantially improve Federal *facilities (except flood control facilities)*.
- c. Finance or otherwise assist in the construction or improvement of *facilities (except flood control facilities)*.
- d. Develop or approve water resources and land use plans
- e. Regulate, permit, or license water resource and land use activities.

PART 3 – DEFINITIONS

Section 301. As used in this order:

- a. *Adverse effects* means harm or detriment to the natural resources and functions of *floodplains* and increased risk of damage or loss of life or property from flooding. “Effects” include:
 - i) Direct effects, which are caused by the *Covered Action* and occur at the same time and place.

- ii) Indirect effects, which are caused by the *covered action* and are later in time or farther removed in distance, but are still reasonably foreseeable and likely.
 - iii) Cumulative effects, which result from the incremental effect of the covered action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.
- b. *Agency* means “Executive agency” as defined in Section 105 of Title 5 of the United States Code, the military departments as defined in Section 102 of that title, and the US Postal Service.
 - c. *Covered Actions* mean those actions described in Section 202 above.
 - d. ***Critical covered action means any covered action for which even a slight chance of flooding would be too great. The minimum floodplain of concern for critical actions of facilities is greater than 1 percent (>100-year) annual chance of flood.*** This can include, but is not limited to, *covered actions* or *facilities* critical to the health and safety of the public such as hospitals and nursing homes, emergency operations centers (eg police, fire, and rescue), vital data storage centers, power generation and water and other utilities (including related infrastructure such as principal points of utility systems) and any that produce, use or store toxic pollutants or hazardous materials as defined under the Clean Water Act and other Federal statues and regulations.
 - e. *Facilities* mean any man-made or man-placed objects including, but not limited to buildings or other structures, roads and bridges, fill material, utilities, storage of equipment and materials **(except those facilities directly related to flood control).**
 - f. *Floodplain* means for other than critical covered actions, **the area subject up to a 1 percent annual chance of flooding (the “100 year” floodplain). For critical covered actions, floodplains mean that area subject to greater than a 1 percent annual chance of flooding (the greater than “100-year” floodplain). (An upper frequency should be given – say 200-year or Standard project flood or where the residual risk is x% below current residual risk.**
 - g. *Floodplain management* means the full range of public and private policies and actions to reduce the loss of life and property caused by floods and to protect and restore the *natural resources and functions* of floodplain.

- h. *Floodway* means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the 1 percent annual chance flood without cumulatively increasing the water surface elevation more than an amount defined by the National Flood Insurance Program.
- i. *Natural resource and functions of floodplains* means those attributes commonly found within floodplain systems such as flood storage and conveyance, groundwater recharge, water quality, fish and wildlife habitats, threatened and endangered species and their critical habitats, wetlands, estuaries, coastal dunes, mangroves, ecosystem integrity, and socio-economic resources such as open space, farm land, and recreation opportunities.
- j. *Nonstructural measures* means techniques that modify susceptibility to flooding by means other than structural measures, such as development and redevelopment policies, planning, and regulations; relocation and acquisition; open space and land management; wetland restoration; and elevation and flood proofing.
- k. *Practicable* means capable of being done within existing constraints. The test of what is *practicable* depends upon the situation and includes consideration of many factors, such as public safety, the environment, cost, technology, or legal authorities.
- l. *Residual risk* means the remaining level of flood risk that community is exposed to after structural and nonstructural measures to reduce risk have been implemented. Risk remains because of the possibility of structural and nonstructural system failures or that flood or hurricane intensity surpasses the design of the implemented measure. **(this should include a measurement)**
- m. *Structural measures* mean flood risk management techniques or measures that modify flood flows by building structures to manage the flow of water. Examples of structural projects include: levees and floodwalls, dams, diversions, seawalls, revetments, tide gates, channels, and drainage modifications.
- n. *Substantial improvement* means any reconstruction, rehabilitation addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the

market value of the structure before the “start of construction” of the improvement. This term includes structures which have incurred substantial damage, where substantial damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

- o. *System-wide* means having to do with a coastal area, watershed, or area within a watershed that has common or interrelated basin hydrology, hydraulics, and ecosystem elements.
- p. *Watershed* means an area of land that drains water, sediment, and dissolved materials to a common water body such as a river, lake or ocean.

PART 4 – DECISION MAKING PROCESS FOR COVERED ACTIONS

Section 401. This decision making process applies to covered actions in floodplains or that cause adverse effects on the floodplain. When preparing documents for compliance with the national Environmental Policy Act (NEPA) agencies can incorporate compliance with this order when relevant to the proposed Federal action.

Section 402. Identify Floodplains.

- a. Before taking a covered action, an agency must determine whether that action will occur in or adversely affect a floodplain or is a critical covered action. The agency shall use Federal Emergency Management Agency’s (FEMA) floodplain information, including maps and Flood Insurance Studies to make its determination. If the agency determines that it needs additional information or if FEMA’s information is not available for the area or is insufficiently detailed, the agency shall look elsewhere for scientifically credible information or develop the information itself.
- b. If the covered action is not in or does not adversely affect a floodplain, **or if the levee systems protecting floodplain are being substantially improved (how is substantially improved being defined – 20yr protection to 80-yr, A99 designation, residual risk dropping by x%),** the covered action is not subject to the remaining requirements of this order.

Section 403. Identify and Evaluate Practicable Alternatives.

- a. Using other sites outside the floodplain that would not adversely affect a floodplain.
- b. Taking other actions that serve essentially the same purpose as the proposed covered action but that are not in a floodplain or would not adversely affect a floodplain.
- c. Taking no action
- d. If the agency revises its covered action to avoid any action in or that would adversely affect a floodplain the covered action is not subject to the remaining requirements of this order.

Section 404. Identify and Mitigate Effects.

- a. Give the public a chance to comment on the proposed covered action in accordance with Section 801.
- b. After considering public comments received, decide whether or not there is a practicable alternative to proceeding with the covered action in or affecting a floodplain. If not, make a formal finding that there is no practicable alternative that is not in or adversely affecting a floodplain.
- c. Identify the effects of the Covered Action and then to the extent practicable.
 - i) Design or modify the proposed covered action to avoid or minimize the potential for loss of life from flooding or property damage and potential adverse effects to the natural resources and functions of the floodplain and protect facilities from potential flood damage following regulations and procedures issued or amended under Part 9 of this order.
 - ii) For Critical covered actions if locating outside the **1 percent annual chance flood hazard area is not practicable, protect these critical covered actions so they can withstand the greater than 1 percent annual chance flood or otherwise minimize possible damages from such a flood. If the 1 percent annual chance flood data is not available, an estimate of the 1 percent annual chance flood should be developed in coordination with FEMA.**

- iii) To the extent practicable, avoid placing fill material in the floodplain to achieve flood protection **(does this preclude levees and in some cases elevation through fill is more reliable than other structural measures.)**.
- iv) Avoid placing fill material or other obstructions in the floodway or coastal high hazard areas.
- v) Ensure that the proposed action considers and has dealt with the residual risks that exist behind levees and other flood risk reduction structures.
- vi) Design or modify the proposed covered action to be consistent with Federal, State, Tribal, and local
 - 1) Flood risk reduction and floodplain management plans, emergency action and evacuation plans, standards, criteria, regulations or procedures that are more restrictive than those in the agency's regulations and procedures developed under Part 9.
 - 2) Environmental protection and restoration plans, regulations and laws.
- d. Consider after completion of i-vi above, if the the proposed action is still feasible.
- e. Prepare and circulate a notice as required in section 802.

Section 405 Process Requirements for Disposing of Interest in Federal Property.

When the covered action is the proposed disposal of an interest in real property within a floodplain to non-Federal public or private entities, in addition to the requirements of Section 402, 404(b) – (c), and appropriate requirements of 403 and 404(a) agencies shall:

- a. List in the document transferring the property those uses that are restricted and requirements under applicable Federal, State, tribal or local floodplain management regulations and procedures.
- b. Make full use of available legal authorities to attach appropriate restrictions to the uses of properties by the grantee or purchaser and any successors.
- c. Consider retaining these properties in federal ownership.

Section 406. Process Requirements for Federal Financial Involvement. In addition to the other requirements of the order and the responsibilities agencies have under Sections 202 and 205 of the Federal Disaster protection Act of 1973 as amended (42 USC 4106 and 4128 and Section 1364 of the Nation Flood Insurance Act of 1968 as amended (42 USC 4104a), agencies shall when the covered action guarantees, approves, regulates or insures any financial transaction, inform private parties of the hazards of locating structures or facilities in the floodplain before completing the transaction by:

- a. Indicating if the property is in a floodway or coastal high hazard area; and
- b. Indicating that the property may be subject to Federal, States, tribal or local floodplain management regulations.

Section 407. Process Requirements for Planning and Issuance of Federal Licenses, Permit Loans, and Grants. In addition, to the other requirements of this order, agencies must also take floodplain management into account by:

- a. Ensuring that, when developing or approving water or land use plans, the use of land and water resources is appropriate to the degree of hazard involved.
- b. Providing guidance to applicants to help them evaluate the adverse effects of their proposed actions in or adversely affecting a floodplain before they apply for Federal licenses, permits, loans or grants.

PART 5 – MANAGING EXISTING FEDERAL FACILITIES WITH FLOODPLAINS

Section 501. With four years of the issuance of this order, each agency shall develop and maintain a list of all its owned or leased facilities with the floodplain.

Section 502. Within six years of this order, each agency shall expand the list to include the following:

- a. A description of each facility's vulnerability to flooding or its contribution to increasing or decreasing flood damages. If the facility is a critical facility describe its vulnerability to a 0.2 percent **(the 500-year event may not be a practical benchmark in the Central valley)** annual chance flood event.
- b. A description of the public health, safety, or other benefits the facility provides.

- c. An assessment of whether the degree of flood risk to the Federal facility, public health and safety, and potential impact on the environment merit undertaking mitigation measures. Some of the measures to consider are relocating vulnerable uses and contents or relocating utilities and mechanical equipment above the flood level, floodproofing the structure, moving critical operations to another location outside the floodplain, etc.

Section 503. When repairing, improving, or rehabilitating Federal facilities in the floodplain that are not substantial Improvements or repair of substantial damage, consider undertaking mitigation measures to minimize the flood risk to the facilities.

PART 6 - - PROMOTE NONSTRUCTURAL APPROACHES

Part 6.01 When acting on proposals for planning, developing, constructing, managing, repairing, restoring, and evaluating flood risk reduction measures or systems, in addition to the requirements in Part 4, agencies shall:

- a. Use as much as practicable, nonstructural measures, design modifications, and enhancements that would:
 - i) A description of the public health, safety, or other benefits the facility provides.
 - ii) An assessment of whether the degree of flood risk to the Federal interest.
 - iii) Lower long-term cost to the taxpayers.
 - iv) Protect, restore, or improve environmental conditions, including: wetlands, riparian buffers, beach dune systems, fish and wildlife habitat, species diversity, and water quality.
- b. Address flood damage reduction on a system-wide or watershed basis, using the concepts of integrated water resources management.
- c. Encourage State, tribal, and local communities to get involved and assume responsibility for flood response and floodplain management. Specifically to the extent practicable:
 - i) Coordinate with State, tribal, and local governments.

- ii) Follow existing community adaptation floodplain management and hazard mitigation, emergency, and evacuation plans when they meet or exceed Federal requirements.
 - iii) Encourage development of community adaptation, floodplain management and hazard mitigation plans as part of flood response proposals.
 - iv) Encourage States, tribes and local governments and entities to take responsibility for non-Federal levees.
 - v) Work with State, tribes and local governments and entities to take responsibility for non-Federal levees.
 - vi) In accordance with existing authorities make levee and other flood risk reduction structure repair and associated recovery and restoration funds available to States, tribes, and local governments for use in implementing nonstructural damage mitigation plans.
- d. Where authorized institute State, tribal and local cost-sharing, and make flood damage reduction measures or systems funds available to States and tribal governments for implementing nonstructural flood loss reduction measures or flood hazard mitigation plans that are consistent with this order.

PART 7 – SHARING SCIENTIFIC INFORMATION

Section 701. Use Consistent and Current Science. Agencies shall use consistent and current scientific principles and methods for effective floodplain identification and management. They shall use those principles and methods to gain knowledge and understanding of the processes that create floodplains of the natural resources and functions of floodplains, and of the consequences of human interaction.

Section 702. Coordinate with Others.

Where agency authorities permit agencies shall coordinate scientific activities share existing databases and coordinate the development of information relevant to flood impact prediction, flood response, recovery and floodplain management planning with other Federal, State, tribal, and local agencies or other institutions as much as is practicable. Each agency shall also act to

ensure the standardization, compatibility and transferability of such data among Federal agencies.

PART 8 – PUBLIC INVOLVEMENT

Section 801. Opportunity to comment. Before taking any covered action in or adversely affecting a floodplain, agencies shall:

- a. Provide the affected public with an opportunity to review and comment on the agency's plans and alternatives.
- b. Coordinate early in the process with affected Federal, State, tribal, and local agencies with jurisdiction by law or special expertise in environmental, coastal zone, and floodplain management matters.
- c. Provide the affected public with an opportunity to review and comment on any revised plans, designs, and alternatives under construction.
- d. Ensure that the head of the agency (or his/her designee) fully considers all public comments and all practicable alternatives before making a determination to proceed with any proposed covered action in or adversely affecting a flood plain.

Section 802. Findings and Public Notice. If after giving the public an opportunity to comment, the head of an agency (or his/her designee) finds that there is no practicable alternative outside the floodplain, the agency shall document compliance with this order by:

- a. Describing the proposed covered action and its adverse effects on the floodplain:
- b. Explaining why locating the proposed covered action within the floodplain or adversely affecting the floodplain is the only practicable alternative.
- c. Describing the other potential sites and actions the agency considered including their locations, and state why the agency rejected each one.
- d. Stating for the proposed covered action what the agency will do to avoid minimize or mitigate the adverse effects to the floodplain and/or minimize the risk of future flood damage.

- e. Stating how the proposed covered action is consistent with Federal, State, tribal, or local flood reduction projects and floodplain management plans requirements and laws or explain how and why the proposed covered action is inconsistent.
- f. Summarizing how the agency proposed to protect, preserve and restore the natural resources and functions of the floodplain affected by the covered action.
- g. Making the above available to the affected public and Federal, State, tribal, and local agencies with jurisdiction by law or special expertise in environmental and floodplain management matters.
- h. Allowing for an adequate comment period before the agency takes any covered action.

Section 803 Relationship to NEPA. The public involvement requirements of Section 801 may be accomplished in conjunction with or by accomplishing the public involvement required under NEPA. The documentation required by Section 802 can be incorporated into documentation required by Section 802 can be incorporated into documentation prepared by the agency for compliance with the Nation environmental Policy Act.

Section 804. Promoting Public Awareness of Flood Hazards.

- a. If Federal property used by the general public has suffered flood damage or is located in an identified floodplain, the agency with control of the property shall show the past and, when available, other flood heights (i.e. 1 percent and 0.2 percent floods) on the property, and other places where appropriate in order to enhance public awareness of and knowledge about flood hazards.
- b. Where the information is available, responsible agencies shall make publicly available the current estimate level of protection provided by federally constructed or financed flood damage reduction measures or systems.

PART 9 – REGULATIONS AND REPORTING REQUIREMENTS

Section 901. As allowed by law, each agency shall amend its existing regulations and procedures within one year of the date of this order to bring those regulations in compliance with this order. Current regulations will remain in effect until amended or replaced. Agency regulations and procedures shall:

- a. Incorporate by reference existing regulations, such as those of the council on Environmental Quality (CEQ) as much as practicable.

- b. Reflect the standards, criteria and regulations or procedures issued under the National Flood Insurance Program and the Unified National Program for Floodplain Management and the requirements of this order.
- c. At a minimum, require that the construction or substantial improvement of Federal facilities and Federally financed or otherwise supported structures comply with the standards issued under the National Flood Insurance Program and the requirements of this order. Agencies should consider going beyond these minimum standards for covered actions where the agency determines that higher levels of protection are necessary and appropriate or for actions not covered by the Nation Flood Insurance Program. Agency regulations may differ from the National Flood Insurance Program only to the extent that the standards of the National Flood Insurance Program are clearly inappropriate for a given type of structure or facility.
- d. Address flood hazards and natural resources and functions of floodplains in the regulations and operating procedures for the licenses, permits, loans or grant programs for water resource and land use activities.
- e. **Avoid creating incentives for adverse floodplain development.** Agencies shall evaluate their policies and procedures for approving, regulating, funding, assisting, permitting, or licensing activities to ensure that they are not encouraging the use of structural measures that would make it easier to develop floodplain areas.

Section 902. Each agency shall consult with FEMA and CEQ before writing its regulations and procedures.

Section 903. Within one year of the issuance of this order, each agency shall submit a report to OMB and CEQ indicating the status of regulation and procedure revisions. Every four years thereafter, each agency must evaluate the effectiveness of its regulation and procedures and report the results of the evaluation to OMB and CEQ.

PART 10 – ADMINISTRATIVE INFORMATION

Section 1001. This order replaces Executive Order No. 11988, issued on May 24, 1977. All guidance and regulations prepared under that order and currently in effect, will remain in effect until modified under this new order.

Section 1002. If Section 104(g) of the Housing and Community Development Act of 1974, as amended ((42USC 5304(g)) applies to covered action, and the agency is allowing an entity other than the agency to do its NEPA documentation, the agency may also permit that entity to perform the actions necessary for compliance with this order.

Section 1003. **With the exception of flood control authorizations and appropriations,** all agency requests to OMB for new authorizations or appropriations for a potential covered action in or adversely affecting a floodplain must include a statement indicating that the agency will comply with this order.

Section 1004. This order is not intended to and does not create any right or benefit, substantive or procedural, enforceable at law or in equity by a party against the United States, its departments, agencies, or entities, its officers, employees or agents, or any other persons.

Section 1005. This order shall be implemented consistent with applicable law and subject to the availability or appropriations.

Section 1006. Nothing in this order shall be construed to impair or otherwise affect authority granted by law to a department, agency, or the head thereof.

Section 1007. Nothing in this order affects limitations on the dissemination of classified information pursuant to law, regulation, or Executive order.

Section 1008. This order only applies to covered action undertaken in any State of the United States, the District of Columbia, The Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, and any other territory or possession over which the United States has jurisdiction. Nothing herein, however, prevents and agency from following the procedures of this order for actions undertaken outside the areas listed above.

Section 1009. This order does not apply to assistance an agency provides for emergency work essential to save lives and protect property and public health and safety, performed under PL 84-99 (33 USC 701n) or Sections 402 and 403 of the Robert T. Stafford Disaster Relief Emergency Assistance Act, as amended (PL 93-288). Whenever practicable, however, each agency shall make such assistance consistent with this order.