SUMMARY OF PROPOSED ACTIONS TO BE INCLDUED IN THE PROGRAMMATIC ENVIRONMENTAL ASSESSMENT FOR DAM SAFETY PROJECTS WITHIN FEMA REGION 4

FEMA's mission is to increase disaster resiliency for communities by providing assistance to prevent loss of life and/or property including mitigation efforts to potentially reduce costs associated with recovery. Aging dam infrastructure and the awareness of impacts to loss of life and/or property requires the assessment of impacts of a potential breach or failure. Federal and State agencies are implementing dam safety activities to repair, rehabilitate, replace, reconstruct, or remove dams due to age, erosion, and/or deterioration. Completing these types of dam activities may reduce the potential for a breach or failure and decrease the risk to life, and/or property.

The PEA will cover dam projects that are designed to repair, rehabilitate, replace, reconstruct, or remove dams which have been deemed a potential hazard to human life and environment within the following Federal Emergency Management Agency's (FEMA) Grant Programs: Building Resilient Infrastructure and Communities (BRIC); Flood Mitigation Assistance (FMA); High Hazard Potential Dam (HHPD) Grant; Hazard Mitigation Grant Program (HMGP); and Public Assistance (PA). This PEA may be applied for dams that meet the definition of a dam as outlined in each state's legislature described within this document. This PEA will not negate the review or consultation required by law for environmental and historic laws and executive orders including, but not limited to, Endangered Species Act (ESA), National Historic Preservation Act (NHPA), EO 11988: Floodplain Management, and EO 11990: Protection of Wetlands.

President Biden issued new Executive Orders 13985, 13990 and 14008 in January 2021 to further address the need to achieve environmental justice and equity across the federal government and to tackle the ongoing climate crisis. Additionally, President Biden issued Executive Order (EO) 14096 in April 2023, advance the nation's implementation and enforcement of environmental justice. The issuance of the new executive orders indicates the administration's directive to federal agencies to renew their energy, effort, resources and attention to environmental justice and climate change.

In accordance with 40 CFR § 1506.3 Adoption, other federal agencies or agencies assuming federal NEPA authority, such as, but not limited to, U.S. Army Corp of Engineers (USACE) or the Federal Energy Regulatory Commission (FERC), may choose to adopt the PEA, in whole or in part, according to their respective regulations. Additionally, FEMA is aware of the November 12, 2024 decision in Marin Audubon Society v. Federal Aviation Administration, No. 23-1067 (D.C. Cir. Nov. 12, 2024). To the extent that a court may conclude that the Council on Environmental Quality (CEQ) regulations implementing NEPA are not judicially enforceable or binding on this agency action, FEMA has nonetheless elected to follow those regulations at 40 C.F.R. Parts 1500–1508, in addition to DHS and FEMA's Directive 023-01 *Implementation of the National Environmental Policy Act*, Instruction 023-01-001-01 *Instruction Manual on Implementation of the National Environmental Policy Act (NEPA),* Directive 108-1 *Environmental Planning and Historic Preservation Responsibilities and Program*

Requirements, and Instruction 108-1-1 *Instruction on Implementation of the Environmental Planning and Historic Preservation Responsibilities and Program Requirements* implementing NEPA to meet the agency's obligations under NEPA, 42 U.S.C. §§ 4321 et seq.

COMMON SCOPES OF WORK

- Typical activities for dam safety proposed actions may include (detailed further in the table below):
    - Repair or rehabilitation of the dam;
    - Principle and/or Emergency Spillway repairs or rehabilitation;
    - Principle and/or Emergency Spillway construction
    - Dam removal;
    - Increasing water supply storage capacity;
    - Construction monitoring;
    - Installation of early warning systems;
    - Removal or relocation of downstream hazards;
- Funds may not be utilized for the following:
    - Rehabilitation of a Federally-owned dam;
    - Routine operation or maintenance;
    - Modifying a dam to produce hydroelectric power;
    - Making any other modification that does not also improve the safety;
- Work may take place within the area of a dam and its ancillary features where activities may include repair, removal, or any other structural or nonstructural measures required to rehabilitate an eligible dam to minimize the potential for breach, failure, or other life safety protection measures.
    - Projects must meet the following limitations for the PEA to apply:
        - Construction may not increase greater than 10% outside of currently licensed acreage;
        - Indirect impacts may not increase greater than 10% outside of currently licensed acreage;
        - Hydrologic and Hydraulic (H&H) Study must not identify significant impacts to upstream and downstream resources (i.e. biological species; housing; soils; cultural resources);
        - Dredging of associated lakes, spillways, etc. that may be associated with the activities for dam safety outlined in the proposed actions below. Dredging activities associated with safety actions will be restricted to conditions and guidelines outlined in the obtained USACE permits.
        - Soil boring actions may be associated with the activities for dam safety outlined in the proposed actions below. Soil borings are limited to no more than 15 inches (381mm) in diameter and must not impact bedrock. Additionally, construction activities must adhere to all conditions and guidelines for borings outlined in permits obtained from USACE.
- This PEA will not apply to the following actions:
    - Construction of new dams;

- Connected actions that trigger extraordinary circumstances which include, but are not limited to, the following:
  - Scientific controversy about environmental effects;
  - Impacts that are potentially adverse, significant, uncertain, or involve unique or unknown risks, including, but not limited to, impacts to protected resources.
- Actions that will result in an adverse effect to human life or safety;
- Actions that will result in an adverse effect to other structures or properties;
- Dredging of associated lakes, spillways, etc. that is associated with maintenance actions.

PROPOSED ACTIONS

Dam Repair

A. Structure Stabilization
   a. Installation of buttress systems;
   b. Installation of anchoring;
   c. Installation of geomembrane systems to provide, enhance, or restore watertightness;
   d. Installation of shelving built into an embankment or cut to break the continuity of the slope;
   e. Upgrading deteriorating and or/failing features within the dam structure including, but not limited to, piping and gates;
   f. The excavation and widening of the crest of a dam to not exceed 10% of the current dam crest;
   g. Reduction or flattening of unstable slope angles to improve the stability of a dam;
   h. Activities identified as minor mitigation or upgrades that do not adversely impact biological, cultural, or natural resources;
   i. Changes required to bring a previously permitted facility into compliance with new state or federal permit conditions or accepted codes/standards.

B. Stream and/or river embankment stabilization
   a. Installation of drainage systems, including revetments and bulkheads;
   b. Installation of new and additional armoring;
   c. Installation of hard armoring stabilization such as riprap, gabion baskets, matting, and soil cement;
   d. Bioengineering to include activities such as use of biological, mechanical, and ecological concepts to control erosion and stabilize soil;
   e. Minor modifications include the extension of the embankment structures to tie into stable ground;
   f. Bioengineering to include activities such as use of biological, mechanical, and ecological concepts to control erosion and stabilize soil;
   g. Minor modifications include the extension of the embankment structures to tie into stable ground;

h. Changes required to bring a previously permitted facility into compliance with new state or federal permit conditions or accepted codes/standards;
i. Activities identified as minor mitigation or upgrades that do not adversely impact biological, cultural, or natural resources;
j. Activities identified as minor mitigation or upgrades that do not adversely impact biological, cultural, or natural resources;
k. Seepage control actions to include, but not limited to, the following:
    i. Cut off wall;
    ii. Stability panels;
    iii. Grouting abutments;

C. Clearing and grubbing of vegetation including any required tree trimming or removal; Placement of fill from a permitted fill source.

Associated Water Storage Improvements

A. Increasing the capacity of existing water detention or retention sources as long as the capacity does not exceed 10 acres for direct impacts and 50 acres for indirect impacts. Direct impacts are identified as construction activities. Indirect impacts are identified as increased water recreational activities, development, and noise not associated with construction.

Dam Replacement

A. Replacement of the existing dam structure and/or ancillary features with minor upgrades to meet codes and standards and without expanding more than 25% of the current footprint. This work can include the entirety of the structure or parts of the structure. Replacement projects do not allow for the construction of a dam in a new location upstream or downstream of the existing dam.
    a. Potential to include replacement of an existing foundation;
    b. Increase of height of dam;
    c. Seepage control actions to include, but not limited to, the following:
        i. Cut off wall;
        ii. Stability panels;
        iii. Grouting abutments;
    d. Reinforcement of existing dam features;
    e. Replacement of downstream materials.

Dam Reconstruction

A. Reconstruction of significantly deteriorated dams and/or associated features with minor upgrades to meet codes and standards and without expanding more than 25% of the current footprint. This work can include the entirety of the structure or parts of the structure. Reconstruction projects do not allow for the construction of a dam in a new location upstream or downstream of the existing dam.
    a. Upgrading existing pipe and valve materials;
    b. Stabilization and/or upgrades to existing foundation;
    c. Increase of height of dam;
    d. Seepage control actions to include, but not limited to, the following:

i. Cut off wall;
ii. Stability panels;
iii. Grouting abutments;

e. Reinforcement of existing dam features;
f. Replacement of downstream materials.

Dam Removal

A. Includes removal of the dam structure, stream channel restoration, removal of fish and wildlife migration blockages, and impoundment revegetation with native vegetation.
B. Creation of a controlled breach of an existing dam or impoundment.

Principle and/or Emergency Spillway Repairs or Rehabilitation

A. Widening of spillway
B. Embankment Stabilization
    a. Installation of drainage systems, including behind revetments and bulkheads
    b. Bioengineering to include activities such as use of biological, mechanical, and ecological concepts to control erosion and stabilize soil;
    c. Minor modifications include the extension of the embankment structures to tie into stable ground;
    d. Changes required to bring a previously permitted facility into compliance with new state or federal permit conditions or accepted codes/standards;
    e. Minor modifications include the extension of the embankment structures to tie into stable ground;
    f. Changes required to bring a previously permitted facility into compliance with new state or federal permit conditions or accepted codes/standards;
    g. Activities identified as minor mitigation or upgrades that do not adversely impact biological, cultural, or natural resources;
    h. Activities identified as minor mitigation or upgrades that do not adversely impact biological, cultural, or natural resources.
C. Clearing and grubbing of vegetation including any required tree trimming or removal;
D. Placement of fill from a permitted fill source.

PROPOSED CONDITIONS:

The PEA will require conditions on each project that is covered and will include the following conditions, with additional conditions required based on project specifics:

General

- The dam owner and/or subrecipient (subrecipient) is responsible for obtaining and complying with all required local, state, and federal permits and approvals.
- All proposed actions must be in compliance with state and federal dam safety requirements.
- Changes to the previously provided and approved Scope of Work (SOW) resulting in substantial design changes, the need for additional ground disturbance, additional removal of vegetation, or any other unanticipated changes to the physical

environment, the subrecipient must contact FEMA so that the revised project scope can be evaluated for compliance with NEPA and other applicable environmental laws, including but not limited to ESA, NHPA, and Executive Orders 11988 and 11990.

- Disturbed green spaces that will be revegetated shall use species native to their specific geographic area.

Threatened and Endangered Species (ESA)

- All practicable measures must be taken to avoid adverse impacts to aquatic species, including, but not limited to, implementing directional boring methods and stringent sedimentation and erosion control measures.
- All practicable measures must be taken to avoid adverse impacts to threatened and endangered species and designated critical habitats, including conditions identified in FEMA's ESA compliance review.

National Historic Preservation Act (NHPA)

- If human remains or intact archaeological features or deposits (e.g., arrowheads, pottery, glass, metal, etc.) are uncovered, work in the vicinity of the discovery will stop immediately and all reasonable measures to avoid or minimize harm to the finds will be taken. The subrecipient will ensure that archaeological discoveries are secured in place, that access to the sensitive area is restricted, and that all reasonable measures are taken to avoid further disturbance of the discoveries. The subrecipient's contractor will provide immediate notice of such discoveries to the subrecipient. The subrecipient will than adhere to state guidelines and conditions outlined in FEMA's NHPA compliance review.
- Prior to conducting repairs, the subrecipient must identify the source and location of fill material and provide this information to FEMA. If the borrow pit is privately owned, or is located on previously undisturbed land, or if the fill is obtained by the horizontal expansion of a pre-existing borrow pit, FEMA consultation with the SHPO will be required.

Water Resources and Water Quality, Wetlands, and Soils:

- Upon completion of work that involves temporary stream impacts, streambeds are to be restored to pre-project elevations and widths using natural streambed material. Stream banks are to be restored to pre-project grade and contours or beneficial grade and contours if the original bank slope is steep and unstable.
- Stockpiles are to be protected with silt fence installed along toe of slope with a minimum offset of five (5) feet from the toe of stockpile.
- Maintain natural buffers on all streams and creeks adjacent to the project site.
- Dewatering Permits are required prior to dewatering activities and the subrecipient must comply with all of the conditions prescribed by the permit.
- Project may require Section 401/404 Clean Water Act permit(s) or approval. The dam owner is responsible for coordinating with and obtaining any required Section 404 permits from the United States Army Corps of Engineers, Section 401 permits/approval from the [**INSERT DELEGATED AUTHORITY**], and a National Pollution

Discharge Elimination System permit/approval from the [**Environmental Protection Agency or INSERT DELEGATED AUTHORITY**] prior to initiating work. The dam owner is responsible for verifying and adhering to all permit/approval requirements including the implementation, monitoring, and maintenance of all applicable Best Management Practices. Copies of permitting or documentation from the permitting official(s) that a permit/approval is not required are to be forwarded to the state and FEMA for inclusion in the administrative record.

- Project may require Section 9/10 permit(s) or approval under the Rivers and Harbors Act from the United States Army Corps of Engineers. The dam owner is responsible for verifying and adhering to all permit/approval requirements including the implementation, monitoring, and maintenance of all applicable Best Management Practices. Copies of permitting or documentation from the permitting official(s) that a permit/approval is not required are to be forwarded to the state and FEMA for inclusion in the administrative record.

Air Quality

- The subrecipient's contractor shall monitor and take precautions to control dust and other air pollutants including but not limited to using water or chemicals, limiting vehicles allowed on-site, and minimizing the operation speed of vehicles in accordance with the Stormwater Pollution Prevention Plans.

Noise

- The subrecipient must comply with local and state Traffic Control Plans and Noise Ordinances. Permits must be obtained if required as regulated by these ordinances.
- Construction activities must take place during less noise-sensitive daylight hours.

Hazardous Materials

- All solid or hazardous wastes generated during construction will be removed and disposed at a permitted facility or designated collection point.
- Construction equipment must be managed to avoid oil, fuel, or lubricant leaks during equipment use, and will employ BMPs as described in the SWPPP to mitigate potential impacts of hazardous materials.
- If hazardous source materials are encountered during construction activities, the subrecipient's contractor will identify, manage, and dispose of hazardous materials, or other heavily contaminated materials, in accordance with all local, state, and federal regulations. The subrecipient must notify FEMA of the encounter and provide disposal details.
- Procedures will be in place that address safety, health, and emergency response; environmental protection; contaminated soil excavation; transportation and disposal of hazardous or contaminated material; and contaminated dewatering and drainage.

Migratory Birds

- Tree and vegetation removal will be avoided during the migratory bird nesting season to the extent practicable. By observing the US Fish and Wildlife Service tree clearing

window for endangered bat species, impacts will be minimized to the greatest extent feasible.

Environmental Justice

- BMPS should be utilized to minimize long-term adverse impacts to populations within the vicinity of the project undertaking regardless of their race, nationality, or income level.
- Alternative routes, including but not limited to public transportation, should be taken into consideration to minimize short-term adverse impacts to populations impacted by construction activities.
- Public notices and community involvement should be implemented from project development to completion should be conducted, appropriately documented, and addressed.

Climate Change

- BMPs should be utilized to minimize increased levels GHG emissions during construction activities and associated actions.
- When applicable or cost effective, renewable energy resources should be utilized.

Invasive Species

- Graded areas will be revegetated with native grasses and forbs, or native seed mixes.

Safety and Security

- The construction contractor shall be required to develop and implement a Health and Safety Plan to assure worker safety during construction activities.
- Construction workers shall be required to comply with all applicable OSHA regulations, as well as other applicable regional regulations.
- The construction site must be secured from public access.

Federal and State Dam Definition by Legislation

Federal Definition 33 U.S. Code § 467

- The term "dam" means any artificial barrier that has the ability to impound water, wastewater, or any liquid-borne material, for the purpose of storage or control of water, that is 25 feet or more in height from the natural bed of the stream channel or watercourse measured at the downstream toe of the barrier; or if the barrier is not across a stream channel or watercourse, from the lowest elevation of the outside limit of the barrier; to the maximum water storage elevation; or has an impounding capacity for maximum storage elevation of 50 acre-feet or more.
- A dam does not include a levee; or a barrier that is 6 feet or less in height regardless of storage capacity; or has a storage capacity at the maximum water storage elevation that is 15 acre-feet or less regardless of height; unless the barrier, because of the location of the barrier or another physical characteristic of the barrier, is likely to pose a significant threat to human life or property if the barrier fails (as determined by FEMA's Administrator).

- An “eligible high hazard potential dam” means a non-Federal dam that is located in a State with a State dam safety program; is classified as “high hazard potential” by the State dam safety agency in the State in which the dam is located; has an emergency action plan that is approved by the relevant State dam safety agency; or is in conformance with State law and pending approval by the relevant State dam safety agency; fails to meet minimum dam safety standards of the State in which the dam is located, as determined by the State; and poses an unacceptable risk to the public, as determined by the Administrator, in consultation with the Board.
- The term “eligible high hazard potential dam” does not include a licensed hydroelectric dam under a hydropower project with an authorized installed capacity of greater than 1.5 megawatts; or a dam built under the authority of the Secretary of Agriculture.

Alabama SB284

- An artificial barrier, including appurtenant works, with the ability to impound water, wastewater, or liquid borne materials and to which either of the following apply:
    - Is 25 feet or more in height from the natural bed of the stream or watercourse measured at the downstream toe of the barrier, or from the lowest elevation of the outside limit of the barrier, if it is not across a stream channel or watercourse, to the maximum water storage elevation.
    - Has an impounding capacity at maximum water storage elevation of 50-acre feet or more.
- The term includes a fill or structure for highway or railroad use or for any other purpose which impounds water.
- This definition does not apply to any barrier not in excess of six feet in height regardless of storage capacity or which has a storage capacity at maximum water storage elevation not greater than 15-acre feet regardless of height, unless the barrier, due to its location or other physical characteristics, is classified as a high hazard potential dam.
- This definition does not apply to any dam subject to the jurisdiction of any other state or federal agency.
- The term does not include any obstruction in a canal used to raise or lower water.
- This term does not include privately owned dams, regardless of the hazard designation, unless the owner has voluntarily elected to participate in the program in accordance with this act.

Florida 2023 Statue Chapter 373 Section 403

- “Dam” means any artificial or natural barrier, with appurtenant works, raised to obstruct or impound, or which does obstruct or impound, any of the surface waters of the state.

Georgia Safe Dams Act, O.C.G.A. Secs. 12-5-370 et seq.

- “Dam” means any artificial barrier that impounds or diverts water which is 25 feet or more in height or has a maximum impounding capacity of 100 acre-feet or more.

Kentucky KRS 151

- "Dam" means any structure that is 25 feet in height, measured from the downstream toe to the crest of the dam, or has a maximum impounding capacity of 50 acre-feet or more at the top of the structure.

Mississippi MAC, Chapter 3, Rule 11-7-3.1

- "Dam" means any artificial barrier, including appurtenant works, constructed to impound or divert water, waste water, liquid borne materials, or solids that may flow if saturated. All structures necessary to maintain the water level in an impoundment or to divert a stream from its course.

North Carolina SB 107 § 143-215.25

- Dam. – A structure and appurtenant works erected to impound or divert water.
    - Mill dam. – A dam built across a stream to raise the level of water for the purpose of providing water to a mill for the operation of the mill.
    - "Minimum stream flow" or "minimum flow" means a minimum stream flow or minimum flow. – A stream flow of a quantity and quality sufficient in the judgment of the Department to meet and maintain stream classifications and water quality standards established by the Department under G.S. 143-214.1 and applicable to the waters affected by the project under consideration, and to maintain aquatic habitat in the length of the stream that is affected.
    - Run-of-river dam. – A riverine or stream dam that is designed or operated to release water at approximately the same rate as the natural flow of the river or stream.

South Carolina Regulation 72-1

- "Dam" means any artificial barrier, together with appurtenant works, including but not limited to dams, levees, dikes or floodwalls for the impoundment or diversion of water or other fluids where failure may cause danger to life or property.

Tennessee Safe Dams Act of 1973

- "Dam" means any artificial barrier, together with appurtenant works, which does or may impound or divert water, and which either (1) is or will be twenty (20) feet or more in height from the natural bed of the stream or watercourse at the downstream toe of the barrier, as determined by the Commissioner, or (2) has or will have an impounding capacity at maximum water storage elevation of thirty (30) acre-feet or more. Provided, however, that any such barrier which is or will be less than six (6) feet in height, regardless of storage capacity, or which has or will have a maximum storage capacity not in excess of fifteen (15) acre-feet, regardless of height, shall not be considered a dam, nor shall any barrier, regardless of size, be considered a dam, if, in the judgment of the Commissioner, such barrier creates an impoundment used only as a farm pond. Diversion weirs, roadbeds, water tanks, and wastewater impoundment barriers as defined in this section are not dams.