

ATTACHMENT 3

Projects Eligible under the SA-HMW

Clean Water SRF

If a project is not specifically listed below, states must explain in their IUP how the project addresses the purposes outlined in section III.C. of this memorandum.

- I. Projects that prevent interruption of collection system operation in the event of a flood or natural disaster, including but not limited to:**
 - a. Installation of back-up generators (including portable generators) or alternative energy sources (e.g., batteries, switch boxes) that service pump stations or other distribution system facilities
 - b. Replacement of damaged equipment with equipment that can reduce the energy consumption needs for publicly owned treatment works (§1383(c)(8)) or reduce the demand for publicly owned treatment works capacity through water conservation, efficiency, or reuse (§1383(c)(6)).
 - c. Physical “hardening” or waterproofing of pumps and electrical equipment at pump stations and other components of collection systems (including storage facilities and associated equipment) through upgrade or replacement, including:
 - Installation of submersible pumps
 - Waterproofing electrical components (e.g., pump motors)
 - Waterproofing circuitry
 - Dry floodproofing/sealing of structure to prevent floodwater penetration
 - Installation/construction of wind resistant features (e.g., wind resistant roofing materials, wind-damage resistant windows, storm shutters)
 - d. Relocation of pump stations or other collection system facilities to less flood prone areas
 - e. Installation of physical barriers around pump stations or other collection system facilities (e.g., levees or dikes)
 - f. Correction of significant infiltration and inflow problems that increase the likelihood of sewer backups or flooding of a treatment works
 - g. Separation of combined sewers that will result in a reduced risk of flooding of the collections system and/or treatment works
 - h. Installation/construction of redundant collection system components and equipment
 - i. Regionalization project that enables diversion of wastewater flows to an alternate system for emergency wastewater collection and treatment services
 - j. SCADA system projects to allow remote or multiple system operation locations
 - k. Construction or installation of flood attenuation, diversion, and retention infrastructure within or beyond the boundaries of a treatment works that protects the collection system
 - Green infrastructure that reduces flood risk by reducing stormwater runoff, including permeable pavement, green roofs and walls, bioretention

infrastructure (e.g., constructed wetlands, detention basins, riparian buffers, or stormwater tree trenches/pits/boxes), stream daylighting, and downspout disconnection

- Natural systems, and features thereof, capable of mitigating a storm surge, such as barrier beach and dune systems, tidal wetlands, living shorelines, and natural berms/levees
- Floodwater pumping systems
- Flood water channels/culverts, physical barriers, and retention infrastructure

II. Projects that prevent floodwaters from entering a treatment works, including but not limited to:

- a. Installation of physical barriers around a facility (e.g., levees or dikes around the facility to prevent flooding)
- b. Relocation of facilities to less flood prone areas
- c. Construction or installation of flood attenuation, diversion, and retention infrastructure within or beyond the boundaries of a treatment works that protects the treatment works
 - Green infrastructure that reduces the risk of flooding by reducing stormwater runoff, including permeable pavement, green roofs and walls, bioretention infrastructure (e.g., constructed wetlands, detention basins, riparian buffers, or stormwater tree trenches/pits/boxes), stream daylighting, and downspout disconnection
 - Natural systems, and features thereof, capable of mitigating a storm surge, such as barrier beach and dune systems, tidal wetlands, living shorelines, and natural berms/levees
 - Floodwater pumping systems
 - Flood water channels/culverts, physical barriers, and retention infrastructure

III. Projects that maintain the operation of a treatment works and the integrity of the treatment train in the event of a flood or natural disaster, including but not limited to:

- a. Installation of back-up generators (including portable generators) or alternative energy sources (e.g., batteries, switch boxes) that service pump stations or other distribution system facilities
- b. Replacement of damaged equipment with more energy efficient equipment
- c. Physical “hardening” or waterproofing of pumps and electrical equipment at treatment works through upgrade or replacement, including:
 - Installation of submersible pumps
 - Waterproofing electrical components (e.g., pump motors)
 - Waterproofing circuitry
 - Dry floodproofing/sealing of structure to prevent floodwater penetration
 - Installation/construction of wind resistant features (e.g., wind resistant roofing materials, wind-damage resistant windows, storm shutters)
- d. Relocation of critical equipment to less flood prone areas of a facility and/or elevation of critical structures
- e. Installation of physical barriers around individual treatment processes

- Flood walls around treatment tanks
 - Elevated walls or capping of treatment tanks
- f. Installation of larger capacity storage tanks
 - Installation of larger capacity chemical storage tanks for continued treatment in absence of delivery service
 - Installation of larger capacity fuel storage tanks for back-up generators
 - Construction of storage tanks at treatment works to store overflows for future treatment
 - g. Installation/construction of redundant components and equipment
 - h. SCADA system projects to allow remote or multiple system operation locations
- IV. Projects that preserve and protect treatment works equipment in the event of a flood or natural disaster, including but not limited to:**
- a. Relocation of critical equipment to less flood prone areas of a facility and/or elevation of critical structures
 - b. Prevention of saltwater damage to materials and equipment
 - Installation of salt water resistant chemical storage tanks
 - Installation of salt water resistant fuel storage tanks
 - Installation of salt water resistant equipment and appurtenances
- V. Planning projects that assess a treatment works' vulnerability to flood damage or that analyze the best approach to integrate system and community sustainability/resiliency priorities in the face of a variety of uncertain futures including natural disasters and more frequent and intense extreme weather events, provided the planning work is reasonably expected to result in a capital project, including but not limited to:**
- a. Risk/vulnerability assessments considering recent floodplain maps and projected sea level rise
 - b. Alternatives analysis
 - c. Asset Management Plans
 - d. Emergency Preparedness, Response, and Recovery Plans
- VI. Projects that assess, prepare for, protect, or mitigate damage to treatment works or collection system from wildfires, including but not limited to:**
- a. Risk/vulnerability assessments considering recent wildfire hazard maps
 - b. Emergency Preparedness, Response, and Recovery Plans considering wildfire potentials
 - c. Maintain emergency generators at key facilities to help mitigate widespread power outages
 - d. Practice mechanical thinning, weed control, selective harvesting, controlled burns and creation of fire breaks on utility managed property
 - e. Create a zone of defensible space for utility equipment and facilities (e.g., structures, supports to wires and transformers); keep intakes clear of debris
 - f. Install manual or automatic irrigation systems to provide wetting of components and groundcover for vulnerable areas (e.g., chemical storage, control equipment buildings)

- g. Installation of fire-resistant building materials
- h. Purchase of fire suppression equipment and fire safety kits as key components of emergency response equipment

Clean Water SRF Decentralized Funds

If a project is not specifically listed below, states must explain in their IUP how the project addresses the purposes outlined in section III.C. of this memorandum

I. Projects that protect decentralized wastewater treatment systems from rising waters

- a. Anchor all buoyant components (e.g., fiberglass tanks, air-filled textile filters, pump basins, etc.) to prevent floating during flood events.
- b. Properly grade and slope areas around septic system components to reduce flood scouring.
- c. Brace septic system components properly to withstand saturated soil conditions.
- d. Plant resilient native plants with shallow root systems to hold soils and prevent erosion near drainfields.
- e. Elevate all electrical components above base flood elevation.
- f. Add artificial buffers or swales, curtain drains, and fill caps to protect infrastructure and divert excess water away from decentralized systems.
- g. Install backflow valves to prevent return flow and protect property from sewage backups.

II. Projects that protect decentralized wastewater treatment systems from power risks associated with flooding

- a. Install backup power systems/connections to ensure that systems remain operational during power outages.
- b. Install power shutoffs for emergency situations.

III. Projects that reduce the risk of decentralized wastewater treatment system failure associated with flooding

- a. Install measures that reduce the amount of wastewater entering the decentralized treatment system.

IV. Projects that increase decentralized wastewater system capacity to handle flood risks

- a. Install additional drain lines, larger septic tanks, and holding tanks.
- b. Elevate drainfields to create more vertical separation distance (e.g., a mound system) or install alternative dispersion for drainfields (e.g., shallow pressurized drainfields or drip dispersal) allowing decentralized systems to return to normal operation more quickly after a flood event.

V. Consolidation of decentralized wastewater treatment systems to reduce flood risk

- a. Install cluster systems to consolidate treatment and dispersal off-lot in a site that is more resilient (e.g., less flood risk, better soil conditions or terrain).
- b. Design and install shared cluster systems to pool financial resources so that resilient features and management practices can be incorporated.
- c. Integrate advanced treatment options into cluster systems to generate treated wastewater for reuse (e.g., membrane technologies)

VI. Planning projects that assess the potential to connect homes served by decentralized wastewater treatment systems to centralized wastewater systems due to vulnerability to flood damage or that analyze the best approach to integrate system and community sustainability/resiliency priorities in the face of a variety of uncertain futures including natural disasters and more frequent and intense extreme weather events, provided the planning work is reasonably expected to result in a capital project, including but not limited to:

- a. Feasibility studies to connect homes served by decentralized treatment systems to centralized treatment systems
- b. Risk/vulnerability assessments considering recent floodplain maps and projected sea level rise
- c. Alternatives analysis
- d. Asset Management Plans
- e. Emergency Preparedness, Response, and Recovery Plans

VII. Projects that make connections from homes served by decentralized wastewater treatment systems to centralized wastewater treatment systems

- a. Installation/construction of collection system components and equipment
- b. Decommissioning of decentralized wastewater systems so that they no longer pose risks to human health and the environment

Drinking Water SRF

If a project is not specifically listed below, states must explain in their IUP how the project addresses the purposes outlined in section III.C. of this memorandum.

- I. Projects that prevent interruption of water distribution system operation in the event of a flood or natural disaster, including but not limited to:**
 - a. Installation of back-up generators (including portable generators) or alternative energy sources (e.g., batteries, switch boxes) that service pump stations or other distribution system facilities
 - b. Purchase of mobile laboratory equipment for use during emergencies
 - c. Replacement of damaged equipment with more energy efficient equipment
 - d. Physical “hardening” or waterproofing of pumps and electrical equipment at pump stations and other components of distribution systems (including storage facilities and associated equipment) through upgrade or replacement, including:
 - Waterproofing electrical components (e.g., pump motors)
 - Waterproofing circuitry
 - Dry floodproofing/sealing of structure to prevent floodwater penetration
 - Installation/construction of wind resistant features (e.g., wind resistant roofing materials, wind-damage-resistant windows, storm shutters)
 - e. Relocation of pump stations or other distribution system facilities to less flood prone areas
 - f. Installation of physical barriers around pump stations or other distribution system facilities (e.g., levees or dikes)
 - g. Installation/construction of redundant distribution system components and equipment
 - h. Construction of interconnections with neighboring water systems which could provide an emergency water supply
 - i. SCADA system projects to allow remote or multiple system operation locations
 - j. Construction or installation of flood attenuation, diversion, and retention infrastructure associated with an otherwise eligible drinking water project that protects the distribution system
 - Green infrastructure that reduces the risk of flooding by reducing stormwater runoff, including permeable pavement, green roofs and walls, bioretention infrastructure (e.g., constructed wetlands, detention basins, riparian buffers, or stormwater tree trenches/pits/boxes), stream daylighting, and downspout disconnection
 - Natural systems, and features thereof, capable of mitigating a storm surge, such as barrier beach and dune systems, tidal wetlands, living shorelines, and natural berms/levees
 - Floodwater pumping systems
 - Flood water channels/culverts, physical barriers, and retention infrastructure
- II. Projects that prevent floodwaters from entering a treatment plant or well house, including but not limited to:**

- a. Installation of physical barriers around a facility (e.g., levees or dikes around the facility to prevent flooding)
- b. Relocation of facilities to less flood prone areas
- c. Construction or installation of flood attenuation, diversion, and retention infrastructure associated with an otherwise eligible drinking water project that protects the treatment plant
 - Green infrastructure that reduces the risk of flooding by reducing stormwater runoff, including permeable pavement, green roofs and walls, bioretention infrastructure (e.g., constructed wetlands, detention basins, riparian buffers, or stormwater tree trenches/pits/boxes), stream daylighting, and downspout disconnection
 - Natural systems, and features thereof, capable of mitigating a storm surge, such as barrier beach and dune systems, tidal wetlands, living shorelines, and natural berms/levees
 - Floodwater pumping systems
 - Flood water channels/culverts, physical barriers, and retention infrastructure

III. Projects that maintain the operation of a drinking water treatment plant, intake or well in the event of a flood or natural disaster, including but not limited to:

- a. Installation of back-up energy supply or alternative energy sources (e.g., batteries, switch boxes) and/or hardening of existing connections to the power grid
- b. Replacement of damaged equipment with more energy efficient equipment
- c. Physical “hardening” or waterproofing of pumps and electrical equipment at pump stations and other components of distribution systems (including storage facilities and associated equipment) through upgrade or replacement, including:
 - Waterproofing electrical components (e.g., pump motors)
 - Waterproofing circuitry
 - Dry floodproofing/sealing of structure to prevent floodwater penetration
 - Installation/construction of wind resistant features (e.g., wind resistant roofing materials, wind-damage-resistant windows, storm shutters)
- d. Relocation of critical equipment to less flood prone areas of a facility and/or elevation of critical structures
- e. Installation of physical barriers around individual treatment processes
 - Flood walls around treatment tanks
 - Elevated walls or capping of treatment tanks (e.g., tanks, vaults)
- f. Installation of larger capacity storage tanks
 - Installation of larger capacity chemical storage tanks for continued treatment in absence of delivery service
 - Installation of larger capacity fuel storage tanks for back-up generators
 - Installation of larger capacity water storage facilities (e.g., raw water reservoirs, backwash tanks, contact basins)
- g. Installation/construction of redundant distribution system components and equipment
- h. SCADA system projects to allow remote or multiple system operation locations

- IV. Projects that preserve and protect water system equipment in the event of a flood or natural disaster, including but not limited to:**
- a. Relocation of critical equipment to less flood prone areas of a facility and/or elevation of critical structure
 - b. Prevention of saltwater damage to materials and equipment
 - Installation of salt water resistant chemical storage tanks
 - Installation of salt water resistant fuel storage tanks
 - Installation of salt water resistant equipment and appurtenances
- V. Planning projects that assess a treatment works' vulnerability to flood damage or that analyze the best approach to integrate system and community sustainability/resiliency priorities in the face of a variety of uncertain futures including natural disasters and more frequent and intense extreme weather events, provided the planning work is reasonably expected to result in a capital project, including but not limited to:**
- a. Risk/vulnerability assessments considering recent floodplain maps and projected sea level rise
 - b. Alternatives analysis
 - c. Asset Management Plans
 - d. Emergency Preparedness, Response, and Recovery Plans
- VI. Projects that assess, prepare for, protect, or mitigate damage to drinking water plant or well house or water distribution system from wildfires, including but not limited to:**
- a. Risk/vulnerability assessments considering recent wildfire hazard maps
 - b. Emergency Preparedness, Response, and Recovery Plans considering wildfire potentials
 - c. Installation of shut-off valves so that damaged sections of pipeline can be isolated
 - d. Take actions to protect the "backbone" of water distribution network including key conduits, transmission mains, critical facilities, reservoirs and tanks
 - e. Maintain emergency generators at key facilities to help mitigate widespread power outages
 - f. In the wake of wildfires, install sensors upstream of the reservoir to monitor the amount of debris and sediment coming down the river, allowing utility to shut down its treatment plant before flash floods could cause damage; monitor raw water quality to adjust treatment, as necessary; resize culverts to handle increased flow
 - g. Practice mechanical thinning, weed control, selective harvesting, controlled burns and creation of fire breaks on utility managed property
 - h. Create a zone of defensible space for utility equipment and facilities (e.g., wellheads, structures, supports to wires and transformers); keep intakes clear of debris
 - i. Install manual or automatic irrigation systems to provide wetting of components and groundcover for vulnerable areas (e.g., chlorine storage, control equipment buildings)
 - j. Installation of fire-resistant building materials
 - k. Purchase of fire suppression equipment and fire safety kits as key components of emergency response equipment