The Department of Homeland Security’s (DHS) Federal Emergency Management Agency (FEMA) proposes to provide funding to the Humboldt Community Services District (Subapplicant) to increase the resilience of a force main by replacing approximately 2.1 miles of existing asphalt-cement (AC) sanitary sewer force main with high-density polyethylene (HDPE) line in the incorporated city of Eureka and unincorporated Humboldt County, California (Proposed Action). The Subapplicant applied for funding from FEMA’s Hazard Mitigation Grant Program (HMGP) to underwrite the proposed project. HMGP is authorized under Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. § 5133. HMGP assists communities in implementing long-term hazard mitigation planning and projects following a Presidential major disaster declaration.

The project is located adjacent to the eastern edge of Humboldt Bay at the confluence of the Elk River in the city of Eureka and unincorporated Humboldt County. The project’s southern end terminates at the South Broadway pump station (latitude and longitude: 40.73666667, -124.20722222) and the northern end terminates at the Elk River Wastewater Treatment Plant (WWTP) (latitude and longitude: 40.76722222, -124.19527778) (project area), operated by the City of Eureka in Eureka, Humboldt County, California.

The purpose of the Proposed Action is to increase the resilience of the force main by reducing risks from flooding and the potential for saltwater intrusion. The Proposed Action would replace approximately 2.1 miles of existing AC sanitary sewer force main with HDPE line, terminating at the South Broadway pump station at the southern end and at the Elk River WWTP at its northern end. Implementation of the Proposed Action is needed to reduce this risk of failure from flooding and saltwater intrusion.

The Proposed Action would replace approximately 2.1 miles of existing AC sanitary sewer force main with HDPE line, terminating at the South Broadway pump station at the southern end and at the Elk River WWTP at the northern end. The existing force main runs under the Elk River to connect the pump station and the WWTP.

The Proposed Action would involve the following activities:

- site preparation;
- open trenching and horizontal directional drilling (HDD) to install the new HDPE pipe;
- connecting the new sewer force main to the existing system;
- abandoning the existing sewer force main in place; and
- restoring disturbed areas.
Along with a detailed description of the project, the Supplemental Environmental Assessment (SEA) describes the equipment, staging, and sequencing of the project implementation.

FEMA prepared an SEA pursuant to the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321-4347 (2000), as implemented by the regulations promulgated by the President’s Council on Environmental Quality (40 Code of Federal Regulations [C.F.R.] 30 §§ 1500-1508) and in accordance with FEMA Directive 108-1, Environmental Planning and Historic Preservation Responsibilities and Program Requirements and DHS Instruction Manual 023-01-001-01, Implementation of the National Environmental Policy Act. The SEA evaluates the range of potential environmental impacts if the Proposed Action is implemented and evaluated the applicability of the December 2014 Final Programmatic Environmental Assessment for Recurring Actions in Arizona, California, and Nevada (PEA) and the March 2019 Supplemental Environmental Assessment to the Final Programmatic Environmental Assessment for Recurring Activities in Arizona, California, and Nevada.

ENVIRONMENTAL IMPACTS

FEMA prepared an SEA because, although the type of work proposed under the Proposed Action does fall under the range of actions evaluated in PEA Section 2.3.4, Repairing, Realigning, or Otherwise Modifying Roads, Trails, Utilities, and Rail Lines, the Proposed Action would require trenching and other ground-disturbing construction activities in areas that are identified as freshwater and emergent wetland and freshwater forested/shrub wetland features, as mapped by the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI). While the project activities are consistent with those described in PEA Section 2.3.4, PEA Best Management Practice (BMP) #1 (Water Resources), this BMP requires that no work be conducted within 50 feet of a wetland or waterbody. Due to the location of existing HCSD infrastructure, and the confirmed location of the NWI-mapped wetland features, there is no feasible alternative to avoid all work within 50 feet of wetland features consistent with this BMP.

According to PEA Section 1.8, Using the Programmatic Environmental Assessment, “If an action is expected to (1) result in impacts not described in the PEA, (2) result in impacts greater in magnitude, extent, or duration than those described in the PEA, or (3) require additional environmental mitigation measures than those described in this PEA, a SEA would be prepared.” Based on the verified presence of wetland features within the project area and the absence of alternative solutions that would avoid work within 50 feet of wetlands in compliance with PEA BMP #1 (Water Resources), the Proposed Action would result in impacts not described in the PEA and require additional environmental mitigation measures to minimize potential temporary impacts on wetland features during construction activities. This SEA evaluates those impacts and discloses the impacts of the Proposed Action that have not been previously described in the PEA for public review.

The Proposed Action, as described in the SEA, would not result in any significant adverse impacts on geology, soils, topography, air quality, historic properties, archeological resources, low-income or minority populations, public services and recreation, transportation, noise, hazardous materials and wastes, or visual resources. Based on a preliminary screening of resources and the project’s geographic location, the SEA found that the following resources were not present in the project area and did not require a detailed assessment: prime and unique farmland, sole-source aquifers, and federally designated wild and scenic rivers.
The affected environment and environmental consequences associated with the Proposed Action are consistent with the affected environment and environmental consequences described in the PEA for all resource areas except water and biological resources. During the construction period, short-term impacts to water and biological resources are anticipated. All potential short-term impacts require conditions to avoid, minimize, and mitigate impacts. With the implementation of these conditions, none of the potential impacts will be significant.

FEMA consulted with the California State Historic Preservation Office and Tribal Historic Preservation Officers (THPOs) from the following three tribes, at their request: Wiyot Tribe, Bear River Band of Rohnerville Rancheria, and Blue Lake Rancheria on the project. FEMA also contacted the following Tribes with a potential interest in the project: Big Lagoon Rancheria, Cher-Ae Heights Indian Community of the Trinidad Rancheria, Hoopa Valley Tribe, and Yurok Tribe.

**PROJECT CONDITIONS**

The Subapplicant is responsible for compliance with federal, state, and local laws and regulations, including obtaining any necessary permits prior to beginning construction activities, and adhering to any conditions laid out in these permits. Any substantive change to the scope of work would require re-evaluation by FEMA for compliance with NEPA and other laws and Executive Orders. The Subapplicant is responsible for implementing best management practices (BMPs) appropriate for this scope of work. A list of typical BMPs was included with the PEA and with the Record of Environmental Consideration.

The Subapplicant must adhere to the following conditions when implementing the Proposed Action. Failure to comply with FEMA grant conditions may jeopardize federal funding:

**PEA BMPs**

1. The Subapplicant will implement the standard BMPs provided with the PEA for:
   a. General Construction
   b. Geology and Soils
   c. Air Quality and Greenhouse Gas Emissions
   d. Water Resources
   e. Biological Resources
   f. Historic Properties
   g. Transportation
   h. Noise
   i. Hazardous Materials

**Water Resources**

The Subapplicant would be responsible for reducing potential impacts on water resources from project activities and employing the following minimization measures:

1. For work between 0 and 50 feet of a wetland or waterbody:
   a. Prior to construction, all surface water and wetland resources shall be delineated and mapped by a qualified biologist and shown on project design plans.
   b. Prior to construction, a qualified biologist or biological monitor shall demarcate the outer perimeter of the work area to prevent damage to adjacent habitat and to provide visual orientation to its limits. Marking shall be in place during all periods.
of operation. All persons employed or otherwise working on the project site shall be instructed about the restrictions that the marking represents.

c. A qualified biologist shall be present during initial disturbance in wetland areas.
d. Every effort will be made to minimize vegetation disturbance.
e. To minimize vegetation disturbance in the marsh habitat within the project area, ingress and egress access shall occur along the same pathway to the extent possible. Where work areas and access routes are required within wetlands, wetland mats will be used along the access route and work area to protect wetland vegetation, as necessary.
f. Equipment will be repaired and refueled a minimum of 100 feet from water features and wetland features. If refueling or repairing equipment is required in wetland habitat, or within close proximity to it, secondary containment will be used to prevent spills in sensitive habitats.
g. Erosion control and spill prevention BMPs will be maintained on-site.
h. Spill containment and cleanup materials will be kept on-site during all construction activities.
i. Spills of hazardous materials into aquatic habitat will be immediately contained. Once contained, the spill will be cleaned up and moved to the extent feasible. Any such spills will be reported to USACE and the Regional Water Quality Control Board (RWQCB) within 24 hours.
j. All construction equipment and materials will be stored in designated upland staging areas.
k. No debris, rubbish, creosote-treated wood, soil, silt, sand, cement, or concrete, or washings thereof; other construction-related materials or wastes, oil, or petroleum products; or other organic or earthen material shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into surface waters or wetland features. Any of these materials placed within or where they may enter surface water or wetland features by HCSD or any party working under contract, or with the permission of HCSD, shall be removed immediately. When operations are completed, any excess material shall be removed from the work area and any areas adjacent to the work area where such material may be washed into surface water or wetland features. During construction, the contractor shall not dump any litter or construction debris within the surface water or wetland features. All such debris and waste shall be picked up daily and properly disposed of at an appropriate site.
l. No equipment shall be operated in areas of flowing or standing water in such a way as to result in the discharge of pollutants into surface water or wetland features; no fueling, cleaning, or maintenance of vehicles or equipment shall take place within any areas where an accidental discharge to surface water or wetland features may occur; and all earth-moving work shall be performed outside of areas of flowing or standing water.
m. All equipment, including, but not limited to, excavators, graders, barges, etc., that may have come in contact with extremely invasive plants, including perennial pepperweed (Lepidium latifolium) or smooth cordgrass (Spartina alterniflora) or
its hybrids, or the seeds of these plants, shall be carefully cleaned before arriving on-site and shall also be carefully cleaned before removal from the site to prevent spread of these plants.

n. Upon completion of project activities, all materials and equipment will be removed from the site.

o. All areas of disturbed vegetation will be recontoured to the original conditions, as needed, and the area will be revegetated using a native seed mix.

p. The project site shall be monitored for revegetation success and invasive species control for a minimum 5-year period, and until the success criteria are met, to ensure temporarily impacted vegetated areas become reestablished and are not permanently impacted.

q. The following criteria shall be used to assess the project’s post-construction success:
   i. Natural colonization of native species shall attain at least 70 percent total cover, compared to preexisting conditions.
   ii. The percent cover by invasive exotic species shall not exceed 5 percent of the total temporarily impacted area.

Additional measures to attain this vegetative cover potentially including seeding, planting, and/or invasive species removal will be taken by HCSD, if necessary

2. For work between 50 and 200 feet of a wetland or waterbody:
   a. Hand tools (e.g., chainsaws, brush cutters, other hand tools) would be used to create a gradation of vegetation density by removing approximately 50 percent of the vegetation farthest from wetlands and perennial waterbodies and 33 percent of the vegetation at closer distances to wetlands and perennial waterbodies.
   b. No equipment fueling would occur within 100 feet of wetland or waterbodies.

3. Never wash down pavement or surfaces where materials have spilled. Dry cleanup methods shall be used.

4. Protect all storm drain inlets using filter fabric cloth or other BMPs to prevent sediments from entering the storm drainage system during construction activities.

5. Keep materials out of the rain and prevent runoff pollution at the source. Cover exposed piles of soil, construction materials, and wastes with plastic sheeting or temporary roofs. Before it rains, sweep and remove materials from surfaces that drain to storm drains, creeks, or channels.

6. Prior to construction, wetlands located in the project area that can be avoided will be fenced off using Environmentally Sensitive Area fencing. The fencing will be placed 5 feet away from each wetland feature.

7. Appropriate erosion control measures will be used to reduce siltation and runoff of contaminants into wetlands and adjacent ponds, streams, or riparian woodland/scrub. The contractor will not be allowed to stockpile brush, loose soils, or other debris material on stream banks.
8. Native plant species will be used in erosion control or revegetation seed mix. Any hydroseed mulch used for revegetation must also be certified weed-free. Dry-farmed straw will not be used, and certified weed-free straw will be required where erosion control straw is to be used. Filter fences and mesh will be of material that will not entrap reptiles and amphibians. Erosion control measures will be placed between water or wetland and the outer edge of the project site.

9. All off-road construction equipment will be cleaned of potential noxious weed sources (e.g., mud, vegetation) before entry into the project area. Equipment will be considered free of soil, seeds, and other such debris when a visual inspection does not disclose such material. Disassembly of equipment components or specialized inspection tools is not required.

10. Vehicles and equipment will be parked on pavement, existing roads or specified staging areas.

11. Trash generated by the project should be promptly and properly removed from the site.

12. All temporarily disturbed areas, such as staging areas, will be restored.

13. Do not overapply fertilizers and follow manufacturer’s instructions for mixing and applying materials.

14. Dispose of all wastes properly. Materials that cannot be reused or recycled must be taken to an appropriate landfill or may require disposal as hazardous waste. Never throw debris into channels, creeks, or wetland areas. Never store or leave debris in the street or near a creek where it may contact runoff.

To minimize impacts related to an accidental frac-out resulting from HDD activities, the Subapplicant shall be responsible for implementing the following measures:

1. HDD bore entry and exit pits shall be located outside marsh and other tidally influenced areas.

2. Construction activities shall be required to include a spoils and produced-water collection system.

3. Prior to construction, the Subapplicant or selected contractor shall prepare an HDD Fluid Release Contingency Plan that will specify procedures to contain and cleanup any drilling fluids released into waterways or wetlands in the event of an inadvertent release of drilling fluids during HDD activities. Specific elements to be included in the HDD Fluid Release Contingency Plan are:
   a. Construction personnel best practices, as determined by the HCSD or construction contractor, to avoid frac-out.
   b. Communication and cleanup procedures for potential frac-out to be conducted using hand tools and supervised by a qualified biologist. No vehicles or machinery will enter the Elk River or its tributaries.
   c. If a frac-out occurs, HDD activities will cease so that a qualified biologist can inspect the frac-out location (e.g., monitoring fluid rate and back pressure).
d. Removal of HDD fluid (bentonite clay) will be overseen by a qualified biologist to ensure that tidewater goby individuals are not present or removed from the cleanup location.

**Biological Resources**

The Subapplicant would be responsible for reducing potential impacts on biological resources from project activities and employing the following minimization measures:

**Special-Status Plants**

1. Prior to the start of construction, rare plant surveys during the appropriate blooming period shall be conducted within a 100-foot buffer of the entire project area, including all suitable habitat for the target species (Menzies’ wallflower, beach layia, and western lily) and all northern foredune, northern coastal bluff scrub, and coastal freshwater marsh habitat, in order to determine presence or absence of target species within project disturbance areas. All occurrences of these species within the 100-foot buffer will be flagged by a qualified biologist. Results of the rare plant survey will be sent to USFWS in memorandum format.

2. If any target species is identified within or adjacent to the project area, a 100-foot buffer will be established from each occurrence, within which no project work shall be allowed to occur. Should no other feasible options exist, and conditions allow, the avoidance buffer may potentially be reduced, based on environmental conditions, or individual take of plants may occur through coordination with USFWS. In coordination with USFWS, the target species-specific seed collection, propagation, transplant, and restoration measures detailed throughout Section 4.4 will be implemented in the event of the identification of a target species that cannot be avoided.

3. Prior to the start of construction, a qualified biologist shall conduct an environmental training to familiarize all construction personnel with the following: identification of Menzies’ wallflower, beach layia, western lily, and their habitat; general provisions and protections afforded by the ESA; measures implemented to protect the federally listed species; and a review of the project boundaries. All new construction personnel must receive the environmental training before commencing work.

4. Prior to the start of construction, the construction plans shall clearly show the placement of construction exclusion fencing around suitable occupied habitat. The intent of the fencing is to exclude Menzies’ wallflower, beach layia, and western lily occurrences from accidental disturbance during construction. The fencing will be maintained in place throughout the construction period.

5. During initial ground disturbance near any established buffers of occupied habitat for Menzies’ wallflower, beach layia, or western lily, a biologist will be present to ensure that avoidance buffers are established with appropriate exclusion fencing and that they are avoided to prevent project effects to listed plants and their habitat.

6. All construction activities shall be confined to a minimum disturbance footprint when activities are conducted in mapped northern foredune, coastal bluff scrub, and coastal freshwater marsh vegetation communities.
7. Standard BMPs and erosion control measures shall be implemented during construction to minimize possible discharge of sediment into suitable habitat for Menzies’ wallflower, beach layia, and western lily. Construction personnel shall reduce the potential for temporary disturbance by applying an erosion control blanket made of natural materials and reseeding the project area with appropriate native vegetation.

8. Prior to bringing vehicles or equipment into the project area, vehicles and equipment will be cleaned at an off-site location to avoid the spread of noxious weeds from other locations.

9. Construction byproducts and pollutants, such as petroleum products, chemicals, fresh cement, or deleterious materials, shall not be allowed to discharge into the action area and shall be collected and transported to an authorized disposal area.

10. A plan for the emergency cleanup of any spills of fuel or other materials shall be prepared and made available to all construction personnel and implemented in the event of an accidental spill.

11. Equipment shall be refueled and serviced at designated construction staging areas that are located outside of suitable habitat for federally listed plants (i.e., mapped northern foredune, coastal bluff scrub, and coastal freshwater marsh vegetation communities).

12. All construction material and fill shall be stored and contained in designated areas located away from all drainages, or surface water resources, to prevent transport of materials into adjacent streams. A silt fence shall be installed to collect any discharge, and adequate materials for spill cleanup shall be maintained on-site.

13. Construction vehicles and equipment shall be properly maintained to prevent contamination of soil or water (from external grease and oil or from leaking hydraulic fluid, fuel, oil, and grease).

14. Good housekeeping practices; use of safer alternative products, such as biodegradable hydraulic fluids, where feasible; and implementation of employee training programs shall be used throughout the duration of construction. Employees shall be trained to prevent or reduce the discharge of pollutants from construction activities into waters and of the appropriate measures to take should a spill occur.

15. Prior to any ground-disturbing activities, a qualified biologist and/or horticulturalist shall be retained to collect a sufficient amount of Menzies’ wallflower seed from individuals within the project area to propagate, at a ratio of 2:1 for impacted individuals, Menzies’ wallflower container plants. This species typically blooms from March through September; therefore, seed collection shall begin in August and continue through September, or when seed production ceases. These propagated materials will be conserved in the temporarily disturbed portions of the project area or within undisturbed suitable habitat in the project right-of-way (ROW).

If any Menzies’ wallflower individuals are observed in the project impact area and cannot be avoided, individual plants will be transplanted to a receiver site within the restored project disturbance area and within suitable habitat for the species or within undisturbed suitable habitat in the project ROW. If translocated plants are to be placed within the restored project disturbance area, the translocated plants will be temporarily placed in
planters on-site and maintained by a qualified biologist until the project site is restored and the receiver site is ready for planting.

Following completion of the reseeding efforts, a qualified biologist will monitor the receiver sites for 2 consecutive years. Non-native vegetation removal will be conducted during the monitoring program. The goal of the monitoring will be to quantify and document the number of individuals that emerge in the receiver sites, the presence of non-native vegetation, and the overall success of the translocation efforts. Success criteria of the receiver site will be considered germination of Menzies’ wallflower seeds and persistence of vegetative plants into the flowering season. If success criteria are met after the first year, no further monitoring will be required.

16. Soil near Menzies’ wallflower occurrences in the project disturbance areas potentially containing Menzies’ wallflower seed shall be collected and reapplied. To accomplish this, the upper 6 inches of sandy substrate located within 5 feet of existing Menzies’ wallflower individuals will be collected, segregated, and stockpiled on-site. Soil collection shall occur immediately following completion of seed collection and prior to the first rainfall. The collected soil should be immediately distributed in the receiver site(s). The collected seed shall be broadcast over the relocated soil, and then the receiver site shall be lightly raked to cover the seed.

17. Beach layia will be conserved in the temporarily disturbed portions of the project area or within undisturbed suitable habitat in the project ROW by broadcast seeding and relocating the soil seed bank. Seed to be broadcast will be collected from the project area prior to start of construction. All seed collection activities will be conducted by a qualified biologist. This species flowers from March to July; therefore, seed collection shall begin in September and continue through October, or when seed production ceases. To the extent feasible, all available seed shall be collected from plants located in project disturbance areas.

If any beach layia individuals are observed in the project impact area and cannot be avoided, individual plants will be transplanted to a receiver site within the restored project disturbance area and within suitable habitat for the species or undisturbed suitable habitat in the project ROW. If translocated plants are to be placed within the restored project disturbance area, the translocated plants will be temporarily placed in planters on-site and maintained by a qualified biologist until the project site is restored and the receiver site is ready for planting.

Following completion of the seed relocation efforts, a qualified biologist will monitor the receiver site for 2 consecutive years. Non-native vegetation removal will be conducted during the monitoring program. The goal of the monitoring will be to quantify and document the number of individuals that emerge in the receiver site, the presence of non-native vegetation, and the overall success of the translocation efforts. Success criteria of the receiver site will be considered germination of beach layia seeds and persistence of vegetative plants into the flowering season. If success criteria are met after the first year, no further monitoring will be required.

18. Soil near beach layia occurrences in the project disturbance areas potentially containing beach layia seed shall be collected and reapplied. To accomplish this, the upper 6 inches of sandy substrate located within 5 feet of existing beach layia individuals will be
collected, segregated, and stockpiled on-site. Soil collection shall occur immediately following completion of seed collection and prior to the first rainfall. The collected soil should be immediately distributed in the receiver site(s). The collected seed shall be broadcast over the relocated soil, and then the receiver site shall be lightly raked to cover the seed.

19. Prior to ground disturbance, and when plants are dormant (anticipated to be October through December), a qualified biologist shall excavate and relocate bulbs of the marked plants to a designated receiver site within the restored project disturbance area and within suitable habitat for the species or undisturbed suitable habitat in the project ROW. The bulbs shall be planted approximately 6 inches below the soil surface.

Following completion of the bulb collection and replanting efforts, a qualified biologist will monitor the receiver site for 2 consecutive years. Non-native vegetation removal will be conducted during the monitoring program. The goal of the monitoring will be to quantify and document the number of individuals that emerge in the receiver site, the presence of non-native vegetation, and the overall success of the planting efforts. Success criteria of the receiver site will be considered germination of western lily bulbs and persistence of vegetative plants into the flowering season. If success criteria are met after the first year, no further monitoring will be required.

20. During initial ground disturbance adjacent to suitable habitat for Menzies’ wallflower, beach layia, and western lily (i.e., mapped northern foredune, coastal bluff scrub, and coastal freshwater marsh vegetation communities), a qualified biologist shall be present to guide construction personnel in retaining the top 6 inches of topsoil/substrate or the applicable topsoil/substrate if less than 6 inches (e.g., some areas may have less than 6 inches of sand substrate above other substrates). Topsoil/substrate will be segregated based on the location stockpiled so that the top 6 inches of topsoil/substrate can be reestablished in project disturbance areas during site restoration. Specific soil segregation methods will be developed in coordination with USFWS.

21. Upon completion of construction, as part of the habitat restoration phase, any disturbed occupied habitat shall be replanted or reseeded and monitored for a 5-year period in order to ensure the successful reestablishment of mitigation plantings and suitable habitat. Success criteria and monitoring requirements will be determined in coordination with USFWS.

Special-Status Wildlife

1. Prior to the start of construction, a qualified biologist shall conduct an environmental training to familiarize all construction personnel with the following: identification of tidewater goby and their habitat; general provisions and protections afforded by the ESA; measures implemented to protect the federally listed species; and a review of the project boundaries. All new construction personnel must receive the environmental training before commencing work.

2. Prior to the start of construction, the construction plans shall clearly show the placement of project work areas in the vicinity of the Elk River to ensure construction activities do not directly impact the river or its tributaries.
3. Standard BMPs and erosion control measures shall be implemented during construction to minimize possible discharge of sediment into suitable habitat (Elk River and adjacent wetland areas). Construction personnel shall implement erosion, sediment, and material stockpile BMPs on-site to minimize the potential for fill or runoff to enter wetlands or waterways.

4. Construction personnel will maintain construction equipment to prevent leaks of fuels, lubricants, or other fluids into waterways. Appropriate materials will be on-site to prevent and manage accidental spills. Service and refueling procedures will take place at designated construction staging areas at least 100 feet from wetland boundaries or waterways to prevent spills from entering waterways or wetlands. A plan for the emergency cleanup of any spills of fuel or other materials shall be prepared and made available to all construction personnel and implemented in the event of an accidental spill.

5. Measures 12, 13, and 14 identified above for Special-Status Plants shall be implemented.

6. Prior to construction, FEMA will prepare an HDD Fluid Release Contingency Plan that will specify procedures to contain and cleanup any drilling fluids released into waterways or wetlands in the event of an inadvertent release of drilling fluids during HDD activities. Specific elements to be included in the HDD Fluid Release Contingency Plan are:
   a. Construction personnel best practices, as determined by the HCSD or construction contractor, to avoid frac-out.
   b. Communication and cleanup procedures for potential frac-out to be conducted using hand tools and supervised by a qualified biologist. No vehicles or machinery will enter the Elk River or its tributaries.
   c. If a frac-out occurs, HDD activities will cease so that a qualified biologist can inspect the frac-out location (e.g., monitoring fluid rate and back pressure).
   d. Removal of HDD fluid (bentonite clay) will be overseen by a qualified biologist to ensure that tidewater goby individuals are not present or removed from the cleanup location.

**General Wildlife**

1. Require personnel to maintain a 10-mile-per-hour speed limit on all unpaved roads to reduce wildlife being harmed through impact with vehicles.

2. Dispose of trash and food into closed containers while the project is being implemented.

3. Prevent the presence of pets or feeding of wildlife.

4. Restrict the maintenance of all equipment to designated staging areas.

5. Report any dead, injured, or entrapped special-status species to the appropriate federal or state resource agency.

6. Use existing access routes.

7. Return staging areas to original conditions.
Migratory Birds and Raptors

Raptors

1. Preconstruction surveys for raptors, other special-status birds, and appropriate nesting habitat will be conducted within 50 feet of the construction area no more than 3 days prior to ground-disturbing activities. If an active nest is found, the state agency (e.g., CDFW) will be consulted to determine the appropriate buffer area to be established around the nesting site and the type of buffer to be used. If establishment of a buffer is not feasible, the appropriate agency will be contacted for further avoidance and minimization guidelines.

2. A qualified biologist will conduct weekly monitoring during construction, to evaluate the identified nest for potential disturbances associated with construction activities. Construction within the buffer is prohibited until the qualified biologist determines the nest is no longer active.

3. If an active nest is found after construction begins, construction activities in the vicinity of the nest will stop until a qualified biologist has evaluated the nest and established the appropriate buffer around the nest. If establishment of the buffer is not feasible, the appropriate agency will be contacted for further avoidance and minimization guidelines.

Migratory Birds

The measures specified in the PEA (listed below) would be implemented for construction work during the nesting season (February 15 through August 31).

1. A qualified biologist will conduct preconstruction surveys for nesting migratory birds in the project area no more than 3 days prior to the start of ground-disturbing activities. If preconstruction surveys indicate the presence of any migratory bird nests where activities would directly result in bird injury or death, a buffer zone of 50 feet will be placed around the nest.

2. Buffers will be established around active migratory bird nests where project activities would directly result in bird injury or death. The size of the buffer may vary for different species and will be determined in coordination with the responsible agency. A qualified biologist will delineate the buffer using ESA fencing, pin flags, and/or yellow caution tape.

3. Buffer zones will be maintained around all active nest sites until the young have fledged and are foraging independently. In the event that an active nest is found after the completion of preconstruction surveys and after construction begins, all construction activities within a 50-foot radius will be stopped until a qualified biologist has evaluated the nest and erected the appropriate buffer around it.

4. If an active nest is found in an area after construction begins, construction activities in the vicinity of the nest will stop until a qualified biologist has evaluated the nest and established the appropriate buffer around the nest. If establishment of the buffer is not feasible, the responsible agency will be contacted for further avoidance and minimization guidelines.
PUBLIC INVOLVEMENT

A notice announcing the availability of the SEA for public review and comment was published on FEMA’s website, the Humboldt Bay Municipal Water District’s website, and in the Times-Standard newspaper. The 30-day public review period started on January 18, 2022 when the notice was published. No comments were received.

FINDINGS

Based upon conditions and information contained in the HMGP grant application and the SEA, and in accordance with FEMA’s Directive 108-1-1, *Environmental Planning and Historic Preservation Responsibilities and Program Requirements*; Executive Orders (EOs) addressing floodplains (EO 11988), wetlands (EO 11990), and environmental justice (EO 12898); the DHS Instruction Manual 023-1-1; and the CEQ regulations in Title 40 Code of Federal Regulations, Chapter V for implementing NEPA; and the Subapplicant’s anticipated adherence to the standard and special conditions contained in this FONSI, FEMA has determined that the Proposed Action will not have significant impacts on the quality of the natural and human environment. As a result of this FONSI, an environmental impact statement will not be prepared and the project, and as described in the grant application and the SEA, may proceed.

APPROVAL

KENNETH G SESSA

Digitally signed by KENNETH G SESSA
Date: 2022.04.18 15:46:08 -04'00'

Kenneth G. Sessa
Acting Regional Environmental Officer, FEMA Region 9

Robert McCord

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Chief, Hazard Mitigation Assistance Branch
Supplemental Environmental Assessment to the Programmatic Environmental Assessment for Recurring Actions in Arizona, California, and Nevada

South Bay Force Main Replacement and Resiliency Project
Humboldt County, California
HMGP # 4344-540-19

December 2021
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</thead>
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<tr>
<td>AC</td>
<td>asphalt-cement</td>
</tr>
<tr>
<td>amsl</td>
<td>above mean sea level</td>
</tr>
<tr>
<td>Applicant</td>
<td>California Governor’s Office of Emergency Services</td>
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<tr>
<td>BMP</td>
<td>Best Management Practice</td>
</tr>
<tr>
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</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
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<td>CNDDDB</td>
<td>California Natural Diversity Database</td>
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<td>CWA</td>
<td>Clean Water Act</td>
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<td>DPS</td>
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<td>Executive Order</td>
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</tr>
<tr>
<td>ESU</td>
<td>Evolutionarily Significant Unit</td>
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<tr>
<td>FEMA</td>
<td>Federal Emergency Management Agency</td>
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<tr>
<td>FIRM</td>
<td>Flood Insurance Rate Map</td>
</tr>
<tr>
<td>HCSD</td>
<td>Humboldt Community Services District</td>
</tr>
<tr>
<td>HDD</td>
<td>horizontal directional drilling</td>
</tr>
<tr>
<td>HDPE</td>
<td>high-density polyethylene</td>
</tr>
<tr>
<td>HMGP</td>
<td>Hazard Mitigation Grant Program</td>
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<tr>
<td>IPaC</td>
<td>Information for Planning and Consultation</td>
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<td>MBTA</td>
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<td>National Wetlands Inventory</td>
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<td>Northwestern Pacific Railroad</td>
</tr>
<tr>
<td>Occ.</td>
<td>Occurrence</td>
</tr>
<tr>
<td>PEA</td>
<td>Final Programmatic Environmental Assessment for Recurring Actions in Arizona, California, and Nevada</td>
</tr>
<tr>
<td>ROW</td>
<td>right-of-way</td>
</tr>
<tr>
<td>SEA</td>
<td>Supplemental Environmental Assessment</td>
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<tr>
<td>Subapplicant</td>
<td>Humboldt Community Services District</td>
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<td>---------------------</td>
<td>--------------------------------------</td>
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<tr>
<td>UCCE</td>
<td>University of California Cooperative Extension</td>
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<tr>
<td>US 101</td>
<td>U.S. Route 101</td>
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<tr>
<td>USC</td>
<td>United States Code</td>
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<tr>
<td>USFWS</td>
<td>U.S. Fish and Wildlife Service</td>
</tr>
<tr>
<td>WOUS</td>
<td>waters of the United States</td>
</tr>
<tr>
<td>WWTP</td>
<td>Wastewater Treatment Plant</td>
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1 Introduction

The U.S. Department of Homeland Security’s Federal Emergency Management Agency (FEMA) proposes to provide federal financial assistance to the Humboldt Community Services District (HCSD or Subapplicant), through the California Governor’s Office of Emergency Services (Cal OES or Applicant), for a force main replacement and resiliency project. The project would be funded under FEMA’s Hazard Mitigation Grant Program (HMGP). The HCSD is proposing to replace approximately 2.1 miles of existing asphalt-cement (AC) sanitary sewer force main with high-density polyethylene (HDPE) line in the incorporated city of Eureka and unincorporated Humboldt County, California (Proposed Action). The project is located adjacent to the eastern edge of Humboldt Bay at the confluence of the Elk River in the city of Eureka and unincorporated Humboldt County. The project’s southern end terminates at the South Broadway pump station (latitude and longitude: 40.73666667, -124.20722222) and the northern end terminates at the Elk River Wastewater Treatment Plant (WWTP) (latitude and longitude: 40.76722222, -124.19527778) (project area), operated by the City of Eureka in Eureka, Humboldt County, California. The existing force main, installed in 1979, has flows as high as 550,000 gallons per day and serves 1,237 residential connections and 49 commercial/industrial connections. The project area is prone to rapid subsidence due to geologic factors and the force main is at risk of damage and increased repair costs from the potential of sea level rise and saltwater intrusion.

1.1 Scope of Document

This Supplemental Environmental Assessment (SEA) evaluates the range of potential environmental impacts if the Proposed Action is implemented and evaluates the applicability of the December 2014 Final Programmatic Environmental Assessment for Recurring Actions in Arizona, California, and Nevada (PEA) and the March 2019 Supplemental Environmental Assessment to the Final Programmatic Environmental Assessment for Recurring Activities in Arizona, California, and Nevada to the Proposed Action.

FEMA prepared this SEA because, although the type of work proposed under the Proposed Action does fall under the range of actions evaluated in PEA Section 2.3.4, Repairing, Realigning, or Otherwise Modifying Roads, Trails, Utilities, and Rail Lines, the Proposed Action would require trenching and other ground-disturbing construction activities in areas that are identified as freshwater and emergent wetland and freshwater forested/shrub wetland features, as mapped by the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI). While the project activities are consistent with those described in PEA Section 2.3.4, PEA Best Management Practice (BMP) #1 (Water Resources) requires that no work be conducted within 50 feet of a wetland or waterbody. Due to the location of existing HCSD infrastructure, and the confirmed location of the NWI-mapped wetland features, there is no feasible alternative to avoid all work within 50 feet of wetland features consistent with this BMP.

According to PEA Section 1.8, Using the Programmatic Environmental Assessment, “If an action is expected to (1) result in impacts not described in the PEA, (2) result in impacts greater in magnitude, extent, or duration than those described in the PEA, or (3) require additional environmental mitigation measures than those described in this PEA, an SEA would be prepared.” Based on the verified presence of wetland features within the project area and the
absence of alternative solutions that would avoid work within 50 feet of wetlands in compliance with PEA BMP #1 (Water Resources), the Proposed Action would result in impacts not described in the PEA and require additional environmental mitigation measures to minimize potential temporary impacts on wetland features during construction activities. This SEA evaluates those impacts and discloses the impacts of the Proposed Action that have not been previously described in the PEA for public review.

1.2 Purpose and Need for the Action

The purpose of the Proposed Action is to increase the resilience of the force main by reducing risks from flooding and the potential for saltwater intrusion. The Proposed Action would replace approximately 2.1 miles of existing AC sanitary sewer force main with HDPE line, terminating at the South Broadway pump station at the southern end and at the Elk River WWTP at its northern end. Implementation of the Proposed Action is needed to reduce this risk of failure from flooding and saltwater intrusion.

2 Description of the Proposed Action and Alternatives

2.1 No Action Alternative

The No Action Alternative is described in PEA Section 2.1, No Action Alternative. Under the No Action Alternative, FEMA financial assistance would not be provided to the Subapplicant to implement the Proposed Action. It is assumed that without FEMA financial assistance, the Subapplicant would not implement the Proposed Action. If no action is taken, the possibility exists that large flood events and increasing levels of groundwater intrusion into the force main, which are both caused by geologic subsidence and sea level rise, would pose an existential threat to critical infrastructure and cause its failure.

2.2 Proposed Action

The Proposed Action would replace approximately 2.1 miles of existing AC sanitary sewer force main with HDPE line, terminating at the South Broadway pump station at the southern end and at the Elk River WWTP at the northern end. The existing force main runs under the Elk River to connect the pump station and the WWTP.

The Proposed Action would involve the following activities:

- site preparation;
- open trenching and horizontal directional drilling (HDD) to install the new HDPE pipe;
- connecting the new sewer force main to the existing system;
- abandoning the existing sewer force main in place; and
- restoring disturbed areas.

Each of these activities are discussed in further detail below. Figure 1 shows the project vicinity within Humboldt County. Figure 2 shows the specific location where the project activities would occur. Figure 3 shows the surrounding wetland features as mapped by the USFWS NWI in the vicinity of the project. Project maps are included in Appendix A.
2.2.1 Site Preparation

Construction activities would begin with site preparation, including vegetation clearing and grubbing, along the proposed 2.1-mile project area (see Figure 2). The predominant natural vegetation communities in this area include coastal brackish marsh, coastal freshwater marsh, northern coastal salt marsh, northern coastal bluff scrub, north coast riparian scrub, northern foredunes, and non-native annual grassland. The presence of these vegetation communities was confirmed through reconnaissance-level biological surveys conducted between September 2 and 4, 2020 (SWCA Environmental Consultants [SWCA] 2020).

2.2.2 Open Trenching and Horizontal Direction Drilling

The Proposed Action includes both open trenching and HDD, six staging areas (200 × 200 feet each), and environmental recovery areas where trenching is proposed. Open trenches would be constructed with excavators, dump trucks, loaders, and compactors for digging the trench, moving spoils around, hauling in backfill material, and compacting backfill material. Trenches are expected to be approximately 3 feet wide and 6 feet deep. Disturbance associated with trenching activities, such as equipment, material, and vehicle movement, would all occur within the 30-foot-wide HCSD easement surrounding the pipeline alignment (see Figure 2). The total area expected to be disturbed by open trenching, and HDD is 8.59 acres.

HDD would be used to pull the pipeline under the Northwestern Pacific Railroad (NWPRR) line, U.S. Route 101 (US 101), and the Elk River, and would use a horizontal directional drill, drill reamers, drill swabbers, drill-locating equipment, and mud trucks. Since there are two HDD sections in the proposed installation, there would be two entry pits and two exit pits, which are expected to be 60 feet long, 6 feet wide, and 6 feet deep each, totaling approximately 1,440 square feet of ground surface disturbance. All ground disturbance associated with HDD activities would occur within HCSD easements (see Figure 2). Because the HDD drills under the ground, there is no disturbance of surface features, such as wetlands, waterways, vegetation, or roads, except at the entry and exit pits.

2.2.3 Tie-in to Existing Structure and Tie-in to Drills

Once the new HDPE pipeline is installed, the different segments would be joined. This would require angle fittings and alignment fittings to correct for any misalignments in the HDD and open trench sections of the installation. The last construction phase would involve connecting the new sewer force main to the Elk River WWTP and pump station, and in doing so, abandoning the existing AC sewer force main in place.

2.2.4 Revegetation

Once all construction work is complete, site restoration would take place. Restoration activities would consist of replanting displaced rare, aquatic, and sensitive plant species, if necessary. Following completion of restoration activities, all equipment, construction laydown areas, and temporary fencing would be removed from the site. Once replanting is complete, the contractor would return control of the site back to the HCSD to maintain and monitor the site for 5 years to verify survival and success of the plants.
2.2.5 Implementation Timeframe

Project construction is expected to take approximately 15 months and revegetation is expected to take approximately 6 months to complete.

2.3 Preferred Alternative

The Proposed Action would provide the most beneficial technology adaptation to protect infrastructure and adjacent restoration projects from rising sea levels. The existing force main is vulnerable to changes in salinity and increased amounts of inflow and infiltration from flooding, stormwater, and sea level rise. If left untreated, local subsidence would lead to increased stormwater and tidal inundation within the project area and increased porosity of the existing force main. The Proposed Action would provide protection for an adjacent restoration project and associated critical infrastructure by building a portion of the force main replacement project within an elevated portion of a tidal ridge that would increase tidal inundation and restore salt marsh and fisheries habitat.

2.4 Second Action Alternative

An adjacent restoration project would provide additional and significant infrastructure protection benefits, as a new force main could be installed through an elevated tidal ridge that would be constructed as a part of an adjacent restoration project. This alternative was not selected because it would only partially alleviate the potential sea level rise impacts to critical infrastructure. The entire project force main replacement from the South Broadway Lift Station to the Elk River Wastewater Treatment Plant was considered to be a more effective solution to make the force main more resilient to the effects of flooding and sea level rise.

3 Affected Environment and Environmental Consequences

The affected environment and environmental consequences associated with the Proposed Action are consistent with the affected environment and environmental consequences described in the PEA for all resource areas except water and biological resources. The affected environment and environmental consequences for water and biological resources are described in this section to supplement the information in the PEA.

Mitigation, minimization, and avoidance measures that are stipulated in the PEA or that are appropriate for the Proposed Action, based on the results of the impact analysis in the SEA, are discussed in Section 4, Best Management Practices, Minimization, and Mitigation Measures, of this SEA.

The effects of the No Action Alternative for all resource areas are described in the PEA. The environmental consequences of the other alternatives considered by FEMA are described in Section 4, Environmental Consequences of Activities and Alternatives, of the PEA and are not reiterated in this document.

This section describes the water and biological resources potentially affected by the Proposed Action. When possible, quantitative information is provided to establish potential impacts, and the potential impacts are evaluated qualitatively based on the criteria listed in Table 1.
“project area” generally includes the treatment area and access and staging areas needed to implement the Proposed Action.

Table 1: Evaluation Criteria for Potential Impacts

<table>
<thead>
<tr>
<th>Impact Scale</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>None/Negligible</td>
<td>The resource area would not be affected, or changes or benefits would be either nondetectable or, if detected, would have impacts that would be slight and local. Impacts would be well below regulatory standards, as applicable.</td>
</tr>
<tr>
<td>Minor</td>
<td>Changes to the resource would be measurable, although the changes would be small and localized. Impacts or benefits would be within or below regulatory standards, as applicable. Mitigation measures would reduce any potential adverse impacts.</td>
</tr>
<tr>
<td>Moderate</td>
<td>Changes to the resource would be measurable and have either localized or regional-scale impacts/benefits. Impacts would be within or below regulatory standards, but historical conditions would be altered on a short-term basis. Mitigation measures would be necessary, and the measures would reduce any potential adverse impacts.</td>
</tr>
<tr>
<td>Major</td>
<td>Changes would be readily measurable and would have substantial consequences on a regional or local level. Impacts would exceed regulatory standards. Mitigation measures to offset the adverse impacts would be required to reduce impacts, but long-term changes to the resource would be expected.</td>
</tr>
</tbody>
</table>

3.1 Water Resources

3.1.1 Floodplains

Existing Conditions

Executive Order (EO) 11988, Floodplain Management, requires federal agencies to avoid, to the extent possible, short- and long-term, adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practical alternative. FEMA regulations (44 Code of Federal Regulations [CFR] Part 9.7) use the 1-percent-annual-chance flood as the minimal area for floodplain impact evaluation.

The Proposed Action is within the floodplain in special flood hazard areas designated Zone AE, as identified on Flood Insurance Rate Map (FIRM) Map Numbers 06023C0839G and 06023C1005G, dated June 21, 2017 (Figure 4). The site is seasonally inundated during heavy rainfall, and periods of high groundwater and episodic flood events have caused damage to existing HCSD infrastructure. Additionally, projections of sea level rise in the project area are 1 foot by 2030, 2 feet by 2050, and 3 feet by 2070 (Aldaron Laird Trinity Associates 2018). Subsidence, coupled with rising sea levels, makes Humboldt Bay, as well as the project area, among the most vulnerable areas in the western United States for future impacts from sea level rise.

Impacts of the Proposed Action

Due to the location of the existing AC force main, construction activities must occur within a 100-year floodplain. Two alternatives were explored to address the damage to the existing sewer force main caused by flooding and groundwater intrusion. Pursuing an adjacent restoration project instead of the Proposed Action could provide additional floodplain protection benefits; however, alternatives considered would only partially alleviate potential impacts to the existing AC pipeline resulting from sea level rise. The project as proposed was considered to be the most
effective alternative for increasing the resiliency of the pipeline. If no action is taken, large flood events and increasing levels of groundwater intrusion would continue to damage the existing AC force main and would eventually result in its failure. Since the pipeline is a critical piece of infrastructure that services 1,237 residential connections and 49 commercial/industrial connections, complete replacement is considered to be the most effective and feasible alternative.

The Proposed Action would replace the existing AC force main with a new HDPE force main better suited to changing groundwater conditions and increased periods of tidal and flood inundation. The project would raise the elevation of the force main in portions of the project area and improve protection from rising groundwater levels through the use of HDPE pipe, which does not allow groundwater to infiltrate into the line. Construction activities would result in minor short-term impacts to the floodplain, including increased erosion and temporary placement of staging areas. The Proposed Action would occur over a 15-month period, which would require construction activities to occur during both the wet and dry seasons. Construction and vegetation removal exposes soils that are then subject to erosive runoff during floods and rain during the wet season. Following the completion of construction activities, staging areas and equipment would be removed and the project area would be restored by replacing excavated soils to backfill trenches and revegetate disturbed areas and staging areas with native seed mix. Restoration would reduce long-term erosion impacts and preserve the natural values of the floodplain. The Proposed Action would result in an increase to the useful life of the force main and minimize adverse impacts associated with sea level rise and saltwater intrusion on the existing system. Measures have been included in Section 4.1, Water Resources, to minimize short- and long-term impacts to the floodplain, including minimizing erosion from construction activities and ensuring restoration of areas of disturbance.

Pursuant to EO 11988, a Floodplain Management Checklist (8-Step Analysis) was completed and is included in Appendix B.

**Comparison of Impacts to the PEA Analysis**

The project would result in short-term modification of a floodplain and a short-term increase in erosion within a floodplain. The Proposed Action would not result in any adverse long-term impacts related to occupancy or modification of the floodplain. The proposed replacement of the existing force main would result in beneficial effects in the event of a flood event or rise in sea level by preventing flood inundation and saltwater intrusion to the existing system. Implementation of PEA and project-specific measures outlined in Section 4.1, Water Resources, would ensure runoff impacts during the 15-month construction period would be minimized. Therefore, potential impacts of the Proposed Action would be minor.

### 3.1.2 Wetlands

**Existing Conditions**

EO 11990, Protection of Wetlands, requires federal agencies to consider alternatives to work in wetlands and limits potential impacts on wetlands if there are no practicable alternatives. FEMA regulation 44 CFR Part 9, Floodplain Management and Protection of Wetlands, sets forth the policies, procedures, and responsibilities to implement and enforce EO 11990 and prohibits FEMA from funding activities in a wetland unless no practicable alternatives are available.
The Proposed Action would require trenching and other ground-disturbing construction activities in areas that are identified as freshwater and emergent wetland and freshwater forested/shrub wetlands, as mapped by the USFWS NWI (see Figure 3). The presence of these mapped wetlands within the project area was confirmed during a biological reconnaissance survey conducted in September 2020.

**Impacts of the Proposed Action**

Based on USFWS NWI mapping, project construction activities, including linear trenching and HDD activities and staging, would result in approximately 4.04 acres of temporary impacts on freshwater emergent wetlands and approximately 1.27 acres of temporary impacts on freshwater forested/shrub wetlands (see Figure 3). Since all project elements ultimately would be below the ground surface, the project would not result in conversion or other permanent impacts on wetlands following restoration. The minor impacts generated by the Proposed Action would be temporary and limited to the construction phase. PEA and project-specific measures identified in Section 4.1, *Water Resources*, would minimize the potential temporary impacts on wetlands.

Pursuant to EO 11990, a Wetlands Management Checklist (8-Step Analysis) was completed and is included in Appendix B.

**Comparison of Impacts to the PEA Scope**

The PEA BMP #1 (Water Resources) requires that no work be conducted within 50 feet of a wetland or waterbody. Because of the location of the existing HCSD infrastructure and the confirmed location of the NWI-mapped wetland features, there is no feasible alternative to avoid all work within 50 feet of wetlands. PEA and project specific-measures identified in Section 4.1, *Water Resources*, would minimize potential temporary impacts on wetland resources to a level consistent with the effects identified in the PEA. These measures would replace PEA BMP #1 (Water Resources).

### 3.2 Surface Water

**Existing Conditions**

The Clean Water Act (CWA) sets forth procedures for effluent limitations, water quality standards and implementation plans, national performance standards, and point source (e.g., municipal wastewater discharges) and nonpoint source programs (e.g., stormwater). The CWA also establishes permits for dredged or fill material under Section 404. A Section 404 permit from the U.S. Army Corps of Engineers (USACE) must be obtained for most dredge or fill activities within jurisdictional waters of the United States (WOUS). During the permit review process, the USACE determines the type of permit appropriate for the Proposed Action. Per the USACE coordination conducted by FEMA in 2019, the proposed project would have less than 0.5 acre of permanent impacts and would likely be authorized by a Nationwide Permit (SPN-2019-00347).

PEA BMP #1 (Water Resources) does not allow work within 50 feet of water resources in order to avoid potential impacts related to degradation of water quality. The project area is located adjacent to the eastern edge of Humboldt Bay at the confluence of the Elk River, and the
Proposed Action requires work under and within 50 feet of the Elk River and along the edge Humboldt Bay.

Impacts of the Proposed Action

The Proposed Action would occur over a 15-month period, which would require construction activity to occur during both the wet and dry seasons. Proposed ground disturbance from HDD, open trenching, and vegetation removal would expose soils that may be subject to runoff during a rain or flood event during the wet season. In addition, construction equipment may result in accidental spills or leaks that may be subject to runoff during the wet season. Therefore, construction has the potential to temporarily impact surface water quality through an increase in erosion, sedimentation, equipment leaks, and other pollutants that could runoff from the nearby project area into Humboldt Bay or the Elk River. Measures have been included in Section 4.1, *Water Resources*, to reduce short-term erosion and pollution impacts on surface water quality. Following construction activities, equipment and staging areas that could leak and result in polluted runoff would be removed from the project area and would not result in long-term impacts. Other long-term impacts are not anticipated because the project area would be restored, which would include replacing excavated soils, recontouring soils to match pre-disturbance contours, and revegetating the disturbed area using a native seed mix. Restoration would minimize long-term impacts related to soil erosion. Measures identified in Section 4.1, *Water Resources*, would minimize the potential temporary impacts on surface water quality.

Comparison of Impacts to the PEA Scope

Construction has the potential to result in short-term impacts related to increased erosion and pollution at the project site that could runoff into Humboldt Bay or the Elk River. Since PEA BMP #1 (Water Resources) is not feasible for the Proposed Action, other PEA and project-specific measures have been identified in Section 4.1, *Water Resources*, to avoid short-term water quality impact. These measures would replace PEA BMP #1 (Water Resources). Long-term impacts are not anticipated because construction equipment and vehicles would be removed following project construction and the project area would be restored to the natural soil contour and revegetated to avoid long-term erosion in the area.

3.3 Biological Resources

3.3.1 Terrestrial and Aquatic Habitat

Existing Conditions

The project is located in the city of Eureka and unincorporated Humboldt County, in the Coast Range ecoregion, Coastal Lowlands Subsection (Griffith et al. 2016). It is adjacent to the eastern edge of Humboldt Bay at the confluence of the Elk River at an elevation that ranges from 5 feet above mean sea level (amsl) at the lower portion of the alignment to approximately 20 feet amsl at the northern portion of the alignment. The predominant natural vegetation communities in this subsection include dunes, grasslands, coastal scrub, beach pine, Bishop pine, and Sitka spruce. Riparian areas in the project area currently contain willows, red alder, conifers, big leaf maple, rhododendron, and salmonberry (SWCA 2020).

The project area and surrounding 200-foot buffer were surveyed and assessed in order to document biological resources present within and near proposed impact areas (action area). The
action area is defined as all areas that may be affected directly or indirectly by the project. Therefore, the action area includes the project area (i.e., area subject to disturbance) and the 200-buffer from these areas. Natural communities observed within the action area were described using *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986) and are listed below (Table 2) and mapped on Figures 5 through 9.

### Table 2: Vegetation Communities Observed Within the Action Area

<table>
<thead>
<tr>
<th>Vegetation Community</th>
<th>Description</th>
<th>Total Acreage</th>
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</thead>
<tbody>
<tr>
<td>Developed/Disturbed</td>
<td>This community is characterized by developed areas of hardscape and areas that are subject to regular human disturbance. Observed vegetation typical of this community consists of a combination of ornamental, ruderal, invasive, and native species, including Monterey cypress (<em>Hesperocyparis macrocarpa</em>), coast redwood (<em>Sequoia sempervirens</em>), pampas grass (<em>Cortaderia jubata</em>), carrot (<em>Daucus carota</em>), fennel (<em>Foeniculum vulgare</em>), and Jersey cudweed (<em>Pseudognaphalium luteoalbum</em>). Developed/disturbed areas occur throughout the action area and include portions of the Pacific Gas and Electric Company (PG&amp;E) Humboldt Bay Power Plant, the pump house on Hill Road, and the Elk River WWTP, as well as sections of abandoned railroad track, current and historical roadways, pedestrian paths, and two small private inholdings.</td>
<td>23.10</td>
</tr>
<tr>
<td>Non-Native Annual Grassland</td>
<td>Observed vegetation within this community is characterized by non-native annual grasses and forbs, including slim oat (<em>Avena barbata</em>), ripgut brome (<em>Bromus diandrus</em>), soft chess (<em>Bromus hordeaceus</em>), Italian rye grass (<em>Festuca perennis</em>), bird’s foot trefoil (<em>Lotus corniculatus</em>), and curly dock (<em>Rumex crispus</em>). Within the action area, the majority of this vegetation community is east of the abandoned railroad tracks and south of the Elk River slough in areas that have been historically, or are currently, used for cattle grazing pastures.</td>
<td>38.94</td>
</tr>
<tr>
<td>North Coast Riparian Scrub</td>
<td>Observed vegetation in this community is dominated by coast willow (<em>Salix hooksiana</em>), Himalayan blackberry (<em>Rubus armeniacus</em>), red alder (<em>Alnus rubra</em>), and arroyo willow (<em>Salix lasiolepis</em>). Within the action area, the majority of this vegetation community is in the area between the Elk River WWTP and the Elk River slough, with some small, isolated areas in the southern portion of the alignment.</td>
<td>23.84</td>
</tr>
<tr>
<td>Coastal Freshwater Marsh</td>
<td>Vegetation within this community is dominated by slough sedge (<em>Carex obnupta</em>), spike rush (<em>Eleocharis macrostachya</em>), velvet grass (<em>Holcus lanatus</em>), dune rush (<em>Juncus lescurii</em>), and Pacific aster (<em>Symphyotrichum chilense</em>). This vegetation community occurs in six isolated areas. Four of these areas are in the southern portion of the action area in roadside ditches and west of the abandoned railroad tracks. Two areas of coastal freshwater marsh habitat are on the east side of the action area, north of the Elk River slough.</td>
<td>3.02</td>
</tr>
<tr>
<td>Coastal Brackish Marsh</td>
<td>Vegetation in this community is dominated by alkali bulrush (<em>Bolboschoenus maritimus</em>), fat hen (<em>Atriplex prostrata</em>), pickleweed (<em>Salicornia pacifica</em>), brass buttons (<em>Cotula coronopifolia</em>), salt grass (<em>Distichlis spicata</em>), and broadleaf cattail (<em>Typha latifolia</em>). The majority of this vegetation community is in areas adjacent to the PG&amp;E Humboldt Bay Power Plant and the pump house on Hill Road and in the area north of the Elk River slough.</td>
<td>13.49</td>
</tr>
<tr>
<td>Northern Coastal Bluff Scrub</td>
<td>Observed vegetation in this community is dominated by coyote brush (<em>Baccharis pilularis</em>), coastal bush lupine (<em>Lupinus arboreus</em>), California blackberry (<em>Rubus ursinus</em>), salal (<em>Gaultheria shallon</em>), Bishop pine (<em>Pinus muricata</em>), and European beachgrass (<em>Ammophila arenaria</em>). The majority of this vegetation community is in areas along the abandoned railroad tracks adjacent to the north and south side of the Elk River slough. A small amount of this vegetation community is along the paved pedestrian trail west of the Elk River WWTP.</td>
<td>7.14</td>
</tr>
</tbody>
</table>
Vegetation Community | Description | Total Acreage
--- | --- | ---
Northern Coastal Salt Marsh | Observed vegetation in this community is dominated by dense flowered cord grass (*Spartina densiflora*), pickleweed, salt grass, gumweed (*Grindelia stricta*), and seaside arrow grass (*Triglochin maritima*). The majority of this vegetation community is in tidally influenced areas adjacent to the north and south side of the Elk River slough. A small amount of this vegetation community is along the unpaved pedestrian trail west of the Elk River WWTP. | 11.82
Northern Foredunes | Observed vegetation in this community is dominated by European beach grass, yellow sand verbena (*Abronia latifolia*), silver beachweed (*Ambrosia chamissonis*), coast evening-primrose (*Camissoniopsis cheiranthifolia*), and sand mat (*Cardionema ramosissimum*). Additionally, beach layia (*Layia carnosa*) has been documented in this vegetation community and within 20 feet of the project area (McBain and Associates 2016). The majority of this vegetation community is restricted to the area west of the abandoned railroad tracks on the south side of the Elk River slough. A small amount of this vegetation community is along the paved pedestrian trail northwest of the Elk River mouth. | 6.92
Open Water | This biological community is dominated by unvegetated areas of open water that are regularly inundated by tidal or freshwater flows. Areas of open water are west of the abandoned railroad tracks and within the Elk River slough. | 17.53

**Impacts of the Proposed Action**

The Proposed Action would have minor short-term impacts on terrestrial habitat from clearing and grubbing within the project area (including staging areas), trenching, excavation and boring, HDD entry and exit pits, and the use and movement of vehicles and construction equipment within the 30-foot HCSD easement during construction activities. Table 3 identifies the anticipated impacts on vegetation communities as a result of the Proposed Action.

**Table 3: Summary of Temporary Impacts on Vegetation Communities**

<table>
<thead>
<tr>
<th>NWI-Mapped Wetland Features and Vegetation Communities</th>
<th>Total Acreage in Action Area</th>
<th>Short-term Impact Acreage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developed/Disturbed</td>
<td>23.10 acres</td>
<td>0.41 acre</td>
</tr>
<tr>
<td>Non-Native Annual Grassland</td>
<td>38.94 acres</td>
<td>4.74 acres</td>
</tr>
<tr>
<td>North Coast Riparian Scrub</td>
<td>23.84 acres</td>
<td>1.73 acres</td>
</tr>
<tr>
<td>Coastal Freshwater Marsh</td>
<td>3.02 acres</td>
<td>0.00 acres</td>
</tr>
<tr>
<td>Coastal Brackish Marsh</td>
<td>13.49 acres</td>
<td>0.74 acre</td>
</tr>
<tr>
<td>Northern Coastal Bluff Scrub</td>
<td>7.14 acres</td>
<td>0.95 acre</td>
</tr>
<tr>
<td>Northern Coastal Salt Marsh</td>
<td>11.82 acres</td>
<td>0.00 acres</td>
</tr>
<tr>
<td>Northern Foredunes</td>
<td>6.92 acres</td>
<td>0.02 acre</td>
</tr>
<tr>
<td>Open Water</td>
<td>17.53 acres</td>
<td>0.00 acres</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>145.80 acres</strong></td>
<td><strong>8.59 acres</strong></td>
</tr>
</tbody>
</table>

The Proposed Action would not result in the permanent conversion or other long-term permanent impacts on terrestrial or aquatic habitat. Following construction activities, the project area would be restored through revegetation of the area with native plant species and the replacement of excavated soils. Revegetation includes replacing topsoil/substrate, restoring the project area to pre-project contours, and using a native seed mix to revegetate the areas disturbed by project...
activities. The Proposed Action would not increase long-term noise levels or light pollution in the long term.

The Proposed Action does not require in-water work that could directly modify Essential Fish Habitat (EFH). Project activities would not have direct impacts on EFH within surface waters associated with the Sonoma Creek or Santa Rosa Creek watersheds. Potential indirect impacts (e.g., erosion, sedimentation, pollutant runoff) on aquatic habitat within and adjacent to the project area would be avoided with implementation of measures included in Section 4.1, Water Resources, and Section 4.2, Biological Resources.

**Comparison of Impacts to the PEA Scope**

The PEA concludes that short-term impacts on terrestrial and aquatic habitats from activities in previously disturbed areas would not substantially disturb the biology of the action area, assuming that existing access routes are used and staging areas are restored. The Proposed Action would use existing access routes and restore staging areas. The PEA also covers the ingress and egress of equipment and personnel during the implementation of an activity that could temporarily adversely affect wildlife resources close to the activities, including displacement or mortality of individual wildlife.

Activities undertaken in previously undisturbed areas could adversely affect terrestrial biological resources through displacement or mortality of individual wildlife as a result of vegetation removal and other construction activities. The HCSD would minimize impacts on terrestrial habitat and wildlife through proper siting and design. Except for staging areas on hardened surfaces, the Subapplicant would seed or sod staging areas with native vegetation following the completion of construction. The Proposed Action does not require realignment of the Elk River, and permanent alteration of a waterway would not occur as a result of the Proposed Action. Construction activities may result in an increase in erosion from ground-disturbing activities and an increase in pollution from construction equipment and vehicle use. However, potential indirect impacts (e.g., erosion, sedimentation, runoff) on aquatic habitat within and adjacent to the project area would be avoided with implementation of PEA and project-specific measures included in Section 4.1, Water Resources, and Section 4.2, Biological Resources. The project area would be restored following the connection of the proposed force main. Restoration activities include revegetation with suitable native plant species and replacement of excavated soils.

Implementation of measures included in Section 4.1, Water Resources, and Section 4.2, Biological Resources, would minimize or avoid potential impacts on terrestrial and aquatic habitat, respectively.

### 3.3.2 Threatened and Endangered Species

**Existing Conditions**

The Endangered Species Act (ESA) of 1973 gives USFWS and the National Marine Fisheries Service (NMFS) authority for the protection of threatened and endangered species. This protection includes a prohibition on direct take (e.g., killing, harassing) and indirect take (e.g., destruction of habitat).
Qualified biologists evaluated the action area for the presence of federally listed species protected under the ESA in September 2020. The evaluation was completed using the USFWS Information for Planning and Consultation (IPaC) database and the California Natural Diversity Database (CNDDB). Site reconnaissance was conducted for the Proposed Action on September 2 and 4, 2020 (SWCA 2020).

No observations of federally listed species were made during the reconnaissance survey conducted between September 2 and 4, 2020; however, it should be noted that the survey was conducted outside of the typical blooming period for Menzies’ wallflower (Erysimum menziesii), beach layia (Layia carnosa), and western lily (Lilium occidentale).

**Menzies’ Wallflower**

Suitable habitat for the endangered Menzies’ wallflower exists in the northern foredune vegetation community present within the action area (see Figures 5 through 9). Six Menzies’ wallflower occurrences have been recorded within a 10-mile radius of the action area; the nearest occurrence is approximately 670 feet west of the action area, on the southwest bank of the Elk River (CNDDB Occurrence [Occ.] 15; California Department of Fish and Wildlife [CDFW] 2020). The next closest recorded occurrence of this species is approximately 1.4 miles west of the action area, in the Samoa Dunes State Recreation Area (CNDDB Occ. 13; CDFW 2020). Due to the number and proximity of Menzies’ wallflower occurrences surrounding the action area and the quality of northern foredune habitat present within and adjacent to the action area, suitable habitat for this species is present within the action area. The absence of CNDDB records for Menzies’ wallflower within the action area does not indicate the absence of the species within the action area.

**Beach Layia**

Suitable habitat for the endangered beach layia exists within the northern foredune vegetation community present within the action area (see Figures 5 through 9). Four beach layia occurrences have been recorded within a 10-mile radius of the action area; the nearest occurrence overlaps a portion of the action area, adjacent to the Elk River (CNDDB Occ. 29; CDFW 2020). The next closest recorded occurrence of this species is approximately 1.4 miles west of the action area, in the Samoa Dunes State Recreation Area (CNDDB Occ. 12; CDFW 2020). Additionally, a rare plant survey conducted in the action area in 2016 identified this species as being present within 20 feet of the action area (McBain and Associates 2016). Due to the number and proximity of beach layia occurrences within and surrounding the action area and the quality of northern foredune habitat present within and adjacent to the action area, suitable habitat for this species is present within the action area.

**Western Lily**

Suitable habitat for the endangered western lily exists within the northern coastal bluff scrub and coastal freshwater marsh vegetation communities present within the action area (see Figures 5 through 9). Nine western lily occurrences have been recorded within a 10-mile radius of the action area and several recorded occurrences overlap the northern and southern portions of the project area (CNDDB Occs. 18, 24, 4, 21, 10, and 32; CDFW 2020). Due to the number and proximity of western lily occurrences within and surrounding the action area and the quality of...
coastal bluff scrub and coastal freshwater marsh habitat present within and adjacent to the action area, suitable habitat for this species is present within the action area.

**Tidewater Goby**

Suitable habitat for the endangered tidewater goby (*Eucyclogobius newberryi*) is present in the open water portion of the Elk River where the project HDD would occur under the river. From 2003 to 2006, during an extensive northern range-wide study for tidewater goby, the species was documented in an unnamed slough tributary to the mainstem of Elk River that intersects the northern portion of the action area (Frimodig and Goldsmith 2008).

**North American Green Sturgeon Southern DPS**

Critical habitat for the threatened North American green sturgeon (*Acipenser medirostris*) southern distinct population segment (DPS) includes feeding sites and a migratory corridor and is present within and adjacent to the action area. Critical habitat within the action area is limited to the open water portion of the Elk River where the project HDD would occur under the river. The Proposed Action does not require in-water work.

**Coho Salmon Southern Oregon/Northern California ESU**

Suitable habitat for the threatened coho salmon (*Oncorhynchus kisutch*) Southern Oregon/Northern California evolutionary significant unit (ESU) includes feeding sites and a migratory corridor and is present within the action area. Suitable habitat within the action area is limited to the open water portion of the Elk River where the project HDD would occur under the river. The Proposed Action does not require in-water work.

**Steelhead Northern California DPS**

Critical habitat for the threatened steelhead (*Oncorhynchus mykiss*) Northern California DPS includes feeding sites and a migratory corridor and is present within the action area. Critical habitat within the action area is limited to the open water portion of the Elk River where the project HDD would occur under the river. The Proposed Action does not require in-water work.

**Chinook Salmon California Coastal ESU**

Critical habitat for the threatened Chinook salmon (*Oncorhynchus tshawytscha*) California Coastal ESU includes feeding sites and a migratory corridor and is present within the action area. Critical habitat within the action area is limited to the open water portion of the Elk River where the project HDD would occur under the river. The Proposed Action does not require in-water work.

**Impacts of the Proposed Action**

Three federally listed plant species and five federally listed animal species have the potential to occur in the action area.

**Menzies’ Wallflower**

Suitable northern foredune habitat for Menzies’ wallflower is present near the central portion of the action area (see Figures 5 through 9) and there is a high potential for this species to occur in
the action area. Therefore, construction activities within or adjacent to northern foredune habitat could result in impacts to this species in the form of disturbance. During excavation/boring activities (e.g., trenching, material hauling, access, equipment staging, vehicle access, etc.) and installation of the new force main within or adjacent to northern foredune habitat, individual plants or plant populations of this species could be adversely affected. Other potential effects to this species could occur as a result of project-related erosion, sedimentation, and accidental release of construction-related pollutants. Adverse effects would be most likely to occur in northern foredune habitat present in areas where ground-disturbing activities are proposed.

Although the project requires work within the northern foredune habitat, which may provide habitat for Menzies’ wallflower, this species was not observed during field surveys and is not anticipated to be present within the habitat based on the absence of critical habitat. The project would incorporate project design features to avoid or limit impacts to suitable habitat and avoid ESA-listed plant individuals that may be present at some point during the Proposed Action. Measures outlined in Section 4.2, Biological Resources, include general BMPs for avoidance of listed plant species. Therefore, there would be no effect on Menzies’ wallflower with implementation of the measures identified in Section 4.2, Biological Resources.

Beach Layia

Suitable northern foredune habitat for beach layia is present near the central portion of the action area (see Figures 5 through 9) and this species is known to occur in the action area. Additionally, a recorded occurrence of this species overlaps a portion of the action area. Therefore, construction activities within or adjacent to northern foredune habitat could result in impacts to this species in the form of disturbance. During excavation/boring activities (e.g., trenching, material hauling, access, equipment staging, vehicle access, etc.) and installation of the new force main within or adjacent to northern foredune habitat, individual plants or plant populations of this species could be adversely affected. Other potential effects to this species could occur as a result of project-related erosion, sedimentation, and accidental release of construction-related pollutants. Adverse effects would be most likely to occur in northern foredune habitat present in areas where ground-disturbing activities are proposed.

Although the project requires work within the northern foredune habitat, which may provide habitat for beach layia, this species was not observed during field surveys and is not anticipated to be present within the habitat based on the absence of critical habitat. The project would incorporate project design features to avoid or limit impacts to suitable habitat and avoid ESA-listed plant individuals that may be present at some point during the Proposed Action. Measures outlined in Section 4.2, Biological Resources, include general BMPs for avoidance of listed plant species. Therefore, there would be no effect on beach layia with implementation of the measures identified in Section 4.2, Biological Resources.

Western Lily

Suitable northern coastal bluff scrub and coastal freshwater marsh habitat for western lily is present near the central northern portion of the action area (see Figures 5 through 9) and there is a high potential for this species to occur in the action area. Additionally, multiple recorded occurrences of western lily overlap the northern and southern portions of the action area. Therefore, construction activities within or adjacent to northern coastal bluff scrub and coastal
freshwater marsh habitats could result in impacts to this species in the form of disturbance. During excavation/boring activities (e.g., trenching, material hauling, access, equipment staging, vehicle access, etc.) and installation of the new force main within or adjacent to northern coastal bluff scrub and coastal freshwater marsh habitat, individual plants or plant populations of this species could be adversely affected. Other potential effects to this species could occur as a result of project-related erosion, sedimentation, and accidental release of construction-related pollutants. Adverse effects would be most likely to occur in northern coastal bluff scrub and coastal freshwater marsh habitats present in areas where ground-disturbing activities are proposed.

Although the project requires work within the northern coastal bluff scrub and coastal freshwater marsh habitats, which may provide habitat for western lily, this species was not observed during field surveys and is not anticipated to be present within the habitat based on the absence of critical habitat. The project would incorporate project design features to avoid or limit impacts to suitable habitat and avoid ESA-listed plant individuals that may be present at some point during the Proposed Action. Measures outlined in Section 4.2, Biological Resources, include general BMPs for avoidance of listed plant species. Therefore, there would be no effect on western lily with implementation of the measures identified in Section 4.2, Biological Resources.

**Tidewater Goby**

Although there would be no direct project disturbance in the Elk River, potential impacts to this species and its habitat could occur from an accidental frac-out during HDD activities (i.e., a leak of drilling fluids from the bore hole through cracks in the river sediments that reach the water), erosion and sedimentation during construction, or the accidental release of construction-related pollutants into the action area adjacent to the Elk River. The project, through planned HDD activities and the implementation of BMPs, has been designed to avoid impacts to the Elk River and adjacent saltmarsh habitat. No in-water work would occur as a result of the Proposed Action and drilling activities would occur a minimum of 40 feet below the river bed of the Elk River.

Additional measures have been included in Section 4.2, Biological Resources, to avoid possible erosion, equipment leaks, or other sources of pollution from entering the Elk River and other aquatic resources within the action area. The Proposed Action was determined to have no effect on any fish species protected under the ESA because all ground disturbance would be located outside of tidally influenced salt marsh habitat, design features would be incorporated to avoid impacts to ESA-listed species habitat, general BMPs would be implemented during project construction, spoils and produced water collection systems would be included, and technical assistance has been provided by USFWS and NMFS staff to avoid direct and indirect impacts to federally listed fish species. Therefore, there would be no effect on tidewater goby with implementation of the measures identified in Section 4.2, Biological Resources.

**North American Green Sturgeon Southern DPS**

Although there would be no direct project disturbance in the Elk River, potential impacts to this species and its habitat could occur from an accidental frac-out during HDD activities (i.e., a leak of drilling fluids from the bore hole through cracks in the river sediments that reach the water), erosion and sedimentation during construction, or the accidental release of construction-related pollutants into the action area adjacent to the Elk River. The project, through planned HDD
activities and the implementation of BMPs, has been designed to avoid impacts to the Elk River and adjacent saltmarsh habitat. No in-water work would occur as a result of the Proposed Action and drilling activities would occur a minimum of 40 feet below the river bed of the Elk River.

Additional measures have been included in Section 4.2, Biological Resources, to avoid possible erosion, equipment leaks, or other sources of pollution from entering the Elk River and other aquatic resources within the action area. The Proposed Action was determined to have no effect on any fish species protected under the ESA because all ground disturbance would be located outside of tidally influenced salt marsh habitat, design features would be incorporated to avoid impacts to ESA-listed species habitat, general BMPs would be implemented during project construction, spoils and produced water collection systems would be included, and technical assistance has been provided by USFWS and NMFS staff to avoid direct and indirect impacts to federally listed fish species. Therefore, there would be no effect on green sturgeon with implementation of the measures identified in Section 4.2, Biological Resources.

Coho Salmon Southern Oregon/Northern California ESU

Although there would be no direct project disturbance in the Elk River, potential impacts to this species and its habitat could occur from an accidental frac-out during HDD activities (i.e., a leak of drilling fluids from the bore hole through cracks in the river sediments that reach the water), erosion and sedimentation during construction, or the accidental release of construction-related pollutants into the action area adjacent to the Elk River. The project, through planned HDD activities and the implementation of BMPs, has been designed to avoid impacts to the Elk River and adjacent saltmarsh habitat. No in-water work would occur as a result of the Proposed Action and drilling activities would occur a minimum of 40 feet below the river bed of the Elk River.

Additional measures have been included in Section 4.2, Biological Resources, to avoid possible erosion, equipment leaks, or other sources of pollution from entering the Elk River and other aquatic resources within the action area. The Proposed Action was determined to have no effect on any fish species protected under the ESA because all ground disturbance would be located outside of tidally influenced salt marsh habitat, design features would be incorporated to avoid impacts to ESA-listed species habitat, general BMPs would be implemented during project construction, spoils and produced water collection systems would be included, and technical assistance has been provided by USFWS and NMFS staff to avoid direct and indirect impacts to federally listed fish species. Therefore, there would be no effect on coho salmon with implementation of the measures identified in Section 4.2, Biological Resources.

Steelhead Northern California DPS

Although there would be no direct project disturbance in the Elk River, potential impacts on this species and its habitat could occur from an accidental frac-out during HDD activities (i.e., a leak of drilling fluids from the bore hole through cracks in the river sediments that reach the water), erosion and sedimentation during construction, or the accidental release of construction-related pollutants into the action area adjacent to the Elk River. The project, through planned HDD activities and the implementation of BMPs, has been designed to avoid impacts to the Elk River and adjacent saltmarsh habitat. No in-water work would occur as a result of the Proposed Action and drilling activities would occur a minimum of 40 feet below the river bed of the Elk River.
Additional measures have been included in Section 4.2, Biological Resources, to avoid possible erosion, equipment leaks, or other sources of pollution from entering the Elk River and other aquatic resources within the action area. The Proposed Action was determined to have no effect on any fish species protected under the ESA because all ground disturbance would be located outside of tidally influenced salt marsh habitat, design features would be incorporated to avoid impacts to ESA-listed species habitat, general BMPs would be implemented during project construction, spoils and produced water collection systems would be included, and technical assistance has been provided by USFWS and NMFS staff to avoid direct and indirect impacts to federally listed fish species. Therefore, there would be no effect on steelhead with implementation of the measures identified in Section 4.2, Biological Resources.

**Chinook Salmon California Coastal ESU**

Although there would be no direct project disturbance in the Elk River, potential impacts to this species and its habitat could occur from an accidental frac-out during HDD activities (i.e., a leak of drilling fluids from the bore hole through cracks in the river sediments that reach the water), erosion and sedimentation during construction, or the accidental release of construction-related pollutants into the action area adjacent to the Elk River. The project, through planned HDD activities and the implementation of BMPs, has been designed to avoid impacts to the Elk River and adjacent saltmarsh habitat. No in-water work would occur as a result of the Proposed Action and drilling activities would occur a minimum of 40 feet below the river bed of the Elk River.

Additional measures have been included in Section 4.2, Biological Resources, to avoid possible erosion, equipment leaks, or other sources of pollution from entering the Elk River and other aquatic resources within the action area. The Proposed Action was determined to have no effect on any fish species protected under the ESA because all ground disturbance would be located outside of tidally influenced salt marsh habitat, design features would be incorporated to avoid impacts to ESA-listed species habitat, general BMPs would be implemented during project construction, spoils and produced water collection systems would be included, and technical assistance has been provided by USFWS and NMFS staff to avoid direct and indirect impacts to federally listed fish species. Therefore, there would be no effect on Chinook salmon with implementation of the measures identified in Section 4.2, Biological Resources.

**Comparison of Impacts to the PEA Scope**

The Proposed Action has the potential to impact three federally listed plant species and five federally listed fish species. The Proposed Action has been designed to avoid direct and indirect impacts to federally listed species. Technical assistance with USFWS and NMFS was completed to identify and incorporate appropriate BMPs and avoidance and minimization measures for avoidance of ESA species of concern that may be present within the action area. Based on coordination with USFWS and NMFS, a no effect determination was concluded due to implementation of the avoidance and minimization measures identified in Section 4.2, Biological Resources (SWCA 2021). The minimization measures listed in the PEA are inadequate to avoid impacts on listed species and the additional measures identified in Section 4.2, Biological Resources, are required. The HCSD would implement environmental mitigation measures identified in Section 4.2, Biological Resources, to avoid potential impacts to federally listed plant and animal species. Implementation of these mitigation measures would reduce impacts on
biological resources to a level that would result in no effect to the three federally listed plant species and five federally listed fish species.

### 3.3.3 Migratory Birds

**Existing Conditions**

A migratory bird is any species or family of birds that live, reproduce, or migrate within or across international borders at some point during their annual life cycle. The Migratory Bird Treaty Act (MBTA) of 1918, as amended, 16 United States Code (USC) 703–711, protects migratory birds and their nests, eggs, and body parts from harm, sale, or other injurious actions. The project area is in the Pacific Flyway, and numerous bird species have the potential to occur in the project area.

**Impacts of the Proposed Action**

Direct effects on migratory birds and raptors due to construction activities could include destruction of nests and eggs and mortality of young, if present at the time of construction. The Proposed Action has the potential to generate moderate impacts on migratory birds and raptors.

Implementation of mitigation measures for migratory birds from the PEA and identified in Section 4.2, *Biological Resources*, would avoid potential impacts on nesting migratory birds and raptors.

**Comparison of Impacts to the PEA Scope**

Migratory birds and raptors have the potential to be directly impacted by the Proposed Action if present at the time of construction. Implementation of minimization measures from the PEA, which are identified in Section 4.2, *Biological Resources*, would avoid these potential impacts, consistent with the impacts evaluated in the PEA. In addition, revegetation is expected to have a beneficial long-term impact, consistent with the PEA.

### 3.3.4 Invasive Species

**Existing Conditions**

EO 13112 requires federal agencies to prevent the introduction of invasive species and provide for their control to minimize the economic, ecological, and human health impacts that invasive species cause. According to the University of California Cooperative Extension (UCCE) Humboldt - Del Norte Counties, the most harmful invasive plant species in Humboldt County include Scotch broom (*Cytisus scoparius*), pampas grass (*Cortaderia jubata*), gorse (*Ulex Europaea*), Himalayan blackberry (*Rubus discolor*), English ivy (*Hedera helix*), Cape ivy (*Delairea odorata*), European beachgrass (*Ammophila arenaria*), ice plant (*Carpobrotus edulis*), yellow bush lupine (*Lupinus arboresus*), yellow star thistle (*Centaurea solstitialis*), spotted and diffuse knapweed (*Centaurea maculosa* and *C. diffusa*), bull and Canada thistle (*Cirsium Vulgare* and *C. arvense*), common reed (*Phragmites australis*), Spanish heath (*Erica lusitanica*), and Chilean cordgrass (*Spartina densiflora*) (UCCE 2021).
Impacts of the Proposed Action

Proposed ground-disturbing construction activities could inadvertently generate a minor localized impact on biological resources by encouraging the spread of invasive plant species through seed dispersal. However, the Proposed Action would provide minor long-term benefits related to clearing and grubbing of the project site and restoration of native vegetation. The Proposed Action would not cause the spread of invasive wildlife.

Comparison of Impacts to the PEA Scope

The impacts of the Proposed Action on invasive species would be the same as the impacts evaluated in the PEA. To minimize impacts associated with invasive species, the Subapplicant would use native seed mixes to revegetate the project area with native plants as described in Section 2.2, Proposed Action. Implementation of measures identified in Section 4.2, Biological Resources, would minimize impacts on biological resources from invasive species and ensure any adverse effects are consistent with impacts evaluated in the PEA.

3.4 Cumulative Impacts

The Council on Environmental Quality (CEQ) defines a cumulative impact as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions…” (40 CFR Section 1508.7). Past, present, and reasonably foreseeable actions were identified based on information obtained from the City of Eureka and FEMA. No cumulative projects or programs were identified in the project area that could contribute to the effects identified for the Proposed Action. Given the lack of other cumulative projects or programs in the project area, and because the impacts on water and biological resources associated with the Proposed Action would be minimal, short-term, and localized to the project area, and would not result in permanent loss of resources or other permanent impacts, no cumulative impacts are expected to occur as a result of implementation of the Proposed Action.

4 Best Management Practices, Minimization, and Mitigation Measures

The HCSD would be required to implement PEA BMPs for general construction, geology and soils, air quality and greenhouse gas emissions, water resources, biological resources, historic properties, transportation, noise, and hazardous materials to avoid or minimize potential impacts to the resource areas. The following PEA and project-specific BMPs have been included to avoid or minimize potential impacts related to water and biological resources applicable to the Proposed Action.

4.1 Water Resources

The Subapplicant would be responsible for reducing potential impacts on water resources from project activities and employing the following minimization measures:

1. For work between 0 and 50 feet of a wetland or waterbody:
   a. Prior to construction, all surface water and wetland resources shall be delineated and mapped by a qualified biologist and shown on project design plans.
b. Prior to construction, a qualified biologist or biological monitor shall demarcate the outer perimeter of the work area to prevent damage to adjacent habitat and to provide visual orientation to its limits. Marking shall be in place during all periods of operation. All persons employed or otherwise working on the project site shall be instructed about the restrictions that the marking represents.

c. A qualified biologist shall be present during initial disturbance in wetland areas.

d. Every effort will be made to minimize vegetation disturbance.

e. To minimize vegetation disturbance in the marsh habitat within the project area, ingress and egress access shall occur along the same pathway to the extent possible. Where work areas and access routes are required within wetlands, wetland mats will be used along the access route and work area to protect wetland vegetation, as necessary.

f. Equipment will be repaired and refueled a minimum of 100 feet from water features and wetland features. If refueling or repairing equipment is required in wetland habitat, or within close proximity to it, secondary containment will be used to prevent spills in sensitive habitats.

g. Erosion control and spill prevention BMPs will be maintained on-site.

h. Spill containment and cleanup materials will be kept on-site during all construction activities.

i. Spills of hazardous materials into aquatic habitat will be immediately contained. Once contained, the spill will be cleaned up and moved to the extent feasible. Any such spills will be reported to USACE and the Regional Water Quality Control Board (RWQCB) within 24 hours.

j. All construction equipment and materials will be stored in designated upland staging areas.

k. No debris, rubbish, creosote-treated wood, soil, silt, sand, cement, or concrete, or washings thereof; other construction-related materials or wastes, oil, or petroleum products; or other organic or earthen material shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into surface waters or wetland features. Any of these materials placed within or where they may enter surface water or wetland features by HCSD or any party working under contract, or with the permission of HCSD, shall be removed immediately. When operations are completed, any excess material shall be removed from the work area and any areas adjacent to the work area where such material may be washed into surface water or wetland features. During construction, the contractor shall not dump any litter or construction debris within the surface water or wetland features. All such debris and waste shall be picked up daily and properly disposed of at an appropriate site.

l. No equipment shall be operated in areas of flowing or standing water in such a way as to result in the discharge of pollutants into surface water or wetland features; no fueling, cleaning, or maintenance of vehicles or equipment shall take place within any areas where an accidental discharge to surface water or wetland features may occur; and all earth-moving work shall be performed outside of areas of flowing or standing water.
m. All equipment, including, but not limited to, excavators, graders, barges, etc., that may have come in contact with extremely invasive plants, including perennial pepperweed (*Lepidium latifolium*) or smooth cordgrass (*Spartina alterniflora*) or its hybrids, or the seeds of these plants, shall be carefully cleaned before arriving on-site and shall also be carefully cleaned before removal from the site to prevent spread of these plants.

n. Upon completion of project activities, all materials and equipment will be removed from the site.

o. All areas of disturbed vegetation will be recontoured to the original conditions, as needed, and the area will be revegetated using a native seed mix.

p. The project site shall be monitored for revegetation success and invasive species control for a minimum 5-year period, and until the success criteria are met, to ensure temporarily impacted vegetated areas become reestablished and are not permanently impacted.

q. The following criteria shall be used to assess the project’s post-construction success:
   
   i. Natural colonization of native species shall attain at least 70 percent total cover, compared to preexisting conditions.
   
   ii. The percent cover by invasive exotic species shall not exceed 5 percent of the total temporarily impacted area.

   Additional measures to attain this vegetative cover potentially including seeding, planting, and/or invasive species removal will be taken by HCSD, if necessary

2. For work between 50 and 200 feet of a wetland or waterbody:

   a. Hand tools (e.g., chainsaws, brush cutters, other hand tools) would be used to create a gradation of vegetation density by removing approximately 50 percent of the vegetation farthest from wetlands and perennial waterbodies and 33 percent of the vegetation at closer distances to wetlands and perennial waterbodies.

   b. No equipment fueling would occur within 100 feet of wetland or waterbodies.

3. Never wash down pavement or surfaces where materials have spilled. Dry cleanup methods shall be used.

4. Protect all storm drain inlets using filter fabric cloth or other BMPs to prevent sediments from entering the storm drainage system during construction activities.

5. Keep materials out of the rain and prevent runoff pollution at the source. Cover exposed piles of soil, construction materials, and wastes with plastic sheeting or temporary roofs. Before it rains, sweep and remove materials from surfaces that drain to storm drains, creeks, or channels.

6. Prior to construction, wetlands located in the project area that can be avoided will be fenced off using Environmentally Sensitive Area fencing. The fencing will be placed 5 feet away from each wetland feature.

7. Appropriate erosion control measures will be used to reduce siltation and runoff of contaminants into wetlands and adjacent ponds, streams, or riparian woodland/scrub. The
contractor will not be allowed to stockpile brush, loose soils, or other debris material on stream banks.

8. Native plant species will be used in erosion control or revegetation seed mix. Any hydroseed mulch used for revegetation must also be certified weed-free. Dry-farmed straw will not be used, and certified weed-free straw will be required where erosion control straw is to be used. Filter fences and mesh will be of material that will not entrap reptiles and amphibians. Erosion control measures will be placed between water or wetland and the outer edge of the project site.

9. All off-road construction equipment will be cleaned of potential noxious weed sources (e.g., mud, vegetation) before entry into the project area. Equipment will be considered free of soil, seeds, and other such debris when a visual inspection does not disclose such material. Disassembly of equipment components or specialized inspection tools is not required.

10. Vehicles and equipment will be parked on pavement, existing roads or specified staging areas.

11. Trash generated by the project should be promptly and properly removed from the site.

12. All temporarily disturbed areas, such as staging areas, will be restored.

13. Do not overapply fertilizers and follow manufacturer’s instructions for mixing and applying materials.

14. Dispose of all wastes properly. Materials that cannot be reused or recycled must be taken to an appropriate landfill or may require disposal as hazardous waste. Never throw debris into channels, creeks, or wetland areas. Never store or leave debris in the street or near a creek where it may contact runoff.

To minimize impacts related to an accidental frac-out resulting from HDD activities, the Subapplicant shall be responsible for implementing the following measures:

1. HDD bore entry and exit pits shall be located outside marsh and other tidally influenced areas.

2. Construction activities shall be required to include a spoils and produced-water collection system.

3. Prior to construction, the Subapplicant or selected contractor shall prepare an HDD Fluid Release Contingency Plan that will specify procedures to contain and cleanup any drilling fluids released into waterways or wetlands in the event of an inadvertent release of drilling fluids during HDD activities. Specific elements to be included in the HDD Fluid Release Contingency Plan are:
   a. Construction personnel best practices, as determined by the HCSD or construction contractor, to avoid frac-out.
   b. Communication and cleanup procedures for potential frac-out to be conducted using hand tools and supervised by a qualified biologist. No vehicles or machinery will enter the Elk River or its tributaries.
c. If a frac-out occurs, HDD activities will cease so that a qualified biologist can inspect the frac-out location (e.g., monitoring fluid rate and back pressure).

d. Removal of HDD fluid (bentonite clay) will be overseen by a qualified biologist to ensure that tidewater goby individuals are not present or removed from the cleanup location.

4.2 Biological Resources

The Subapplicant would be responsible for reducing potential impacts on biological resources from project activities and employing the following minimization measures:

Special-Status Plants

1. Prior to the start of construction, rare plant surveys during the appropriate blooming period shall be conducted within a 100-foot buffer of the entire project area, including all suitable habitat for the target species (Menzies’ wallflower, beach layia, and western lily) and all northern foredune, northern coastal bluff scrub, and coastal freshwater marsh habitat, in order to determine presence or absence of target species within project disturbance areas. All occurrences of these species within the 100-foot buffer will be flagged by a qualified biologist. Results of the rare plant survey will be sent to USFWS in memorandum format.

2. If any target species is identified within or adjacent to the project area, a 100-foot buffer will be established from each occurrence, within which no project work shall be allowed to occur. Should no other feasible options exist, and conditions allow, the avoidance buffer may potentially be reduced, based on environmental conditions, or individual take of plants may occur through coordination with USFWS. In coordination with USFWS, the target species-specific seed collection, propagation, transplant, and restoration measures detailed throughout Section 4.4 will be implemented in the event of the identification of a target species that cannot be avoided.

3. Prior to the start of construction, a qualified biologist shall conduct an environmental training to familiarize all construction personnel with the following: identification of Menzies’ wallflower, beach layia, western lily, and their habitat; general provisions and protections afforded by the ESA; measures implemented to protect the federally listed species; and a review of the project boundaries. All new construction personnel must receive the environmental training before commencing work.

4. Prior to the start of construction, the construction plans shall clearly show the placement of construction exclusion fencing around suitable occupied habitat. The intent of the fencing is to exclude Menzies’ wallflower, beach layia, and western lily occurrences from accidental disturbance during construction. The fencing will be maintained in place throughout the construction period.

5. During initial ground disturbance near any established buffers of occupied habitat for Menzies’ wallflower, beach layia, or western lily, a biologist will be present to ensure that avoidance buffers are established with appropriate exclusion fencing and that they are avoided to prevent project effects to listed plants and their habitat.
6. All construction activities shall be confined to a minimum disturbance footprint when activities are conducted in mapped northern foredune, coastal bluff scrub, and coastal freshwater marsh vegetation communities.

7. Standard BMPs and erosion control measures shall be implemented during construction to minimize possible discharge of sediment into suitable habitat for Menzies’ wallflower, beach layia, and western lily. Construction personnel shall reduce the potential for temporary disturbance by applying an erosion control blanket made of natural materials and reseeding the project area with appropriate native vegetation.

8. Prior to bringing vehicles or equipment into the project area, vehicles and equipment will be cleaned at an off-site location to avoid the spread of noxious weeds from other locations.

9. Construction byproducts and pollutants, such as petroleum products, chemicals, fresh cement, or deleterious materials, shall not be allowed to discharge into the action area and shall be collected and transported to an authorized disposal area.

10. A plan for the emergency cleanup of any spills of fuel or other materials shall be prepared and made available to all construction personnel and implemented in the event of an accidental spill.

11. Equipment shall be refueled and serviced at designated construction staging areas that are located outside of suitable habitat for federally listed plants (i.e., mapped northern foredune, coastal bluff scrub, and coastal freshwater marsh vegetation communities).

12. All construction material and fill shall be stored and contained in designated areas located away from all drainages, or surface water resources, to prevent transport of materials into adjacent streams. A silt fence shall be installed to collect any discharge, and adequate materials for spill cleanup shall be maintained on-site.

13. Construction vehicles and equipment shall be properly maintained to prevent contamination of soil or water (from external grease and oil or from leaking hydraulic fluid, fuel, oil, and grease).

14. Good housekeeping practices; use of safer alternative products, such as biodegradable hydraulic fluids, where feasible; and implementation of employee training programs shall be used throughout the duration of construction. Employees shall be trained to prevent or reduce the discharge of pollutants from construction activities into waters and of the appropriate measures to take should a spill occur.

15. Prior to any ground-disturbing activities, a qualified biologist and/or horticulturalist shall be retained to collect a sufficient amount of Menzies’ wallflower seed from individuals within the project area to propagate, at a ratio of 2:1 for impacted individuals, Menzies’ wallflower container plants. This species typically blooms from March through September; therefore, seed collection shall begin in August and continue through September, or when seed production ceases. These propagated materials will be conserved in the temporarily disturbed portions of the project area or within undisturbed suitable habitat in the project right-of-way (ROW).

If any Menzies’ wallflower individuals are observed in the project impact area and cannot be avoided, individual plants will be transplanted to a receiver site within the restored
project disturbance area and within suitable habitat for the species or within undisturbed
suitable habitat in the project ROW. If translocated plants are to be placed within the
restored project disturbance area, the translocated plants will be temporarily placed in
planters on-site and maintained by a qualified biologist until the project site is restored
and the receiver site is ready for planting.

Following completion of the reseeding efforts, a qualified biologist will monitor the
receiver sites for 2 consecutive years. Non-native vegetation removal will be conducted
during the monitoring program. The goal of the monitoring will be to quantify and
document the number of individuals that emerge in the receiver sites, the presence of
non-native vegetation, and the overall success of the translocation efforts. Success criteria
of the receiver site will be considered germination of Menzies’ wallflower seeds and
persistence of vegetative plants into the flowering season. If success criteria are met after
the first year, no further monitoring will be required.

16. Soil near Menzies’ wallflower occurrences in the project disturbance areas potentially
containing Menzies’ wallflower seed shall be collected and reapplied. To accomplish
this, the upper 6 inches of sandy substrate located within 5 feet of existing Menzies’
wallflower individuals will be collected, segregated, and stockpiled on-site. Soil
collection shall occur immediately following completion of seed collection and prior to
the first rainfall. The collected soil should be immediately distributed in the receiver
site(s). The collected seed shall be broadcast over the relocated soil, and then the receiver
site shall be lightly raked to cover the seed.

17. Beach layia will be conserved in the temporarily disturbed portions of the project area or
within undisturbed suitable habitat in the project ROW by broadcast seeding and
relocating the soil seed bank. Seed to be broadcast will be collected from the project area
prior to start of construction. All seed collection activities will be conducted by a
qualified biologist. This species flowers from March to July; therefore, seed collection
shall begin in September and continue through October, or when seed production ceases.
To the extent feasible, all available seed shall be collected from plants located in project
disturbance areas.

If any beach layia individuals are observed in the project impact area and cannot be
avoided, individual plants will be transplanted to a receiver site within the restored
project disturbance area and within suitable habitat for the species or undisturbed suitable
habitat in the project ROW. If translocated plants are to be placed within the restored
project disturbance area, the translocated plants will be temporarily placed in planters on-
site and maintained by a qualified biologist until the project site is restored and the
receiver site is ready for planting.

Following completion of the seed relocation efforts, a qualified biologist will monitor the
receiver site for 2 consecutive years. Non-native vegetation removal will be conducted
during the monitoring program. The goal of the monitoring will be to quantify and
document the number of individuals that emerge in the receiver site, the presence of non-
native vegetation, and the overall success of the translocation efforts. Success criteria of
the receiver site will be considered germination of beach layia seeds and persistence of
vegetative plants into the flowering season. If success criteria are met after the first year,
no further monitoring will be required.
18. Soil near beach layia occurrences in the project disturbance areas potentially containing beach layia seed shall be collected and reapplied. To accomplish this, the upper 6 inches of sandy substrate located within 5 feet of existing beach layia individuals will be collected, segregated, and stockpiled on-site. Soil collection shall occur immediately following completion of seed collection and prior to the first rainfall. The collected soil should be immediately distributed in the receiver site(s). The collected seed shall be broadcast over the relocated soil, and then the receiver site shall be lightly raked to cover the seed.

19. Prior to ground disturbance, and when plants are dormant (anticipated to be October through December), a qualified biologist shall excavate and relocate bulbs of the marked plants to a designated receiver site within the restored project disturbance area and within suitable habitat for the species or undisturbed suitable habitat in the project ROW. The bulbs shall be planted approximately 6 inches below the soil surface.

Following completion of the bulb collection and replanting efforts, a qualified biologist will monitor the receiver site for 2 consecutive years. Non-native vegetation removal will be conducted during the monitoring program. The goal of the monitoring will be to quantify and document the number of individuals that emerge in the receiver site, the presence of non-native vegetation, and the overall success of the planting efforts. Success criteria of the receiver site will be considered germination of western lily bulbs and persistence of vegetative plants into the flowering season. If success criteria are met after the first year, no further monitoring will be required.

20. During initial ground disturbance adjacent to suitable habitat for Menzies’ wallflower, beach layia, and western lily (i.e., mapped northern foredune, coastal bluff scrub, and coastal freshwater marsh vegetation communities), a qualified biologist shall be present to guide construction personnel in retaining the top 6 inches of topsoil/substrate or the applicable topsoil/substrate if less than 6 inches (e.g., some areas may have less than 6 inches of sand substrate above other substrates). Topsoil/substrate will be segregated based on the location stockpiled so that the top 6 inches of topsoil/substrate can be reestablished in project disturbance areas during site restoration. Specific soil segregation methods will be developed in coordination with USFWS.

21. Upon completion of construction, as part of the habitat restoration phase, any disturbed occupied habitat shall be replanted or reseeded and monitored for a 5-year period in order to ensure the successful reestablishment of mitigation plantings and suitable habitat. Success criteria and monitoring requirements will be determined in coordination with USFWS.

Special-Status Wildlife

1. Prior to the start of construction, a qualified biologist shall conduct an environmental training to familiarize all construction personnel with the following: identification of tidewater goby and their habitat; general provisions and protections afforded by the ESA; measures implemented to protect the federally listed species; and a review of the project boundaries. All new construction personnel must receive the environmental training before commencing work.
2. Prior to the start of construction, the construction plans shall clearly show the placement of project work areas in the vicinity of the Elk River to ensure construction activities do not directly impact the river or its tributaries.

3. Standard BMPs and erosion control measures shall be implemented during construction to minimize possible discharge of sediment into suitable habitat (Elk River and adjacent wetland areas). Construction personnel shall implement erosion, sediment, and material stockpile BMPs on-site to minimize the potential for fill or runoff to enter wetlands or waterways.

4. Construction personnel will maintain construction equipment to prevent leaks of fuels, lubricants, or other fluids into waterways. Appropriate materials will be on-site to prevent and manage accidental spills. Service and refueling procedures will take place at designated construction staging areas at least 100 feet from wetland boundaries or waterways to prevent spills from entering waterways or wetlands. A plan for the emergency cleanup of any spills of fuel or other materials shall be prepared and made available to all construction personnel and implemented in the event of an accidental spill.

5. Measures 12, 13, and 14 identified above for Special-Status Plants shall be implemented.

6. Prior to construction, FEMA will prepare an HDD Fluid Release Contingency Plan that will specify procedures to contain and cleanup any drilling fluids released into waterways or wetlands in the event of an inadvertent release of drilling fluids during HDD activities. Specific elements to be included in the HDD Fluid Release Contingency Plan are:
   a. Construction personnel best practices, as determined by the HCSD or construction contractor, to avoid frac-out.
   b. Communication and cleanup procedures for potential frac-out to be conducted using hand tools and supervised by a qualified biologist. No vehicles or machinery will enter the Elk River or its tributaries.
   c. If a frac-out occurs, HDD activities will cease so that a qualified biologist can inspect the frac-out location (e.g., monitoring fluid rate and back pressure).
   d. Removal of HDD fluid (bentonite clay) will be overseen by a qualified biologist to ensure that tidewater goby individuals are not present or removed from the cleanup location.

**General Wildlife**

1. Require personnel to maintain a 10-mile-per-hour speed limit on all unpaved roads to reduce wildlife being harmed through impact with vehicles.
2. Dispose of trash and food into closed containers while the project is being implemented.
3. Prevent the presence of pets or feeding of wildlife.
4. Restrict the maintenance of all equipment to designated staging areas.
5. Report any dead, injured, or entrapped special-status species to the appropriate federal or state resource agency.
6. Use existing access routes.
7. Return staging areas to original conditions.

**Migratory Birds and Raptors**

**Raptors**

1. Preconstruction surveys for raptors, other special-status birds, and appropriate nesting habitat will be conducted within 50 feet of the construction area no more than 3 days prior to ground-disturbing activities. If an active nest is found, the state agency (e.g., CDFW) will be consulted to determine the appropriate buffer area to be established around the nesting site and the type of buffer to be used. If establishment of a buffer is not feasible, the appropriate agency will be contacted for further avoidance and minimization guidelines.

2. A qualified biologist will conduct weekly monitoring during construction, to evaluate the identified nest for potential disturbances associated with construction activities. Construction within the buffer is prohibited until the qualified biologist determines the nest is no longer active.

3. If an active nest is found after construction begins, construction activities in the vicinity of the nest will stop until a qualified biologist has evaluated the nest and established the appropriate buffer around the nest. If establishment of the buffer is not feasible, the appropriate agency will be contacted for further avoidance and minimization guidelines.

**Migratory Birds**

The measures specified in the PEA (listed below) would be implemented for construction work during the nesting season (February 15 through August 31).

1. A qualified biologist will conduct preconstruction surveys for nesting migratory birds in the project area no more than 3 days prior to the start of ground-disturbing activities. If preconstruction surveys indicate the presence of any migratory bird nests where activities would directly result in bird injury or death, a buffer zone of 50 feet will be placed around the nest.

2. Buffers will be established around active migratory bird nests where project activities would directly result in bird injury or death. The size of the buffer may vary for different species and will be determined in coordination with the responsible agency. A qualified biologist will delineate the buffer using ESA fencing, pin flags, and/or yellow caution tape.

3. Buffer zones will be maintained around all active nest sites until the young have fledged and are foraging independently. In the event that an active nest is found after the completion of preconstruction surveys and after construction begins, all construction activities within a 50-foot radius will be stopped until a qualified biologist has evaluated the nest and erected the appropriate buffer around it.

4. If an active nest is found in an area after construction begins, construction activities in the vicinity of the nest will stop until a qualified biologist has evaluated the nest and established the appropriate buffer around the nest. If establishment of the buffer is not feasible, the responsible agency will be contacted for further avoidance and minimization guidelines.
5 Conclusion

Although the specific type of action proposed under the Proposed Action does fall under the range of actions evaluated in the PEA, it would require trenching and other ground-disturbing construction activities in areas that are identified as freshwater and emergent wetland and freshwater forested/shrub wetland features, which is inconsistent with the PEA measures to avoid and minimize impacts on water quality, floodplains, wetlands, and biological resources. The PEA adequately describes the affected environment and the environmental consequences of the No Action Alternative for all resource areas and the effects of the Proposed Action not evaluated in the PEA are assessed in this SEA. FEMA, Cal OES, and the Subapplicant have not identified public controversy regarding implementation of the Proposed Action.

The Proposed Action would result in no new substantial impacts on the environment beyond those described in the PEA; however, mitigation measures beyond those described in the PEA are required and are described in this SEA. With the implementation of the applicable avoidance and minimization measures and BMPs in the PEA and the measures specified in this SEA, the Proposed Action would not result in significant impacts.
6 References


Holland, Robert F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Sacramento, California: California Department of Fish and Game.


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Appendix A: Project Maps
Figure 2: Project Location Map
Figure 4: FEMA Floodplain Map

FEMA Floodplain Map
Project ID: HMGP-4344-540-19
Project Name: South Bay Force Main Replacement and Resiliency Project
Subapplicant: Humboldt Community Services District

Figure 7: Vegetation Communities Mapbook (Sheet 2 of 4)
Figure 8: Vegetation Communities Mapbook (Sheet 3 of 4)
Figure 9: Vegetation Communities Mapbook (Sheet 4 of 4)
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Appendix B: Executive Order 11988 and 11990 8-Step Analysis Forms
EXECUTIVE ORDER 11988  
FLOODPLAIN MANAGEMENT – CHECKLIST (44 CFR Part 9)

TITLE: South Bay Force Main Replacement and Resiliency Project

PROPOSED ACTION: Replace 2.1 miles of asphalt-cement (AC) sanitary sewer force main pipeline with high density polyethylene (HDPE) line.

APPLICABILITY:  
Determine whether the proposed action is located in the 100-year floodplain, which includes the Coastal High Hazard Area (500-year floodplain for critical actions)

YES  NO

The proposed action could potentially adversely affect the floodplain or support floodplain development.

Remarks: The project will cross the Elk River using horizontal directional drilling and will require open trenching in wetland areas.

YES  NO

The proposed action could potentially be adversely affected by the floodplain.

Remarks: The project has been designed to accommodate changing groundwater conditions and increased periods of tidal and flood inundation.

IF ANSWER IS NO, REVIEW IS COMPLETED, OTHERWISE CONTINUE WITH Step 1.

STEP NO. 1  
Determine whether the proposed action is located in the 100-year floodplain, which includes the Coastal High Hazard Area (500-year floodplain for critical actions);

LOCATION (lat/long):

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<th>Component</th>
<th>Latitude, Longitude</th>
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<tr>
<td>Project mid-point</td>
<td>40.75138889, -124.19805556</td>
</tr>
<tr>
<td>Project end</td>
<td>40.73666667, -124.20722222</td>
</tr>
</tbody>
</table>

Flood Hazard data available (check the box that applies)

YES  NO  

YES  NO  
The project is located in a 500 Year floodplain as mapped by FIRM Panel No. , Dated .

YES  NO  
The project is located in a floodplain as mapped by a FEMA draft/preliminary study. Name Dated .
The project is located in a floodplain as mapped by another Agency (State, Corps, USGS, NRCS, local community, etc.)
Agency Name: Dated:

The project is outside the floodplain but has potential to affect floodplain, including support of floodplain development.

### Flood Hazard data not available

The proposed action is subject to flooding based on evaluation from soil surveys, aerial photos, site visits and other available data. Evaluation material used in determination:

FEMA assumes the proposed action is subject to flooding based upon previous flooding of the facility/structure.

**IF ANY OF THE ANSWERS ARE YES, CONTINUE WITH THE REVIEW, OTHERWISE REVIEW IS COMPLETE.**

**REVIEW CRITERIA:** Determine the appropriate level of review and applicable review steps required

### CRITICAL ACTION:

- **YES** Review against 500 Year floodplain
- **NO** Review against 100 Year floodplain

### FLOODWAY/COASTAL HIGH HAZARD ZONE

- **YES** The proposed action is located in a floodway or coastal high hazard area (full 8 step process is required).

**Source, other than FIRM:**

Mark the review steps required per applicability:

- 1, 4, 5, 8 (44 CFR Part 9.5 (g))
- 1, 2, 4, 5, 8 (44 CFR Part 9.5 (d))
- All steps

### STEP NO. 2

**Notify the public at the earliest possible time of the intent to carry out an action in a floodplain, and involve the affected and interested public in the decision-making process.**

- **YES** Notice was provided as part of a disaster cumulative notice.
- **NO** Project Specific Notice was provided by: FEMA

**Type of Public Notice:**

- Newspaper, (name: )
- Post Site, (location: )
- Broadcast, (station: )
- Direct Mailing, (area: )
- Public Meeting, (dates: )
- Other:
STEP NO. 3  Identify and evaluate practicable alternatives to locating the proposed action in a floodplain (including alternatives sites, actions and the "no action" option). If a practicable alternative exists outside the floodplain, FEMA must locate the action at the alternative site.

Alternative Options

☐ YES ☐ NO  Is there a practicable alternative site location outside of the 100-Year floodplain?

   Site location:

☐ YES ☐ NO  For Critical Actions, is there a practicable alternative site location outside of the 500-Year floodplain?

   Site location:

☐ YES ☐ NO  Is there a practicable alternative action outside of the 100-Year floodplain that will not affect the floodplain?

   Alternative action:

☐ YES ☐ NO  Is the NO Action alternative the most practicable alternative?

Remarks:

Two alternatives were explored to address the damage to the existing sewer force main caused by flooding and groundwater intrusion. Pursuing an adjacent restoration project instead of the proposed project could provide additional floodplain protection benefits; however, this alternative would only partially alleviate potential impacts to the existing AC pipeline resulting from sea level rise. The project as proposed was considered to be the most effective alternative for increasing the resiliency of the pipeline. If no action is taken, large flood events and increasing levels of groundwater intrusion would continue to damage the existing AC force main and would eventually result in its failure. Since the pipeline is a critical piece of infrastructure that services 1,237 residential connections and 49 commercial/industrial connections, complete replacement is considered to be the most effective and feasible alternative.

IF ANY ANSWER IS YES, THEN FEMA SHALL TAKE THAT ACTION AND THE REVIEW IS CONCLUDED.

FLOODWAY

☐ YES ☐ NO  Is the action new construction (i.e. construction of new structure, demolition/ rebuilding, reconstruction, replacement) or substantial improvement (for structures damaged in equal or excess of 50% of its market value or the total replacement cost of the structure)?

☐ YES ☐ NO  If Yes, is the action a functional dependent use (cannot perform its intended purpose unless it is located or carried out in close
proximity to water) or a facility or structure that facilitates open space use?

If Yes, explain:

**If No, FEMA cannot fund this action.**

☐ YES ☐ NO Is the action an alteration of a structure or facility listed on the National Register of Historic Places or a State Inventory of Historic Places?

If Yes, then this is not substantial improvement and the action may proceed as long as it does not cause any increase of flood levels within the community during the occurrence of the base flood discharge.

**COASTAL HIGH HAZARD ZONE**

☐ YES ☐ NO Is the action new construction (i.e. construction of new facility or structure, demolition/ rebuilding of facilities or structures, reconstruction of facilities or structures, replacement of facilities or structures)?

☐ YES ☐ NO If Yes, is the action a functional dependent use (cannot perform its intended purpose unless it is located or carried out in close proximity to water) or a facility or structure that facilitates open space use?

If Yes, explain:

**If No, FEMA cannot fund this action.**

Remarks: Questions related to floodway/CHHA are not applicable for this project as the project area is not within a floodway or coastal high hazard area.

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**STEP NO. 4**

Identify the potential direct and indirect impacts associated with the occupancy or modification of floodplains and the potential direct and indirect support of floodplain development that could result from the proposed action. 44CFR Part 9.10

☐ YES ☐ NO Is the Proposed Action based on incomplete information?

☐ YES ☐ NO Is the proposed action in compliance with the NFIP?

☐ YES ☐ NO Does the proposed action increase the risk of flood loss?

☐ YES ☐ NO Has the facility been damaged before from a Presidentially declared flooding event?

☐ YES ☐ NO Will the proposed action result in an increased base discharge or increase the flood hazard potential to other properties or structures?

☐ YES ☐ NO Does the proposed action minimize the impact of floods on human health, safety and welfare?
Will the proposed action induce future growth and development, which will potentially adversely affect the floodplain?  

☐ YES  ☒ NO

Does the proposed action involve dredging and/or filling of a floodplain?  

☐ YES  ☒ NO

Will the proposed action result in the discharge of pollutants into the floodplain?  

☐ YES  ☒ NO

Does the proposed action avoid long and short-term adverse impacts associated with the occupancy and modification of floodplains?  

☒ YES  ☐ NO

Will the proposed action result in any indirect impacts that will affect the natural values and functions of floodplains?  

☐ YES  ☒ NO

NOTE: If wetlands are near or potentially affected, refer review to the Environmental Section.

Will the proposed action forego an opportunity to restore the natural and beneficial values served by floodplains?  

☐ YES  ☒ NO

Does the proposed action restore and/or preserve the natural and beneficial values served by floodplains?  

☒ YES  ☐ NO

Will the proposed action result in an increase to the useful life of a structure or facility?  

☐ YES  ☒ NO

Will the action encroach on the Floodway in manner that causes any increase of flood levels within the community during the occurrence of the base flood discharge?  

☐ YES  ☒ NO

Remarks: The project would require HDD, open trenching, and staging in special flood hazard areas designated Zone AE, as identified on FIRM Map Panel Numbers 06023C0839G and 06023C1005G, dated June 21, 2017. Once all construction work is complete, site restoration would take place. Following the completion of construction activities, staging areas and equipment would be removed and the project area would be restored by replacing excavated soils to backfill trenches and revegetate disturbed areas and staging areas with native seed mix. Restoration would reduce long-term erosion impacts and preserve the natural values of the floodplain.

STEP NO. 5 Minimize the potential adverse impacts and support to or within floodplains to be identified under Step 4, restore and preserve the natural and beneficial values served by floodplains.

☒ YES  ☐ NO

Were flood hazard reduction techniques (see technical bulletins) applied to the proposed action in the Scope of Work to minimize the flood impacts if site location is in the 100-Year floodplain?  

Note: New construction or substantial improvement of a structure (i.e. walled or roofed building) requires elevation or flood proofing (non-residential), except for listed Historic Structures.
If No, Identify Flood Hazard Reduction Techniques required as a condition of the grant:

☑️YES ☐NO

Were avoidance and minimization measures applied to the proposed action in the Scope of Work to minimize the short and long term impacts on the floodplain?

If No, identify measures required as a condition of the grant:

☑️YES ☐NO

Were measures implemented to restore and preserve the natural and beneficial values of the floodplain.

If No, identify measures required as a condition of the grant:

FLOODWAY/COASTAL HIGH HAZARD ZONE

☐YES ☐NO

Is there a practicable alternative site location or action outside of the Floodway (but within the floodplain)?

Site location:

☐YES ☐NO

Can the facility be relocated to minimize impacts within the coastal high hazard area (CHHA) that will not affect the Floodway or CHHA?

Alternative action:

☐YES ☐NO

Are functionally dependent new construction in the CHHA elevated on adequately anchored pilings or columns such that lowest portion of the structural members of the lowest floor are above base flood elevation.

The use of fill for elevation is prohibited in the CHHA.

Remarks: The project would require HDD, open trenching, and staging in special flood hazard areas designated Zone AE, as identified on FIRM Map Panel Numbers 06023C0839G and 06023C1005G, dated June 21, 2017. Once all construction work is complete, site restoration would take place. Following the completion of construction activities, staging areas and equipment would be removed and the project area would be restored by replacing excavated soils to backfill trenches and revegetate disturbed areas and staging areas with native seed mix. Restoration would reduce long-term erosion impacts and preserve the natural values of the floodplain. The project area is not within a floodway or coastal high hazard area.

STEP NO. 6

Reevaluate the proposed action to determine first, if it is still practicable in light of its exposure to flood hazards, the extent to which it will aggravate the hazards to others, and its potential to disrupt floodplain values and second, if alternatives preliminarily rejected at Step 3 are practicable in light of the information gained in Steps 4 and 5. FEMA shall not act in a floodplain unless it is the only practicable location.
☑ YES ☐ NO The action is still practicable at a floodplain site in light of the exposure to flood risk and ensuing disruption of natural values;

☐ YES ☐ NO The floodplain site is the only practicable alternative.

☑ YES ☐ NO There is no potential for limiting the action to increase the practicability of previously rejected non-floodplain sites and alternative actions.

☐ YES ☐ NO Minimization of harm to or within the floodplain can be achieved using all practicable means.

☑ YES ☐ NO The action in a floodplain clearly outweighs the requirement of E.O. 11988.

Note: Careful consideration needs to be applied for facilities repetitively damaged.

Remarks: Project alternatives would not provide adequate safeguard against damage from flooding or groundwater intrusion. The proposed improvements associated with the Proposed Action would effectively reduce the risk of damages and substantially reduce the need for maintenance and repairs.

IF ANY ANSWER IS NO, THEN FEMA SHALL NOT TAKE THE ACTION AND THE REVIEW IS CONCLUDED.

STEP NO. 7 Prepare and provide the public with a finding and public explanation of any final decision that the floodplain is the only practicable alternative.

☑ Final Notice was provided as part of the floodplain notice. See EO 11988 checklist.

☐ Notice was provided as part of a disaster cumulative notice.

☐ Project Specific Notice was provided by: FEMA

Type of Public Notice:

☐ Newspaper, (name: )

☐ Post Site, (location: )

☐ Broadcast, (station: )

☐ Direct Mailing, (area: )

☐ Public Meeting, (dates: )

☐ Other:

Date of Public Notice: January 23, 2018
After providing the final notice, FEMA shall, without good cause shown, wait at least 15 days before carrying out the proposed action.

STEP NO. 8 Review the implementation and post-implementation phases of the proposed action to ensure that the requirements stated in Section 9.11 are fully implemented. Oversight responsibility shall be integrated into existing processes.

☐ YES ☐ NO Was Grant conditioned on review of implementation and post-implementation phases to insure compliance of EO 11988?

The following conditions are not reflected in the Scope of Work and are required:

This project is in compliance with the provisions outlined in Section 9.11. No additional conditions are required in the Scope of Work to meet the General and Minimization provisions included in Section 9.11 (b) and (c).
EXECUTIVE ORDER 11990
WETLANDS MANAGEMENT – CHECKLIST (44 CFR Part 9)

TITLE: South Bay Force Main Replacement and Resiliency Project

PROPOSED ACTION (description):
Replace 2.1 miles of asphalt-cement (AC) sanitary sewer force main pipeline with high density polyethylene (HDPE) line.

APPLICABILITY: Actions which have the potential to affect wetlands or their occupants, or which are subject to potential harm by location in wetlands.

☑ YES ☐ NO The proposed action could result in the destruction or modification of wetlands and the direct or indirect support of new construction in wetlands.

Remarks:
The Proposed Action would require open trenching, HDD, and staging in areas identified as freshwater and emergent wetland and freshwater forested/shrub wetlands, as mapped.

IF ANSWER IS NO, REVIEW IS COMPLETED, OTHERWISE DETERMINE APPROPRIATE LEVEL OF REVIEW AND REVIEW STEPS REQUIRED

Mark the review steps required per applicability:
☐ Steps: 1,4,5,8 (44 CFR Part 9.5 (g))
☐ Steps: 1,2,4,5,8 (44 CFR Part 9.5 (d))
☐ All steps

STEP NO. 1 Determine whether the proposed action is located in a wetland):

LOCATION (lat/long): Mid-point: 40.75138889, -124.19805556

Wetland data available (check the box that applies):

☑ YES ☐ NO The project is located in a wetland defined by a USFWS wetland inventory map. Date information accessed: 9/21/19

☑ YES ☐ NO The project is located in a wetland as mapped by another Agency (State, Corps, USGS, NRCS, local community, etc.) Agency Name:

Date information accessed:

1 “New construction in wetlands” includes draining, dredging, channelizing, filling, diking, impounding, and related activities and any structures or facilities.
The project is located in a wetland as observed through an in-situ analysis performed by a qualified individual for wetlands characteristics. Date wetland identified:

☐ YES  ☐ NO

The project is outside a wetland but has potential to result in indirect impacts\(^2\) on wetlands, including support of floodplain development.

Wetland data not available:

☐ YES  ☐ NO

The proposed action may affect a wetland based on evaluation from soil surveys, aerial photos, site visits and other available data. Evaluation material used in determination:

☐ YES  ☐ NO

FEMA assumes the proposed action may affect a wetland based upon previous data of the facility/structure.

IF ANY OF THE ANSWERS ARE YES, CONTINUE WITH THE REVIEW, OTHERWISE REVIEW IS COMPLETE.

STEP NO. 2

Notify the public at the earliest possible time of the intent to carry out an action in or affecting a wetland, and involve the affected and interested public in the decision-making process.

☐ Notice was provided as part of a disaster cumulative notice.

☐ Project Specific Notice was provided by: FEMA

Type of Public Notice:

☐ Newspaper  Name:

☐ Post Site  Location:

☐ Broadcast  Station:

☐ Direct Mailing  Area:

☐ Public Meeting  Dates:

☐ Other:

Date of Initial Public Notice:  December 5, 2017

\(^2\) "Indirect Impacts" means an indirect result of an action whenever the action induces or makes possible related activities which effect the natural values and functions of wetlands. Such impacts occur whenever these values and functions are potentially affected, either in the short- or long-term, as a result of undertaking an action.
STEP NO. 3  Identify and evaluate practicable³ alternatives to locating the proposed action in a wetland (including alternatives sites, actions and the "no action" option). If a practicable alternative exists outside the wetland, FEMA must locate the action at the alternative site.

Alternative Options:

☐ YES  ☐ NO  Is there a practicable alternative site location outside of the wetland?

Site location:

☐ YES  ☐ NO  Is there a practicable alternative action outside of the wetland that will not affect the wetland?

Alternative action:

☐ YES  ☐ NO  Is the NO Action alternative the most practicable alternative?

Remarks:  Two alternatives were explored to address the damage to the existing sewer force main caused by flooding and groundwater intrusion. Pursuing an alternative which would be as low in cost as possible and have the least adverse environmental impact.

IF ANY ANSWER IS YES, THEN FEMA SHALL TAKE THAT ACTION AND THE REVIEW IS CONCLUDED.

STEP NO. 4  Identify the potential direct and indirect adverse impacts associated with the occupancy or modification of wetlands and the potential direct and indirect support of wetland development that could result from the proposed action.

☐ YES  ☐ NO  Would the proposed action induce future growth and development, which could potentially adversely affect the wetland?

☐ YES  ☐ NO  Does the proposed action involve dredging and/or filling of a wetland?

☐ YES  ☐ NO  Would the proposed action result in the discharge of pollutants into the wetland?

☐ YES  ☐ NO  Does the proposed action avoid long and short-term adverse impacts associated with the occupancy and modification of wetland?

☐ YES  ☐ NO  Would the proposed action result in any indirect impacts that could affect the natural values and functions of wetlands?

☐ YES  ☐ NO  Would the proposed action forego an opportunity to restore the natural and beneficial values served by a wetland?

³“Practicable” means capable of being done within existing constraints. The test of what is practicable depends upon the situation and includes consideration of all pertinent factors, such as environment, cost and technology.
Disaster/Program: Hazard Mitigation Grant Program  
Project No.: 4344-540-19
Reviewer: Jacqueline Markley  
Date: 9/18/19

Does the proposed action restore and/or preserve the natural and beneficial values served by wetland?  
☐ YES  ☐ NO

Would the proposed action result in an increase to the useful life of a structure or facility?  
☐ YES  ☐ NO

Would the proposed action affect the factors relevant to the survival and quality of wetlands such as public health, safety, and welfare; pollution; flood and storm hazards; sediment and erosions; and maintenance of natural systems; and other uses of wetlands in the public interest (see 44 CFR Part 9.10(d)(3).  
☐ YES  ☐ NO

Remarks: The project would cross the Elk River using HDD and would require open trenching and staging in wetland areas. Once all construction work is

STEP NO. 5  
Minimize the potential adverse impacts and support to or within wetlands to be identified under Step 4, preserve and enhance the natural and beneficial values served by wetlands.

Were avoidance and minimization measures applied to the proposed action in the Scope of Work to minimize the short and long term impacts on the wetland?  
☐ YES  ☐ NO

If No, identify measures required as a condition of the grant:

Avoidance and minimization measures were applied to the Proposed Action to minimize the long- and short- term impacts on wetlands.

Were measures applied to the proposed action in the Scope of Work to restore and preserve the natural and beneficial values of the wetland.  
☐ YES  ☐ NO

If No, identify measures required as a condition of the grant:

Measures were also applied to the Proposed Action to restore and preserve the natural and beneficial values of the wetland resources.

STEP NO. 6  
Reevaluate the proposed action to determine first, if it is still practicable, the extent to which it will aggravate the hazards to others, and its potential to disrupt wetland values and second, if alternatives preliminarily rejected at Step 3 are practicable in light of the information gained in Steps 4 and 5. FEMA shall not act in a wetland unless it is the only practicable location.

The action is still practicable at a wetland site.  
☐ YES  ☐ NO

The wetland site is the only practicable alternative.  
☐ YES  ☐ NO

The proposed action cannot be limited to increase the practicability of previously rejected non-wetland sites and alternative actions.  
☐ YES  ☐ NO

The action in a wetland clearly outweighs the requirement of E.O. 11990.  
☐ YES  ☐ NO
IF ANY ANSWER IS NO, THEN FEMA SHALL NOT TAKE THE ACTION AND THE REVIEW IS CONCLUDED.

STEP NO. 7

Prepare and provide the public with a finding and public explanation of any final decision that the wetland is the only practicable alternative.

☐ Final Notice was provided as part of the floodplain notice.

☐ Notice was provided as part of a disaster cumulative notice.

☐ Project Specific Notice was provided by: FEMA

Type of Public Notice:

☐ Newspaper Name:

☐ Post Site Location: https://www.fema.gov/disaster/notices/initial-public-net

☐ Broadcast Station:

☐ Direct Mailing Area:

☐ Public Meeting Dates:

☐ Other:

Date of Public Notice: January 23, 2018

Note: Ensure that a proof of publication of the notice is provided to FEMA

After the final notice is published, FEMA shall, without good cause shown, wait at least 15 days before carrying out the proposed action. E.O. 11988 and 11990 Notices should be combined.

STEP NO. 8

Review the implementation and post-implementation phases of the proposed action to ensure that the requirements stated in Section 9.11 are fully implemented. Oversight responsibility shall be integrated into existing processes.

☐ YES ☐ NO Was Grant conditioned on review of implementation and post-implementation phases to insure compliance of E.O. 11990?

The following conditions are not reflected in the Scope of Work and are required (include identification of the entity responsible for implementing the condition): Compliance with the conditions outlined in the USACE Nationwide Permit No. 18: Minor Discharges.