

**APPENDIX D**  
**8-Step Narrative**

# EXECUTIVE ORDER 11988 and 11990 8-STEP PROCESS NARRATIVE

## St. Croix Coastal Interceptor Relocation Project

### St. Croix, United States Virgin Islands

#### Project ID: PDMC-PJ-02-VI-2014-002

#### Project Description:

The Department of Homeland Security-Federal Emergency Management Agency (DHS-FEMA) is proposing to provide funding from its Pre-Disaster Mitigation Competitive (PMDC) Grant Program to the Virgin Islands Waste Management Authority (VIWMA) for the relocation of the coastal interceptor in St. Croix, Virgin Islands.

The coastal interceptor is a 30-inch diameter line that transports sewage from the La Grande Princess area to the LBJ Pump Station in the La Grande Princess and Golden Rock areas northwest of the town of Christiansted on the island of St. Croix. In recent years, the coastline has eroded due to storm surge and wave action during numerous hurricane events. With this coastline erosion, approximately 1,918 feet of a 2,200-foot section of the coastal interceptor is now submerged in the sea. As the line is submerged, there has been an increase of inflow of sea water, sand, sea shells, and other ocean debris into the sewer system. The sand and debris in the system cause excessive wear and tear to the pump, significantly reducing the life cycle of the pumps and reliability of the pump station. Leakage of the line into the marine habitat is also denoted by the marked growth of eutrophic algae along the submerged section of the line. The mixture of wastewater leaking from the Coastal Interceptor and sea water contributes to the elevated bacteria found when the beach water is tested by the Virgin Islands Department of Planning and Natural Resources. When the water quality of the beach is compromised, the beach is closed and swimming is prohibited.

To reduce this inflow and outflow, VIWMA will relocate a portion of the coastal interceptor further inland. VIWMA has completed the preliminary design, but will advertise and award a design-build contract for the final design. The proposed scope of work includes:

- install 200 feet of new 30-inch gravity line from manhole (MH) 0432 to a new lift station with required mechanical, structural, instrument, and electrical systems;
- install 2,300 feet of new force 6-inch main piping with air release valves between the lift station and a new transition manhole
- install new transition manhole with 600 feet of new 30-inch gravity line;
- rehabilitate two (2) manholes (MH 0432 and MH 0439) to include the existing walls; and
- install two (2) lateral connections to reconnect current users

Once the rerouted line is in place, approximately 2,200 feet between MH 0432 and MH 0439 of piping will be cleaned and abandoned in place. Six manholes will be demolished. At each manhole, the ends of the sewer line would be capped off and the base would be filled with concrete flow fill. The remaining walls and top of manhole would be demolished in pieces, carried out of the water by hand, and placed in a truck for disposal. To minimize environmental impacts, all demolition would be executed with hand tools. The end product would result in a filled concrete top of structure located two (2) feet below the sea floor.

VIWMA will not acquire any land in order to carry out the proposed action but will secure easements from four (4) property owners. Inspection and acceptance of work, will be performed by the VIWMA Division of Engineering and VIWMA Division of Operations during and upon completion of the project.

## **8-Step Narrative:**

### *Step 1: Determine Proposed Action Location*

Per FIRM Panel Number 7800000071G, effective April 16, 2007, the existing coastal interceptor is located within an AE Zone (base flood elevations vary between 11 – 16). The route of proposed relocated line is primarily located outside of the floodplain, although MH 0432 and MH 0439, as well as small sections (approximately 20 feet and 30 feet respectively) of the immediate gravity lines connecting to the MHs, are located within the AE Zone (EI 12). The repair and replacement of the sewer line would be a critical action as defined at 44 CFR § 9.4, as a critical component of wastewater treatment to the community; therefore, impacts to and by the 500-year floodplain are considered in accordance with EO 11988 and 44 CFR Part 9.

Per the U.S. Fish and Wildlife Service National Wetlands Inventory, the submerged portion of the coastal interceptor is located within marine wetland. The new lift station, gravity lines, force main, rehabilitated manholes, and new transition manhole are not located within a wetland.

### *Step 2: Early Public Notice*

An Environmental Assessment was made available for public comment, and was advertised through a Public Notice placed in the local paper of record, the *St. Croix Avis*.

### *Step 3: Identify Practicable Alternatives*

- 1) The No Action Alternative would provide no repair or relocation of the coastal interceptor, and would continue to place human health and safety at risk.
- 2) Alternative 1: The proposed action to relocate the coastal interceptor is the only practicable alternative.

### *Step 4: Identify Potential Impacts*

The demolition/abandonment of the existing sewer line and the cleaning and collapsing of the six existing manholes will all occur directly in the floodplain and wetland. With the exception of MH 0432 and MH0439 and the immediate adjoining portions of the gravity lines (approximately 20 feet and 30 feet respectively), the relocated coastal interceptor will be removed from the floodplain.

The proposed project will not change the capacity of the existing sewer line. The project will remove approximately 1,900 feet of line from the marine habitat. The project will improve marine quality which has sometime been compromised by bacteria, resulting in the closing of the beach and prohibition of swimming. Once the manholes are collapsed below the seabed, the project will also result in the spreading of seagrass into their footprints and the halos around to provide additional forage habitat for endangered turtles that may be found in the area.

The sewer line relocation and enhanced beach area from the removal of the manholes may spur development of the vacant Turquoise Bay property.

Manholes 0432 and 0439 could be affected by future sea level rise.

*Step 5: Minimize Adverse Impacts*

Relocation of the line predominantly outside the floodplain would minimize risk of coastal storm damage to the facility. The line is functionally dependent upon a location near the service area.

The project will be constructed using best management practices (BMP). Prior to demolition of the existing line, the line will be cleaned using water. No chemicals will be used during this process. Cleaning of the line will also remove any contaminants from the line and will not be released into the wetland/floodplain. All work that occurs in water will occur by hand. Manholes will be demolished in pieces, carried out of the water by hand, and placed in a truck for disposal. Turbidity curtains will be installed around the manholes identified to be demolished and will contain the dispersion of any floating debris or silt in the water. The curtain anchors will be placed to avoid impact to submerged aquatic vegetation.

*Step 6: Reevaluate Alternatives*

Re-evaluation of the proposed action confirms that this is the only practicable action and location. The proposed action effectively removes the coastal interceptor from the floodplain and wetlands, and any impacts to the floodplain and wetland which may occur during demolition of the existing line have been minimized. By predominantly removing the coastal interceptor from the floodplain and wetland, the water quality of Christiansted Harbor will improve. The proposed action will also result in a decrease of coastal erosion of the seagrass beds which have colonized the inshore area around the existing manholes and will eliminate an eyesore at the beach. The project would provide a more resilient facility to deliver wastewater services to the community in the future. The public benefits of the project outweigh the minor risks (see Step 4) associated with the partial floodplain occupancy.

*Step 7: Final Public Notice*

The anticipated Finding of No Significant Impact will serve as the final notice for this project with the explanation that this is the only practicable alternative.

*Step 8: Implement Action*

The requirements of 44 CFR Part 9.11 are fully implemented by the proposed action.