

# Mastic Beach 8-STEP

Floodplain Management & Wetlands Protection  
Determination

**FLOODPLAIN AND WETLAND 8-STEP PROCESS AND DETERMINATION  
IN ACCORDANCE WITH EXECUTIVE ORDER 11988: FLOODPLAIN  
MANAGEMENT AND EXECUTIVE ORDER 11990: WETLANDS  
Mastic Beach Drainage Improvements Project  
Hamlet of Mastic Beach, Town of Brookhaven, Suffolk County New York**

New York State Governor's Office of Storm Recovery  
U.S. Department of Housing and Urban Development  
Community Development Block Grant – Disaster Recovery Funding

*December 24, 2019*

**Introduction & Overview**

The purpose of Executive Order 11988, Floodplain Management, is “to avoid to the extent possible the long- and short-term adverse impacts associated with occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.” The purpose of EO 11990 Protection of Wetlands is “to avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative.” This report contains the analysis prescribed by 24 CFR Part 55.

The Project involves U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant Program – Disaster Recovery (CDBG-DR) funding for the replacement of drainage infrastructure at multiple locations within Mastic Beach, New York. The analysis that follows focuses on the direct wetland and floodplain impacts associated with this project. Based on the type of land use, facility, and other case characteristics described herein, it is concluded that there is a reasonable basis to proceed with funding for this project/ activity within floodplain and wetland. The HUD CDBG-DR funding is administered through the New York State Rising Community Reconstruction (NYRCR) Program which is using bottom-up community participation and State-provided technical expertise to develop resilient and sustainable communities. Thus, alternatives preventing or impeding the development of resilient and sustainable communities are not considered reasonable alternatives.

**Description of Proposed Action & Land Use**

The Mastic Beach Drainage Improvements Project (Project) will involve drainage improvements at eight (8) locations (Project Sites) within the census-designated place of Mastic Beach, Town of Brookhaven, Suffolk County, New York.

The proposed Project will improve the ability of existing drainage systems to manage stormwater runoff and prevent backflow of seawater into the systems. Drainage systems are located along and adjacent to existing roadways that are primarily in residential areas. Contractor staging and storage areas will be coordinated with the Town of Brookhaven.

The individual sites and the improvements proposed at each site are described below.

Gooseberry Road (DS-11): Removal and replacement of approximately 400 linear feet (LF) of existing drainage pipe and four (4) inlets within the existing road surface and installation of new 15-inch HDPE pipe, four (4) high knock-out catch basins, an 18-inch Tideflex check valve, and new 129 LF 18-inch HDPE with 80 square foot rip-rap pad in vegetated wetlands; re-sizing and adjusting pipe invert elevations to improve system conveyance capacity; and restoring asphalt pavement and grassy areas to match existing

conditions. Installing rip-rap apron at discharge point and creation of a new wetland mitigation area to offset the permanent impacts of the rip-rap apron.

Maywood Drive (DS-12): Removal and replacement of approximately 1,415 LF of existing 12-inch corrugated metal pipe and 15 associated drainage inlets within existing road surface and install new 15-inch reinforced concrete pipe/HDPE and 16 high knock-out catch basins; re-sizing and adjusting pipe invert elevations to improve system conveyance capacity; restoring pavement to match existing conditions.

Hickory Road, Laurelton Drive, Park Place, and Huntington Drive (DS-13): Removal and replacement of approximately 2,000 LF of existing drainage pipe and 23 inlets within or adjacent to the existing road surface and installation of new 15 to 18-inch reinforced concrete and HDPE pipes, 26 high knock-out catch basins/drainage manholes, and an 18-inch Tideflex check valve; re-sizing and adjusting pipe invert elevations to improve system conveyance capacity; installation of a check valve prior to outfall into downstream waterbody.

Riviera Drive, Blue Point Road, Bellport Road, Montauk Drive, and Floral Drive (DS-14, DS-15, DS-16, and DS-17): Removal and replacement of existing drainage structures and installation of Tideflex check valves at six sites on or adjacent to Riviera Drive; re-sizing and adjusting pipe invert elevations to improve system conveyance capacity; installation of a check valve prior to outfall into downstream waterbody; restoring pavement to match existing conditions. Replacement structures will include 25 LF of reinforced concrete pipe and six (6) inlet structures. New structures include two (2) proposed 15-inch Tideflex check valves, three (3) proposed 12-inch Tideflex check valves, and one (1) proposed Tideflex check valve of currently undetermined size. All structures will be located under existing asphalt surface of Riviera Drive and surrounding crossroads.

Neighborhood Road (DS-24): Removal and replacement of approximately 300 LF of existing 15-inch reinforced concrete pipe and associated drainage inlets; re-sizing and adjusting pipe invert elevations to improve system conveyance capacity; and installation of a water quality treatment device prior to discharge into downstream water body; restoring pavement, sidewalk and curb to match existing conditions. Curb ramps will be installed to meet ADA requirements.

The Project will involve less than 0.1 acre of temporary wetland disturbance, which will be restored by re-grading the disturbed area to original contours and re-planting hydrophytic and salt-tolerant vegetation. The Project will involve less than 0.1 acre of permanent wetland impacts associated with the installation of an approximately 80 square-foot (SF) rock apron, which will be mitigated by the creation of a 240 SF wetland mitigation area in existing uplands by lowering grade to elevation 2.5 feet and re-planting and re-seeding using native wetland vegetation. Best management practices (BMPs), such as the installation of silt fence and drainage inlet sediment bags, will be employed during construction to prevent detrimental environmental impacts. During the course of construction, erosion and sediment control measures will be utilized to prevent the discharge of sediment from the project site. Temporary stockpiling, staging, or storage of equipment will not occur in wetland areas.

Due to shallow groundwater elevations influenced by tidal cycles, temporary dewatering activities are anticipated throughout the Project area during construction. All dewatering operations will be conducted in accordance with all applicable regulations and permitting requirements.

#### **Applicable Regulatory Procedure Per EO 11988**

The proposed action corresponds with a noncritical action not excluded under 24 CFR §55.12(b) or (c). Funding is permissible for the use in the floodplain if the proposed action is processed under §55.20 and the findings of the determination are affirmative to suggest that the project may proceed.

Based on data provided in **Appendix I**, including online data managed and updated by the U.S. Fish & Wildlife Service (USFWS) and New York Department of Environmental Conservation (NYSDEC), there are mapped wetlands in the Project area. Based on data provided in **Appendix II**, including online data managed and updated by the Federal Emergency Management Agency (FEMA), the Project is located in the 100-year floodplain. According to 24 CFR §55, the activity is planned to occur in a community that is in the regular program of the National Flood Insurance Program (NFIP) and the community is currently in good standing. Substantial Improvement/ Substantial Damage calculations do not apply to the Project. The Project involves modification of the 100-year floodplain and new construction in wetlands; therefore, the decision making steps in §5.20 (b), (c), and (g) apply to the Project. As such, the full eight-step floodplain determination process in §55.20 is required and the following analysis examines each step in a floodplain management determination process.

***Step 1. Determine Whether the Proposed Action is Located in the 100-year Floodplain (500-year for Critical Actions) or results in New Construction in Wetlands.***

Per the USFWS National Wetlands Inventory, there are Riverine, Estuarine and Marine wetlands and Freshwater Forest Shrub Wetlands on, or immediately adjacent to, the proposed Project Area (*Appendix I*). This proposed action requires a Section 404 permit under the Clean Water Act (see 55.20(a)(1)); however, this work will likely be permitted through a nationwide permit rather than an individual Section 404 permit. The locations of the Project Sites, per the FEMA National Flood Hazard Layer map, are within the 100-year floodplain (SFHA - AE Zone), as shown in *Appendix II*. There is an established Base Flood Elevation (BFE) of approximately 6 to 8 feet across the Project area.

***Step 2. Initiate Public Notice for Early Review of Proposal.***

Because the proposed Project is located in floodplain and wetlands, the Governor's Office of Storm Recovery (GOSR) published an early notice that allowed for public and public agency input on the decision to provide funding for reconstruction and development activities. The early public notice and 15-day comment period is complete. No public comments were received.

The early notice and corresponding 15-day public comment period started on December 26, 2018 with the "Early Notice of a Proposed Project in a 100-Year Floodplain and Wetland" being published in the South Shore Press newspaper, with the 15-day period expiring on January 10, 2019. The notice targeted local residents, including those in the floodplain. The notice was also sent to the relevant state and federal agencies on December 26, 2018: Federal Emergency Management Agency (FEMA); U.S. Dep. of Housing and Urban Development; NYSDEC; NYS Historic Preservation Office; and New York State Office of Emergency Management. The notice was also sent to Suffolk County and the Town of Brookhaven. See **Appendixes III** and **IV** of this Wetlands Protection and Floodplain Management Determination for the letter distributed to these agencies and the associated newspaper notice affidavit.

***Step 3. Identify and Evaluate Practicable Alternatives to Locating the Proposed Action in a 100-year Floodplain or Wetland.***

The New York State Rising Community Reconstruction Program is structured to provide eligible communities resources and expertise to build communities resilient to future flooding events. This community was impacted by Superstorm Sandy, which brought rain, wind, and record- high storm surge that flooded much of the Community. In addition to flooding, trees were downed, power was lost, and homes were damaged.

Suffolk County reported that between 60 and 80 homes in Mastic Beach and Smith Point of Shirley were deemed either unlivable or condemned due to structural damage. Many hundreds more homes were damaged to such an extent that residents could no longer occupy them. Since Mastic Beach does not have sanitary sewers, floodwaters wreaked havoc with residential on- site wastewater systems. The inundation of septic systems rendered many of them inoperable, presenting significant health and safety issues for the

Community. Not only were these systems not functioning, but they were also releasing thousands of gallons of raw, untreated wastewater into the Community and local waterways.

The primary alternative for the current proposed action is the “no action” alternative. This alternative means that there would be no mitigation to the existing Project area and no work would be undertaken to alleviate the flood problem. This would leave the surrounding community vulnerable to future flood damage. The “no action” alternative would provide no protection to the residential neighborhoods and greater community from future flood events, as mitigation would be compromised due to lack of financial support. Thus, the “no action” alternative is not feasible in relation to the desired objective of creating area resiliency to future flooding events.

Due to the number of developed parcels within this Mastic Beach community, prohibition of the proposed stormwater infrastructure repairs and modifications within floodplain and wetland is not practicable.

***Step 4. Identify & Evaluate Potential Direct & Indirect Impacts Associated with Occupancy or Modification of 100-year Floodplain and Potential Direct & Indirect Support of Floodplain and Wetland Development that Could Result from Proposed Action.***

The focus of floodplain evaluation should be on adverse impacts to lives and property, and on natural and beneficial floodplain values. Natural and beneficial values include consideration of potential for adverse impacts on water resources such as natural moderation of floods, water quality maintenance, and groundwater recharge.

According to the FEMA Report - A Unified National Program for Floodplain Management, two definitions commonly used in evaluating actions in a floodplain are “structural” and “non-structural” activities. Per the report, structural activity is usually intended to mean adjustments that modify the behavior of floodwaters through the use of measures such as public works dams, levees and channel work. Non-structural is usually intended to include all other adjustments (e.g., regulations, insurance, etc.) in the way society acts when occupying or modifying a floodplain. These definitions are used in describing impacts that may arise in association with potential advancement of this case.

*Natural moderation of floods*

During Superstorm Sandy, flooding in Mastic Beach occurred due to stormwater runoff and backup of seawater into the stormwater drainage systems. A number of the neighborhoods experienced roadway flooding during the storm that extended onto private properties. Some of the areas continue to flood at higher high tides and during heavy rainfalls. The replacement and installation of stormwater drainage infrastructure is anticipated to alleviate future flooding events by preventing water from backing up behind the existing drainage, allowing water to more efficiently be conveyed to outfall locations.

*Living resources such as flora and fauna*

A potential impact that may arise is that during construction there could be disturbance in the waterbody and the associated wetlands during the drainage replacement. This would be more likely if there are not construction best management practices (BMP) implemented during the construction period and the return of disturbed areas to pre-existing and/or improved conditions upon completion of project activities. However, a qualitative evaluation suggests the potential would be relatively minor, and if such releases do occur, it would likely be part of an area wide impact. Given the nature of the project, the potential for an acute or chronic level of water quality impact from this proposed project is low.

*Impacts to Property & Lives*

The action does present potential to impact residential occupancy of the floodplain, but it does not impact any structures or directly cause modification of the 100-year floodplain. The project will involve ground disturbance in order to replace and/ or upgrade the existing stormwater drainage infrastructure in Mastic

Beach.

According to Suffolk County's [Multi-Jurisdictional Hazard Mitigation Plan](#), 2014, the former Village of Mastic Beach is at risk for occasional hurricanes and severe storms and frequent flooding for flooding, Nor-Easters (page 9.10-3 to 9.10-4). Considering the context of the area, this action represents an activity at eight locations among others that are located within the contiguous floodplain of Narrow Bay. Thus, funding this project/ activity does constitute indirect continued support of floodplain occupancy and development. Moreover, the project will protect the existing surrounding community and municipal infrastructure from future storm and flood events.

The Project will provide funding to address flooding through the upgrading of drainage infrastructure which will allow storm run-off to efficiently convey to downstream outfall locations. In combination with other improvements taking place in Mastic Beach, this project will help alleviate flooding concerns. It is anticipated that the replacement infrastructure will be capable of withstanding the effects of a 100-year storm event and will convey 100-year floodwater events efficiently to outfall locations, which will primarily alleviate flooding of residences and critical community assets.

*Cultural resources such as archaeological, historic & recreational aspects*

The New York State Historic Preservation Office confirmed on October 9, 2018 that there continue to be 'no historic properties affected' by this Project, as documented in **Attachment 10** of the [Mastic Beach Drainage Improvement Projects Environmental Review Record Report](#).

*Agricultural, aquacultural, & forestry resources*

The Suffolk County area has several agricultural sites located in the flood zone, as well as undeveloped woodlands. In December 2013, the Suffolk County Department of Economic Development & Planning released a report entitled, "[The State of the Suffolk County Agriculture Industry](#)" states that Suffolk County is the top region in New York State for the sale of nursery, greenhouse, floriculture and sod which accounts for half of all statewide sales in these products. There is substantial agriculture and fishing industry in Nassau and Suffolk Counties on Long Island, including aquaculture in the form of oyster farming. While there appears to be a higher concentration of aquaculture on Eastern Long Island, per the 2012 State Comptrollers Report [Agriculture in Long Island and Agricultural Production by Commodity Group in Long Island](#) (2007), aquaculture represents 2.9% of the economy at a \$7.5 million sales revenue. It is possible that if there is a materials release from these project locations which are proposed to receive funding support this could contribute to an undefined cumulative influence on degradation of water quality, which in-turn could influence natural resources including agriculture and forestry. It is possible during the short-term construction activities, the disturbance could impact local water quality and this economic sector, although the impact attributable to this use could not be quantitatively derived. However, a qualitative analysis suggests that the impact would be very small as mitigative measures and BMPs will be utilized during construction. Project activities will be completed in accordance with all applicable federal, state and local permit requirements and conditions. Thus, no or minor temporary impacts from the proposed project activities are anticipated.

**Wetland Evaluation**

The purpose of wetland evaluation is to consider factors relevant to a proposal's effect on the survival and quality of the wetland. These factors should include public health (including water supply and water quality), maintenance of natural systems, cost increases attributed to construction in wetland, and other uses of wetland in the public interest.

*Public health, safety, and welfare, including water supply, quality, recharge, and discharge; pollution; flood and storm hazards and hazard protection; and sediment and erosion.*

The Project is located within or immediately adjacent to NWI wetlands that are designated riverine wetlands, estuarine/ marine wetlands, and freshwater forested/shrub wetlands.. The estuarine and marine wetlands are not freshwater wetlands and, therefore, are not directly used for water supply; additionally, the freshwater forested/shrub wetlands are immediately adjacent to the estuarine and marine wetlands, and thus are not utilized for water supply. However, these wetlands along the coast can serve to absorb the force of storm waters and tidal erosion. These areas help protect upland soil and freshwater resources. The scope of work for the Project involves stormwater infrastructure improvements that would alleviate flooding to the surrounding communities. This work involves, amongst other infrastructure improvements, the installation of a new stormwater outfall and protective rip-rap aprons along Gooseberry Road (DS-11) within NWI Estuarine and Marine wetlands. However, a new wetland mitigation area will be created directly east of the new outfall area to offset the permanent impacts of the rip-rap apron. Thus while the rip-rap apron will encroach upon the regulated wetlands, the proposed action will create new wetlands to compensate for the permanent impacts associated with the creation of the rip-rap outfall and will instead help protect the downstream wetlands by preventing erosion associated with the stormwater outlet/outfall. The rip-rap apron will be approximately 80 square-foot (SF) and the newly created mitigation wetland will be approximately 240 SF. Therefore, the Project will result in a net increase in wetland area. The mitigation wetland will be created in existing uplands by lowering grade to elevation 2.5 feet and re-planting and re-seeding using native wetland vegetation.

*Maintenance of natural systems, including conservation and long-term productivity of existing flora and fauna; species and habitat diversity and stability; natural hydrologic function; wetland type; fish; wildlife; timber; and food and fiber resources.*

The proposed action will not significantly affect the natural systems in the vicinity of the Project area. The Project shall comply with all best management practices and permit conditions that are set forth in the applicable federal, state, and local environmental permits, when and as they are acquired. As the work will prevent floodwaters from backing up into the stormwater drainage systems during storm events and allow for more efficient stormwater transport during normal storm events, it is presumed that there will not be new adverse impacts on the existing flora/ fauna, habitat, natural hydrologic function, or natural resources at the location. The Project will involve less than 0.1 acre of temporary wetland disturbance, which will be restored by re-grading the disturbed area to original contours and re-planting hydrophytic and salt-tolerant vegetation. The Project will involve less than 0.1 acre of permanent wetland impacts associated with the installation of an approximately 80 square-foot (SF) rock apron, which will be mitigated by the creation of a 240 SF wetland mitigation area in existing uplands by lowering grade to elevation 2.5 feet and re-planting and re-seeding using native wetland vegetation. Therefore, the Project will result in a net increase in wetland area.

*Cost increases attributed to wetland-required new construction and mitigation measures to minimize harm to wetlands that may result from such use.*

The proposed scope of work involves stormwater infrastructure improvements, including the construction of a new stormwater sewer outfall location and protective rip-rap apron. The rip-rap apron will be constructed within documented NWI wetlands; to compensate for the NWI wetlands lost during the construction of the outfall, a new wetland mitigation area will be constructed immediately east of the outfall location. The wetland mitigation area will be replanted with salt tolerant plants and shrubbery, and all trees located outside the limits of disturbance will be protected during construction. These mitigation measures were built into the proposed Project; consequently, there are no cost increases attributed to additional necessary mitigation measures to minimize harm to wetlands that may result from such use.

*Other uses of wetland in the public interest, including recreational, scientific, and cultural uses.*

According to the Outdoor Industry Association's two page fact sheet New York The Outdoor Recreation Economy, outdoor recreation generates \$338 Billion in consumer spending and 305,000 direct jobs within New York. This is an important sector of the regional and local economy, with the local fisheries and scenic location being an important economic driver for the area. Protecting this area against future flood events would further protect the existing fish and wildlife resources, aesthetic quality, and other cultural and archaeologically significant features in the area.

**Step 5. Where Practicable, Design or Modify the Proposed Action to Minimize the Potential Adverse Impacts To and From the 100-Year Floodplain and to Restore and Preserve its Natural and Beneficial Functions and Values.**

The objective of the project is to improve the existing drainage infrastructure located in Mastic Beach in order to mitigate future flood risk and minimize potential impacts to the surrounding community located within the 100-year floodplain. However, it is still reasonable to promote awareness of future risks of natural hazards, including flooding, plus the physical, social and economic impacts that potential storm events could convey, including the potential for future physical damage to the surrounding property.

**Step 6. Reevaluate the Alternatives and Proposed Action.**

The "no action" alternative for not funding this project would not address the purpose and need of the proposed action. Without the proposed action, the impacted community would be left more susceptible to future flooding events in this area than it would after the implementation of the proposed action. Therefore, the "no action" alternative examined is not considered desirable and the proposed action is still practicable in light of exposure to flood hazards in floodplain, possible adverse impacts on floodplain, the extent to which it may aggravate current hazards to other floodplains, and the potential to disrupt natural and beneficial functions and values of floodplains. Additionally, implementation of the proposed action will abide by all applicable state and local codes for floodplain development. As such, the impact of the proposed action on a floodplain would be less the "no action" alternative.

**Step 7. Issue Findings and Public Explanation.**

It is the finding of this report that there is no better alternative than to provide funding for this drainage improvements Project. Permanent wetland impacts will be mitigated by the creation of a mitigation wetland, which will result in a net increase in wetland area. The proposed Project will improve stormwater collection and will eliminate flooding from stormwater runoff in all but the most severe storm events. The associated risk to public and private assets will be reduced and roadways utilized for evacuation will be made passable and safer. A final notice, formally known as "Final Notice and Public Review of a Proposed Activity in a 100-Year Floodplain and Wetland", was published in accordance with 24 CFR 55, for a 7-day comment period. This public notice was combined with a Notice of Intent to Request Release of Funds. The 7-day comment period started with the Final Notice publishing in the South Shore Press newspaper on December 24, 2019 and the 7-day period expires at 5 pm on January 2, 2020. The notice describes the reasons why the Project must be located in the floodplain and wetlands, alternatives considered, and all mitigation measures to be taken to minimize adverse impacts and preserve natural and beneficial floodplain values.

**Step 8. Continuing Responsibility of Responsible Entity & Recipient.**

The Governor's Office of Storm Recovery (GOSR), operating under the auspices of the New York State Homes and Community Renewal's (NYSHCR) Housing Trust Fund Corporation, is the responsible entity. The responsible entity will make available educational materials regarding best practices for any structures located in floodplains. It is acknowledged there is a continuing responsibility by the responsible entity to ensure, to the extent feasible and necessary, compliance with the steps herein.