NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM (WRP)
CONSISTENCY ASSESSMENT FORM - WRP POLICY QUESTIONS – RESPONSES

For those policies checked Promote or Hinder, on the Consistency Assessment Form, responses are provided below.

WRP POLICY QUESTIONS – RESPONSES

WRP Policy 4: *Protect and restore the quality and function of ecological systems within the New York coastal area.*

The goal of the tentatively selected plan (TSP) is to "restore and sustain a mosaic of habitats within the region, in a cost-effective and socially feasible manner"; therefore, the project is consistent with this policy.

WRP Policy 4.1: *Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas.*

The purpose of this project is to restore coastal habitat, which is in direct accord with this policy. While excavation and grading will occur with restoration activities, all work will be done using best management practices (BMPs) for erosion control. The planting/seeding of native vegetation will replace the existing invasive introduced species.

WRP Policy 4.5: *Protect and restore tidal and freshwater wetlands.*

The project includes the restoration of 4.01 acres of low marsh, 0.41 acres of high marsh, and the conversion of 1.25 acres of mudflats into low salt marsh. Restored wetlands will provide beneficial wildlife habitat and increase native biodiversity in the area; therefore, the project is consistent with this policy.

WRP Policy 4.6: *In addition to wetlands, seek opportunities to create a mosaic of habitats with high ecological value and function that provide environmental and societal benefits. Restoration should strive to incorporate multiple habitat characteristics to achieve the greatest ecological benefit at a single location.*

Flushing Creek is significantly disturbed by anthropogenic impacts. Urban development has artificially straightened the creek, filled wetlands, and reconfigured the headwaters of the creek. Currently, the site has low ecological value suffering from bank erosion, invasive species invasion, low benthic and fish abundance and diversity, and poor water quality. The purpose of the project is to "restore and sustain a mosaic of habitats within the region"; therefore, the project is consistent with this policy.

Additionally, to ensure the most ecologically and economically feasible plan was selected, a comprehensive tiered evaluation plan was used. The Evaluation of Planned Wetlands assessment method was used to characterize the functional capacity of the project site. The assessment results estimate the current resource value and the potential increase in resource value for each alternative restoration plan proposed. Current vegetative communities, tidal patterns, and human use patterns at the project site were observed, documented, and incorporated into an analysis of the existing site and in the selection for the most economically and ecologically beneficial design plan.

WRP Policy 4.7: *Protect vulnerable plant, fish, and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.*

All appropriate federal and state agencies were consulted regarding the documentation of rare, threatened, and endangered species in the project area. Restoration plans have been carefully mapped so as to avoid areas where listed species were found during previous surveys. A final survey of the

restoration site will be performed to ensure that damage to rare plants will be avoided. If protected species are found on site, further protective measures will be considered including but not limited to protection from construction by fencing, or transplanting if the plants are in an unavoidable impact area. Handling of protected species will be coordinated with the New York Natural Heritage Program and New York State Department of Environmental Conservation. Avian species are not expected to be impacted due to their mobile nature. It is expected that listed bird species will fly to another nearby site to forage during construction and planting. Restoration activities in the long term will benefit threatened and endangered species by producing localized environmental enhancements, including improving water quality and creating and restoring habitat, which support an increase in local and regional biodiversity; therefore, the project is consistent with this policy.

WRP Policy 4.8: *Maintain and protect living aquatic resources.*

Aquatic resources will receive long-term benefits from the implementation of the TSP and restoration measures of this project. Habitats created and restored will enhance the entire ecosystem by increasing primary and secondary production, habitat availability, water quality, and aquatic species diversity and abundance. During construction, fish may be displaced due to noise, changes in currents or stream flow, changes in water quality, including increased turbidity, and direct mechanical disturbance to habitat. To prevent these impacts, proper planning and implementation of BMPs will minimize these disturbances, and fish will return to the area shortly after completion of construction activities. Generally, these impacts will be minor for species that are abundant as well as species that may be rare. Construction activities can deter commercially important, rare, or protected fish species from using essential migratory pathways, breeding, foraging, or seeking shelter from predators. However, seasonal work windows will be observed to minimize or avoid disturbances to fish life stage. The project is consistent with this policy.

WRP Policy 5: *Protect and improve water quality in the New York City coastal area.*

To minimize impacts to surface water and water quality during construction, erosion and sediment control measures will be employed. These may include temporary construction of a cofferdam, employing silt curtains, and stabilizing soils. These BMPs for soil and sediment control will be prepared before any construction commences. With wetland creation and habitat enhancement, restored vegetative communities will provide a reduction in nutrient inputs into surface water bodies. Restoration work proposed in time will result in fewer low dissolved oxygen events, increased water transparency and a reduction in frequency and duration of algal blooms. Therefore, the project is consistent with this policy.

WRP Policy 5.1: *Manage direct or indirect discharges to waterbodies.*

See Policy 5 above.

WRP Policy 5.2: *Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.*

Standard construction stormwater BMPs will be implemented to protect water quality of surrounding water resources. The following BMPs will be used:

- Minimize area of ground disturbance and vegetation clearing.
- Use the site's natural contours to minimize run-off and erosion.
- Do not expose the entire site at one time; avoid bare soils during rainy months.
- Stabilize erodible surfaces with mulch, compost, seeding, or sod.
- Use features such as silt fences, gravel filter berms, silt dikes, check dams, and gravel bags for interception and dissipation of turbid runoff water.
- Use silt or turbidity curtains during in-water construction to contain and control dissolved sediments.
- Use wetland mats for construction access within wetland areas to prevent soil compaction.
- Use vehicles with high flotation tires within wetland areas to prevent rutting and soil compaction.
- Complete in-water work during periods of low tide.
- Install cofferdams or stream diversions to isolate in-water construction areas.

- Use stabilized construction entrances for all ingress and egress points.

The project is consistent with this policy.

WRP Policy 5.3: *Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.*

The project will carefully evaluate construction in a manner to prevent or minimize adverse impacts such as soil erosion and sediment alteration. For example, work can be accomplished during low tidal periods or in areas temporarily disconnected from tidal waters. In addition, all appropriate BMPs for soil erosion and sediment control including use of an environmental bucket to perform mechanical dredging, silt fencing, turbidity curtains, and hay bales will be used. The project is consistent with this policy.

WRP Policy 5.4: *Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.*

The proposed project includes restoration measures such as shoreline stabilization and channel modification will reduce erosion and help reestablish hydrologic conditions and sediment transport in the system. Additionally, restored vegetative communities associated with wetland and maritime forest restoration will retain and bio-transform soil and sediment nutrients. Over time, a reduction in nutrient inputs, combined with increased nutrient uptake by vegetation should result in improved water quality. Wetland and forest restoration will also establish new areas for aquifer recharge, which will also provide beneficial impacts to water quality. As stated in Policy 5.2, BMPs for soil erosion and sediment control will also be implemented at the site to protect water quality; therefore, the project is consistent with this policy.

WRP Policy 5.5: *Protect and improve water quality through cost-effective grey-infrastructure and in-water ecological strategies.*

Multiple restoration alternatives were proposed for the project site and then evaluated through a Cost Effectiveness Analysis/Incremental Cost Analysis. The alternative selected included the most cost-effective and ecologically effective restoration option for the site. Restoration measures at the site, including wetland creation, shoreline stabilization, and channel modification will contribute to the overall resolution of water resource problems within the area; therefore, the project is consistent with this policy.

WRP Policy 6: *Minimize loss of life, structures, infrastructure, and natural resources caused by flooding and erosion, and increase resilience to future conditions created by climate change.*

The creation of wetlands and maritime forests on the project site can function as retention basins acting as flood prevention measures. Channel modification and shoreline stabilization will also have beneficial effects to flood plains as the project will reestablish natural flood regimes; therefore, the project is consistent with this policy.

WRP Policy 6.1: *Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the site, the use of the property to be protected, and the surrounding area.*

As stated in Policy 6, the project includes the creation of wetlands, channel modification, and shoreline stabilization, which will function as flood protection measures; therefore, the project is consistent with this policy.

WRP Policy 6.2: *Integrate consideration of the latest New York City projections of climate change and sea level rise (as published in New York City Panel on Climate Change 2015 Report, Chapter 2: Sea Level Rise and Coastal Storms) into the planning and design of projects in the city's Coastal Zone.*

Consistent with United States Army Corps of Engineers (USACE) guidance, as alternatives are refined, and a particular alternative is identified, the selection of the preferred plan will consider the sensitivity of

the alternative plan to varying projections of sea level rise (SLR). Consideration will also be given to alternatives that perform well and are adaptable to a range of SLR projections. The 2015 report prepared by the New York City Panel on Climate Change presents SLR projections that take into account the predicted ranges of both global climate change and local land subsidence. The central ranges of these projections are sea level increases in New York City of four (4) to eight (8) inches by the 2020s, 11 to 21 inches by the 2050s, and 18 to 39 inches by the 2080s.

Results from implementing the TSP at this site involve the restoration of terrestrial habitat and creation of aquatic plant communities, which will promote primary productivity and increase removal of carbon dioxide from the atmosphere. The project will also result in improved water quality and clarity, which will promote increased photosynthesis and carbon capture from aquatic vascular plants and phytoplankton. The creation and restoration of terrestrial habitat could also lead to minor alterations in microclimates. Biological and physical processes such as transpiration, evaporation, convection, and shading will mediate temperature and humidity within these microhabitats. Therefore, the project is consistent with this policy.

WRP Policy 6.3: *Direct public funding for flood prevention or erosion control measure to those locations where the investment will yield significant public benefit.*

The erosion control measures proposed for the site are necessary, as based off modeling efforts, to protect the existing and constructed habitat at the site. Without installation, it is expected that current rates of erosion will continue. Therefore, it is determined the project is consistent with this policy.

WRP Policy 7: *Minimize environmental degradation and negative impacts on public health from solid waste, toxic pollutants, hazardous materials, and industrial materials that may pose risks to environment and public health and safety.*

Preliminary sampling has been completed at the site and will be utilized to consider the impacts of the conceptual plans, however further sampling will be conducted during the next phase of this project before final plans are created. It is expected that this further testing will define areas that may include contaminated soils or solid wastes that would need to be excavated and transported to an existing upland facility for processing. It will also verify soils that can be reused on site for landscaping and possible capping of contaminated areas and solid wastes that do not need to be removed. Preliminary testing has showed contaminant types and levels as would be expected in urban areas. Overall, the proposed project is expected to result in a positive impact, in that it will effectively remove or cap contaminated soils. It is therefore determined that the project is consistent with this policy.

WRP Policy 7.1: *Manage solid waste material, hazardous wastes, toxic pollutants, substances hazardous to the environment, and the unenclosed storage of industrial materials to protect public health, control pollution, and prevent degradation of coastal ecosystems.*

As stated in Policy 7, preliminary testing showed contaminants common in urban areas present on site. Further testing will be utilized to define these areas. Based on these findings and the nature of the soil/sediment, removal and placement can be undertaken. If the nature of the removed material is non-hazardous, it can be retained on site. If the nature of the excavated material is found to be hazardous, the material will be treated and disposed of at a facility approved to accept hazardous material. The project is consistent with this policy

WRP Policy 9: *Protect scenic resources that contribute to the visual quality of the New York City coastal area.*

By restoring coastal habitat along Flushing Creek, protecting existing habitats from erosion, and improving water quality, the project is consistent with and furthers the goals of this policy.

WRP Policy 9.1: *Protect and improve visual quality associated with the New York City's urban context and the historic and working waterfront.*

See Policy 9 above.

WRP Policy 9.2: *Protect and enhance scenic values associated with natural resources.*

See Policy 9 above.

WRP Policy 10: *Protect, preserve, and enhance resources significant to the historical, archaeological, architectural, and cultural legacy of the New York City coastal area.*

A Cultural Resources Baseline Study has been completed for the site to identify potentially significant cultural resources in the project area. The restoration area will not affect any known prehistoric sites. Twenty-two (22) historic properties were identified within a one (1) mile radius and three (3) archaeological sites were identified within the site boundaries. Further testing will be conducted in the Plans and Specifications Phase of the project and will be completed prior to construction. The USACE will consult with the New York State Office of Parks, Recreation, and Historic Preservation (NYSOPRHP) to develop plans to complete identification and evaluation of historic resources found within the project area. Appropriate treatment plans for historic resources that may be affected will be developed with input from the NYSOPRHP. Therefore, the project is consistent with this policy.

WRP Policy 10.1: *Retain and preserve historic resources, and enhance resources significant to the coastal culture of New York City.*

See Policy 10 above.

WRP Policy 10.2: *Protect and preserve archaeological resources and artifacts.*

See Policy 10 above.