

## **ENVIRONMENTAL ASSESSMENT**

Federal Financial Assistance Grant Number: 42984  
Mill River Flood Mitigation and Habitat Corridor Extension, Stamford, Connecticut

Prepared as Part of the Hurricane Sandy Coastal Resiliency Competitive Grant Program

Prepared by:



U.S. Department of the Interior

In Partnership With:

National Fish and Wildlife Foundation

and

Mill River Collaborative

This Environmental Assessment becomes a Federal document when evaluated and signed by the responsible Federal Official.

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## **1.0 Introduction**

The Hurricane Sandy Coastal Resiliency Competitive Grant Program (Program) supports projects that reduce communities' vulnerability to the growing risks from coastal storms, sea level rise, flooding, erosion, and associated threats through strengthening natural ecosystems that also benefit fish and wildlife. Funding for the program is administered by the National Fish and Wildlife Foundation (NFWF) through the U.S. Department of the Interior (Department or DOI) Hurricane Sandy disaster relief appropriation (Disaster Relief Appropriations Act of 2013).

On June 16, 2014, the Department announced the award of 54 grants totaling \$102.75 million. In addition, the grantees committed over \$55 million in additional funding and in-kind contributions, for a total conservation investment of over \$158 million. Grants were awarded to projects that assess, restore, enhance, or create wetlands, beaches and other natural systems to help better protect communities and to mitigate the impacts of future storms and naturally occurring events on fish and wildlife species and habitats. Projects are located the region affected by Hurricane Sandy: Connecticut, Delaware, the District of Columbia, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Virginia, and West Virginia. Each of these states officially declared a natural disaster as a result of the 2012 Hurricane Sandy storm event.

Upon completion of the projects, the program will benefit more than 210 communities and engage over 4,800 youths, veterans and volunteers. The program will also result in more than 8,000 acres of wetlands and marshes restored or created, 220 acres of beach restored and over 182 million gallons of stormwater runoff reduced to protect communities and infrastructure from future storms, as well as to benefit fish and wildlife.

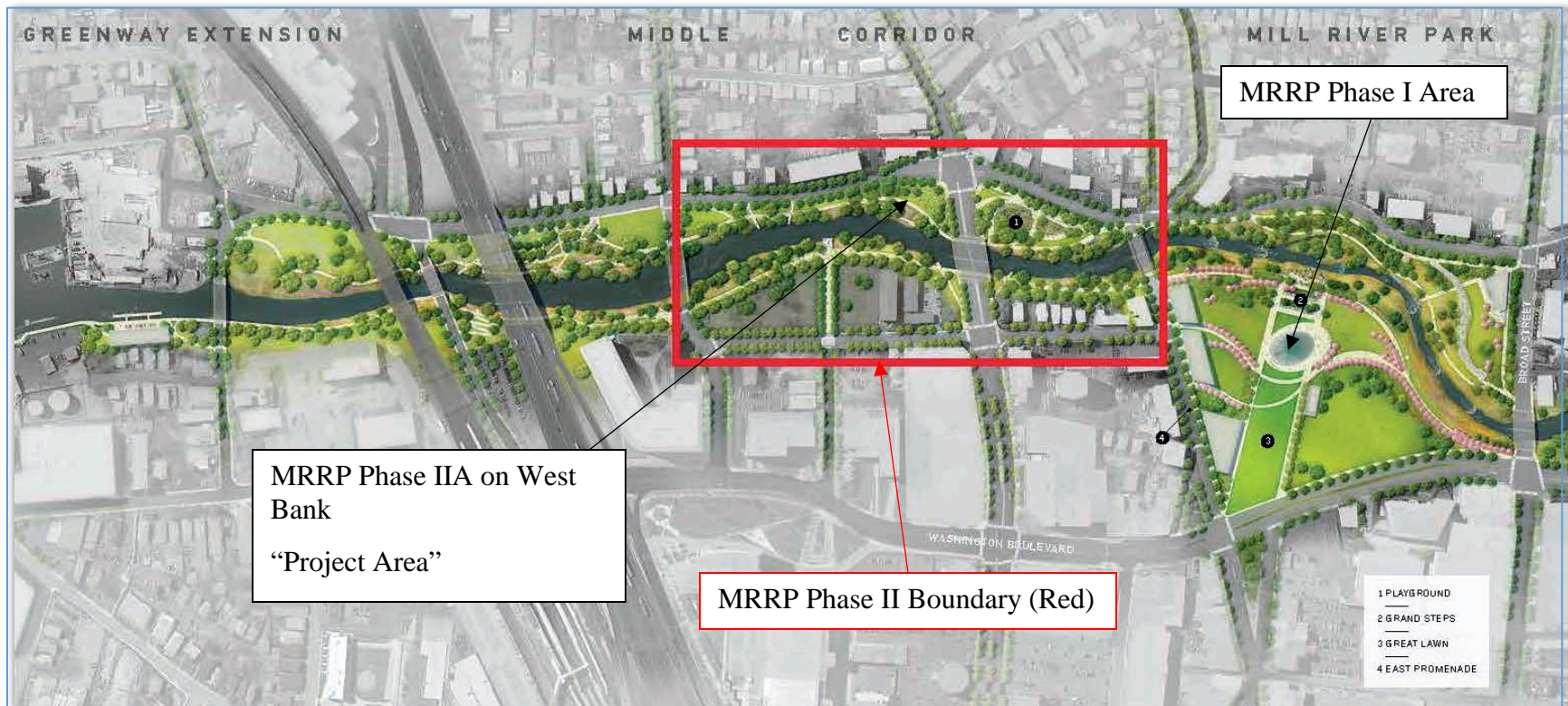
The Department, as lead Federal agency, and its project partners, the Mill River Collaborative, recipient of a \$3.75 million Hurricane Sandy grant, are proposing to complete Phase IIA of a riparian redevelopment plan for the West Branch Rippowam River (locally known as the Mill River), entitled the Mill River Flood Mitigation and Habitat Corridor Extension Project in Stamford, Connecticut, Federal Financial Assistance Grant Number: 42984 (Project). The Project would be Phase IIA of the "Mill River Restoration Project" (MRRP), a multi-year collaborative effort between the City of Stamford (City) and the United States Army Corps of Engineers (USACE) to restore the aquatic ecosystem and increase public access along the Mill River. As the Project administrator, the Mill River Collaborative is managing the Project activities. Specific improvements that would utilize Federal funding include the analysis and filing of the Federal Emergency Management Agency (FEMA) Letter of Map Revision (LOMR) and certain improvements on the western bank of the Mill River to improve recreation, improve the degraded aquatic ecosystem along the river and improve public access to this resource in the vicinity of the Project. Future planned improvements on the eastern bank of the Mill River (Phase IIB) would be undertaken using funding from private sources and the State of Connecticut.

The City's goal is to restore the Mill River corridor into a vibrant downtown amenity. Phase I of the MRRP, completed by both the City and USACE, centered on the area between West Broad Street and Main Street, and involved connecting the upstream riverine environment to Long Island Sound through the removal of two dams and enhancement of a river channel suitable for migration by alewife, blueback herring and eels. Specific elements included the removal of an Ambursen-style dam just upstream of Main Street and restoration of the upstream impoundment. The impoundment restoration included the removal of floodwalls and creation of linear trails along both riverbanks for public access (Mill River Park as shown on Figure 1-1). Additional work completed by the USACE under Phase I included tidal wetland restoration at two locations along the west bank of the river, removal of invasive *Phragmites australis*, excavation of depositional sediments for maintenance of salt marsh vegetation, and removal of the remnants of a breached dam under Pulaski Street to provide for fish passage and to complement the proposed linear park design. Refer to Table 1.1 for a summary of overall phasing.

**Table 1.1 Overall MRRP Phasing**

Phase	Description	DOI Funding	Status
Phase I	Dam removal & breached dam remnant removal		Completed
Phase I	Impoundment restoration		Completed
Phase I	Removal of floodwalls		Completed
Phase I	Creation of linear trails for public access near Mill River Park		Completed
Phase I	Tidal wetland restoration (two locations)		Completed
Phase I	Phragmites removal		Completed
Phase IIA (Project)	Install handicap-accessible linear trail, public restrooms, and park amenities (west bank between Main Street & Tresser Boulevard)	X	Not Started
Phase IIA (Project)	Restore riparian buffer via removal of nuisance vegetation and new plantings (west bank between Main Street & Richmond Hill Avenue))	X	Not Started
Phase IIA (Project)	FEMA LOMR to revise Special Flood Hazard Area	X	In Review
Phase IIA (Project)	Install Amphitheater on west bank south of Tresser Boulevard	X	Not Started
Phase IIA (Project)	Replace 215 linear feet of dilapidated rock retaining wall with 140 linear feet of revetment rock wall integrated into natural riparian vegetation	X	Not Started
Phase IIB	Upgrade and restore stormwater infrastructure		Not Started
Phase IIB	Install handicap-accessible linear trail, public restrooms, and park amenities (east bank between Main Street and Richmond Hill Avenue)		Not Started
Phase IIB	Restore riparian buffer via plantings (west bank between Tresser and Richmond; entire east bank)		Not Started
Phase III	Future Projects downstream of Richmond Hill Avenue		Not Started

Phase II of the MRRP includes the extension of the linear trail along both riverbanks, upgrades to an existing playground, creation of a fishing pier/overlook, and remapping of anticipated regulatory floodplain limits between Main Street and Richmond Hill Avenue. The limits of this phase are shown as the red rectangle within the "Middle Corridor" on Figure 1-1, with a closer aerial view of this area on Figure 1-2 and Project element locations called out on Figure 1-3.



**Figure 1-1 Project Area Overview**



Straight arrow indic



Figure 1-2 Project Area Overview (Aerial)





**Figure 1-3 Phase IIA Project Elements**

This Environmental Assessment (EA) evaluates two alternatives to address the degraded aquatic ecosystem along the Mill River in the vicinity of the Project and the limited public access to this resource: a No Action alternative and one Proposed Action alternative. The EA further analyzes the potential impacts these alternatives may have on the natural and human environment. This

EA has been prepared in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 Code of Federal Regulations (CFR) 1500-1508), and DOI regulations (43 CFR Part 46), policy, and guidance.

## **1.1 Purpose and Need**

The purpose of the Program is to undertake a variety of actions to restore wetlands and other natural areas, better manage stormwater using green infrastructure, and assist states, tribes and local communities in protecting themselves from major storms such as Hurricane Sandy. Overall, the Program goals relate to coastal resiliency and ecosystem enhancement. The Program provides funding for projects in five categories:

- **Project Planning and Design** – Projects that support the preparation of conceptual designs, engineering plans, facilitate federal, state, and local permitting processes to position projects for successful implementation in the future.
- **Coastal Resiliency Assessments** – Projects that perform mapping, analysis, assessments, resiliency planning, and natural resource prioritizations that advance our knowledge of the effects of increased weather intensity, sea level rise, and storm events on coastal natural ecosystems and communities.
- **Restoration and Resiliency Projects** – Projects that restore, enhance or create naturally functioning habitats or ecological systems for the benefit of communities and fish and wildlife species.
- **Green Infrastructure** – Projects that use green infrastructure techniques and approaches that provide multiple ecosystem benefits and help to provide community resiliency will be considered for funding.
- **Community Coastal Resiliency Planning** – Projects that assist local governments and community organizations to integrate environmentally-sound solutions into comprehensive planning and zoning and into capital programs for parks, schools,

The Program provides technical and financial assistance to identify, protect, conserve, manage, enhance, or restore habitat and infrastructure on both public and private lands that have been negatively impacted by Hurricane Sandy.

This Project intends creation of a portion of a linear park along the length of the Mill River as an extension of the existing Mill River Park upstream, integrating an environmentally-sound waterfront recreational use that would mitigate future damage from flooding (as per Community Coastal Resiliency Planning, above). To a lesser extent, this Project supports “Project Planning and Design” elements (see list above) related to revising the existing FEMA floodplain mapping for the Mill River.

Phase II (both Phase IIA and Phase IIB) of the MRRP is needed to:

1. Provide better river access and amenities to the urban community of Stamford in an area that is highly developed with roadways, buildings, infrastructure, and impervious surfaces.
2. Revise the FEMA floodplain and floodway mapping to more accurately reflect current flooding conditions in the tidal portion of the Mill River. Modeling conducted prior to completion of Phase I of the MRRP demonstrated that the dam removals completed under Phase I of the MRRP reduced flood elevations along the upper section of the Mill River, and a LOMR was completed to formally revise the mapping. A Phase II LOMR would correct the FEMA hydrology and mapping through the MRRP area. The expectation is that currently mapped properties along the eastern bank of the Mill River would be removed from the Special Flood Hazard Area (SFHA); that the revision would remove potential constraints on the development of properties outside of the buffer zone, and provide up-to-date mapping for City officials to evaluate such development; and would clarify design requirements related to flooding for work during Phase IIB.
3. Restore the riparian buffer between the river and adjacent uses to mitigate riverbank erosion and protect riverbank habitat.
4. Upgrade and restore degraded stormwater infrastructure (Phase IIB only).

Grant funding from the Department would be used to complete Project improvements under Phase IIA along the western bank of the Mill River between Main Street and Richmond Hill Avenue. This is the Project area as denoted on Figure 1-1 and as labeled on Figure 1-2. Project improvements include installation of handicap-accessible linear trail, public restrooms, park amenities, and riparian plantings. Grant funding is also being used to revise the FEMA floodplain and floodway mapping through the LOMR process. The remainder of MRRP elements under Phase II (Phase IIB) would be completed with non-federal funding sources. As such, impacts under Phase IIB of the MRRP are not evaluated within this document.

The purpose of the Project is to further restore the balance between the urban and natural realm along the Mill River in downtown Stamford that can endure by providing the river the necessary space to expand during extreme storms and floods and due to increased weather intensity. The buffer provided by the linear trail and parks under Phase IIA would prevent future encroachment by urban development in the Project area, while promoting public recreational access to the Mill River where none is currently available; specifically, the Project is vital to the continued establishment of community-friendly, pedestrian-friendly, resilient public amenities and riverbank access in an area of extensive development and concrete.

The completion of a FEMA LOMR under Phase IIA would correct the boundary of the SFHA along the Mill River. This would allow for a correct evaluation of floodplain impacts under Phase IIB of the MRRP, and would allow properties currently mapped incorrectly within the SFHA to redevelop in areas along the Mill River outside of the Project area. Areas correctly mapped within the SFHA would be maintained as a natural buffer for the Mill River to expand

during extreme storms and floods to the extent possible in accordance with Stamford's Zoning Regulations.

## **2.0 Alternatives**

### **2.1 No Action Alternative**

Under this alternative, installation of public linear trails and completion of park improvements would not take place. The earlier work completed by the City and USACE would not be expanded upon, limiting the overall effectiveness of the MRRP, and preventing the long-term goal of the City to restore the Mill River corridor into a vibrant downtown amenity. The threat of erosion along the section of bank in the Project area would continue to be of local concern.

Restoration of native riparian vegetation and connection to the existing limited recreational facilities along the Mill River corridor would not occur under the No Action Alternative. Invasive plant species would continue to overtake the native bank vegetation, and local residents would continue to have limited riverine access for active and passive recreation along the Mill River in the Project area. Repair of the dilapidated retaining walls would not occur such that erosion would continue to undermine the wall, thereby introducing sedimentation downstream.

Removing parcels from the mapped SFHA via the LOMR process would also not occur under the No Action Alternative. Clinton Avenue properties would remain incorrectly mapped in the FEMA SFHA, and future mixed-use development outside of the buffer that would complement the linear trail features would not be feasible due to limited parcel configurations.

The No Action alternative does not meet the project purpose and need. It would not provide revised floodplain mapping along the Mill River, protect the riparian corridor in the Project area from future degradation, restore the natural buffer between the river and urban development in the Project area, nor promote public access to the Mill River in the Project area.

### **2.2 Proposed Action Alternative**

Under this alternative, the improvements envisioned under the Project (Phase IIA of the MRRP) would be implemented. The Proposed Action Alternative would be an important component in restoring the Mill River corridor into a vibrant downtown amenity, restoring the natural buffer between the Mill River and surrounding development through a highly-urbanized area, and enhancing the connection of Long Island Sound to the 36.9 square-mile Mill River watershed. The Proposed Action Alternative would enhance the riparian and upland portions of the habitat corridor and would protect and enrich the riverine ecology in the vicinity of the Proposed Action while protecting the riparian corridor in the Project area from future degradation. Specific improvements include:

- Approximately 1,700 linear feet of oil and chip pedestrian walkway and other community-friendly, pedestrian-friendly park amenities including dark-sky compliant (downward facing) lighting would be installed on the west bank of the Mill River, primarily at grade;
- Approximately two acres of land would be restored as riparian corridor and resilient recreational area that would:



- Provide a natural buffer between the Mill River and surrounding urban development, allowing for expansion of the Mill River during extreme storms and floods; and
- Enhance riparian and upland portions of the habitat corridor in the Project area which in turn would protect and enrich nearby riverine ecology; and
- Protect the riparian corridor in the Project area from future degradation through the removal of 215 linear feet of dilapidated stone masonry rock retaining walls with 140 linear feet of rock revetment wall integrated into the natural riparian vegetation on either end. There would be approximately 368 cubic yards of excavation, installation of 705 square feet of riprap armoring installed landward of the existing revetment, with scuppers<sup>1</sup> and riparian plantings to stabilize the area.
- Completion of a FEMA LOMR which is expected to result in the removal of non-flood-prone properties from the SFHA (i.e. 1% annual chance floodplain) and provide a correct SFHA boundary for evaluation of floodplain impacts under Phase IIB of the MRRP.

A review of the FEMA published flows as compared to regional regression equations utilized by United States Geological Survey (USGS) indicated that FEMA flows were much higher than what record data would predict for the Mill River. The hydraulic model utilized in the FEMA analysis also did not utilize the correct downstream water surface elevation within Long Island Sound. A LOMR to revise the published flows for the Mill River within the Project area is expected to remove significant developed areas out of the SFHA, thereby reducing or eliminating flood insurance requirements for some residents, and allowing for future economic development and redevelopment outside of the remapped SFHA along portions of the Mill River outside of the Project area. With the increased zoning density available in the Mill River corridor under the City's Mill River Corridor Plan, the expected development and redevelopment increase real estate tax revenues from redevelopment for the benefit of the community.

Based on this analysis, the Proposed Action meets the Project purpose and need described in Section 1.1.

### **2.3 Alternatives Eliminated from Further Consideration**

Alternative components within the Proposed Action were evaluated for the Project area during conceptual design of the Project. These components included additional boardwalk and overlook structures suspended over the river in the Project area, with supporting structures in the river's floodway. These structures would have required supporting grading and fill within the SFHA and floodway of the Mill River. In addition, restroom facilities were proposed within the floodway. Following consultation of these conceptual components with representatives of the City and the Connecticut Department of Energy and Environmental Protection (DEEP), the walkway elements were refined, and the restroom facilities were relocated out of the floodway. These changes reduced the potential impact of flooding to the proposed infrastructure, and reduced the permitting burden which would be required to demonstrate that the obstructions and

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<sup>1</sup> Openings to allow groundwater drainage through the riprap wall.

necessary fill in the floodway would not result in any increase in the 1% annual chance flood elevation in the vicinity of the Project.

### **3.0 Affected Environment**

#### **3.1 Scope of Resources Evaluated**

The Project area has been impacted by anthropomorphic modifications, including retaining walls, infrastructure, playground amenities, and fill. Environmental resources identified and analyzed in this document are listed below along with reasons for their inclusion in this EA and applicable regulations. The evaluation of environmental effects to these resources for each alternative is described in “Section 4.0: Environmental Consequences.” A brief description of the existing resource conditions is provided below.

#### **3.2 Resources Eliminated from Further Analysis**

The following impact topics were dismissed from further evaluation because the resource does not occur in the area and/or because implementation of the Project would not affect these resources or issues.

- Agriculture – There are no known agriculture uses in the vicinity of the Project area, therefore agriculture would not be affected.
- Airport Hazards – There are no airports in close proximity to the Project area.
- Coastal Barrier Resources – No coastal barrier resources occur within or in close proximity to the Project area (Coastal Area Management Program, 1979).
- Energy Consumption – While there would be temporary use of fuel by vehicles and machinery during implementation of the Project, upon completion only a minimal increase in energy consumption related to park amenities (such as lighting) is anticipated.
- Explosive and Flammable Hazards – The Project area is believed to have an acceptable separation distance (ASD) from any hazard that could cause structures or individuals to be subjected to blast overpressure or thermal radiation flux levels in excess of the safety standards in 24 CFR 51.203. No such hazards are present within, adjacent, or proximal to the Project area. Therefore, no direct or indirect impacts are expected from explosive or flammable hazards.
- Navigation – The Mill River is not used for commercial navigation, nor is it expected to be under proposed conditions.
- Power Generation – There are no known power generation facilities located on the Mill River, therefore power generation would not be affected.
- Public Transportation – While the improvements to the Project area may attract visitors via public transportation, no more than a minimal increase in riders are expected.

- **Sole Source Aquifers** – The Project area is not located within a designated sole source aquifer (SSA) watershed area. The Connecticut DEEP (2015) has designated the groundwater within and surrounding the Project area (Class GB) as suitable for uses such as industrial process water and cooling water but not suitable as drinking water. The Project would have a negligible effect on groundwater resources and is consistent with the Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149.

### **3.3 Geology, Soils, and Sediment**

The Project area generally slopes from west to east, with the highest elevations of approximately 14 feet occurring in the southwestern corner declining to approximately 6 feet along the top of the riverbank. Surficial geology mapping (Stone, et. al, 2005) indicates that the Project area is underlain by deposits of sand and gravel, overlying sand, overlying fines. The Project area is considered susceptible to terrace escarpment type erosion and is located in an area mapped as containing erodible surficial materials (Connecticut DEEP, 2005). This classification is consistent with observations of erosion and bank degradation/scour in the Project area.

Soil mapping within the Project area is characterized entirely as Urban Land by the National Resource Conservation Service (NRCS) Web Soil Survey (WSS) (Soil Survey Staff, 2016). This mapping is reflective of the extensive site modification completed within the Project area in its urban setting. The designation of Urban Land is used to describe soils that have been substantially disturbed, including areas that have been excavated or filled by at least two feet.

There are no contaminated sites within the immediate vicinity of the Project identified on the United States Environmental Protection Agency (EPA) Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) List (EPA, 2016a). The sediment in the Project area is considered suitable for onsite reuse.

Minor surficial grading would occur in the Project area associated with the Project. Disturbance of surficial materials is not anticipated to encounter groundwater in the Project area, and disturbed material would be reused on-site. Off-site disposal of sediment is not anticipated.

### **3.4 Water Resources and Wetlands**

#### **3.4.1 Watershed Characteristics**

The West Branch Rippowam River (locally known as the Mill River) flows along the eastern edge of the Project area (Figure 1-2). The Mill River originates in Ridgefield, Connecticut and flows 17 miles to the West Branch of Stamford Harbor at Stamford, Connecticut where it empties into Long Island Sound. Long Island Sound's tidal influence extends upstream to Main Street in Stamford through the entire Project area. The Mill River basin is an approximately 36.9-square-mile watershed located in southeastern New York and southwestern Connecticut according to the USGS (2012). Approximately 9% of the area is determined to be impervious, and an estimated 35.6% of the contributing watershed is Class 21-24 land use, which includes developed open space, low intensity, medium intensity and high intensity areas. The topography in the upper portion of the watershed is dominated by rolling hills that have average slopes of

approximately 0.5%. The lower half of the watershed where the proposed activities are located is primarily flatter topography.

There is a history of industrial use on the Mill River. Water utilization through damming of the river to supply mills has affected the stream flow and path of the river and thereby altered the river's habitat. Discharge from the North Stamford Reservoir, owned by Aquarion Water Company, controls the base flow of the Mill River. Six smaller dams between the Main Street dam and the North Stamford Reservoir dam interrupt flows and partially inhibit fish passage. The Main Street dam was the southernmost of the dams on the Mill River, but was removed under Phase I of the MRRP.

The Mill River watershed is therefore a mix of residential and urban landscapes and can be characterized as moderately urban. Much of the watershed land surface is impervious, especially in the vicinity of the Project area near downtown Stamford. Storm sewers from adjacent streets currently drain directly into the river. These discharges increase the peak flow in the river during storm events and increase the risk of erosion and sediment transport downstream.

### **3.4.2 Surface Water**

The Connecticut DEEP has established surface and groundwater standards and classifications that serve as the basis of the State's water quality management program and are required by both State and federal legislation. This classification system defines existing water quality conditions and establishes standards for allowable and prohibited uses for each water classification. For instance, all discharges must be consistent with the stream's assigned water quality classification, without causing degradation.

The Mill River in the Project area is considered a Class A waterbody by the Connecticut DEEP (2015) between Main Street and Tresser Boulevard, indicating that the designated uses include habitat for fish and other aquatic life and wildlife; potential drinking water supply; recreation; navigation; and water supply for industry and agriculture. Although the river is tidally influenced, it is not considered to be habitat for marine fish or shellfish at the Project area. Downstream of Tresser Boulevard, the channel is classified as Class SB, indicating it is a coastal water that is presumed to support designated uses such as habitat for marine fish and aquatic fish and wildlife; commercial shellfish harvesting; recreation; industrial water supply; and navigation.

A portion of the Mill River at the Project Area near Main Street has been classified as an impaired waterbody by the EPA (2014) under Section 303(d) of the Clean Water Act, meaning it is not supporting one or more types of use. The impaired status is for habitat for fish, other aquatic life, and wildlife. A total maximum daily load (TMDL) plan is needed, describing a plan for restoring the impaired waters that identifies the maximum amount of a pollutant that the Mill River can receive while still meeting water quality standards. The cause of the impairment is unknown. According to Connecticut DEEP (2017), the potential sources of impairment may include stormwater, industrial discharges, illicit discharges, remediation sites, and groundwater impacts. Downstream of the Project area, the lower section of the Mill River and Stamford



Harbor are defined as an impaired estuary by Connecticut DEEP due to not supporting aquatic life.

The Mill River is not a National Wild and Scenic River. There are no National Wild and Scenic Rivers located within one mile of the Project area, according to the list of designated rivers maintained by the National Wild and Scenic Rivers System (2017) maintained by the National Park Service.

### **3.4.3 Wetlands**

In general, extensive wetland areas do not flank the relatively urbanized Mill River. Rather, channel banks in the vicinity of the Project area consist of stone or concrete walls and steep vegetated banks that provide little to no habitat value. According to the U. S. Geological Survey (USGS 2012) delineation of the Mill River watershed at the Project area, less than 1% of the 36.7-square mile contributing watershed is classified as wetlands.

No tidal or inland wetlands occur within the Project area. NRCS soil resource mapping (Soil Survey Staff, 2016) does not show any floodplain wetland soils bordering the Mill River at the Project area. The U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps show that the Project area is not located within any federally regulated wetland habitat (see Appendix C, IPaC Trust Resources Report, June 06, 2016). The Mill River is mapped in the NWI as an 'Estuarine and Marine Deepwater' habitat. The habitat is labeled as E1UBL3, indicating that it is an estuarine (E), subtidal (1) habitat with an unconsolidated bottom (UB) that is permanently flooded with tidal water (L) characterized as mixohaline (water of intermediate salinity) or brackish (3).

A tidal wetland and watercourse delineation was completed in August 2001 and re-evaluated in October 2006 by William Kenny Associates, LLC. The investigation identified no inland wetlands within the Project area. Based on a field visit on May 18, 2006, the Mill River was reported to provide several important wetland functions and values including flood flow alteration, shoreline stabilization, wildlife habitat, recreation opportunities, and aesthetic quality (Milone & MacBroom, Inc., 2006b). Additional confirmatory field investigations would be conducted as part of permitting and implementation of the Project.

### **3.4.4 Floodplains**

The Mill River and its natural floodplain has been extensively impacted by urbanization. In general, floodplain encroachment has occurred to the edge of the waterway along the entire river through the urbanized area of the City, although the recreationally-developed Project area is an exception. Extensive flooding occurred in the City in 1955 and in 1972. In addition, coastal storm surges further impact flooding by restricting the discharge of freshwater to Stamford Harbor.

Flood zones are geographic areas defined by FEMA, reflecting the severity or type of flooding in the area. The government definition of a floodplain, or high flood risk zone (also known as the SFHA), is an area which has at least a one in one hundred (i.e., one percent) chance of flooding in any given year. The Project is located within a FEMA-designated SFHA and floodway. The existing playground and open space (non-residential recreational use of the floodplain) is

consistent with the standards of the National Flood Insurance Program (NFIP) as codified in 44 CFR Parts 59, 60, 65, and 70, and the Project would also be flood resilient in that the proposed amenities would be allowed to flood and would be designed to withstand flood flow velocities.

A primary goal in the implementation of this Project is the completion of a LOMR to facilitate the removal of some 22 properties from the SFHA of the Mill River outside of the Project area and provide updated flood design criteria for future actions under Phase IIB of the MRRP. A copy of the current Firmette for the Project area is attached as Appendix D. The map reflects the revised floodplain limits that were approved in 2015 following the removal of the Main Street Dam, but which still rely on 1982 hydrology, which is considered out of date (q.v. Section 2.2).

### **3.5 Biological Resources and Vegetation**

#### **3.5.1 Endangered, Threatened, and Special Concern Species**

The Endangered Species Act of 1973 (ESA) provides for the conservation of species that are endangered or threatened throughout all or a significant portion of their range, and requires the conservation of the ecosystems on which they depend. The ESA is administered by the USFWS and the National Marine Fisheries Service (NMFS). “Endangered” means a species is in danger of extinction; “threatened” means a species is likely to become endangered within the foreseeable future.

An Official Species List was obtained from the USFWS on June 6, 2016 for the Phase II area of the MRRP, including the Project area (Appendix C). The Official Species List includes no endangered species and two threatened species that may occur in the Project area and/or may be affected by the Project:

- The red knot (*Calidris canutus rufa*) is a migratory bird which may be particularly vulnerable in the Project area due to changes to coastal habitats from rising sea levels, availability of food resources throughout its range, and changes in storm and weather patterns. The red knot flies north over Connecticut in the spring to breed in the central Canadian Arctic, and travels south over Connecticut in the early autumn on its way to the southern hemisphere. No critical habitat rules have been published for the red knot. However, according to the USFWS (undated), the red knot eats small clams, mussels, snails, and other invertebrates for much of the year, and therefore must have access to shallow water with an abundance of such species for several days at a time. Such in-water species are not known to be in abundance in the Mill River near the Project area. Consultation with the USFWS (Section 4.3) found that given the level of development in the area, the lack of suitable habitat and preferred food sources, the red knot was unlikely to make use of the Project area (Appendix C).
- Northern long-eared bat (*Myotis septentrionalis*) is one of the species of bats most impacted by the white-nose syndrome disease. No critical habitat has been designated for this species, but typical habitat requirements per the USFWS online Information, Planning, and Conservation (IPaC) system (Appendix C) include the following: “*Hibernates in caves and*

*mines - swarming in surrounding wooded areas in autumn. During late spring and summer roosts and forages in upland forests.”* Based on a review of site photographs conducted in December 2016, the limited trees in the Project area surrounded by urban development does not constitute an “upland forest” habitat, nor are caves or mines located in the Project area. According to the Connecticut DEEP (2016), Stamford is not an area of Connecticut with known northern long-eared bat hibernacula or maternity roost trees. Based on the above, it is unlikely that this species utilizes the Project area. As it is possible that the northern long-eared bat may utilize some of the limited habitat in the Project area, consultation with the USFWS was conducted as described in Section 4.3.

Based on 2002 and 2004 correspondence with the NMFS (Appendix B), coastal habitat adjacent to the Project area is limited because of access restrictions in the downstream channel in the vicinity of the Pulaski Street Bridge. The NMFS stated in 2002 that “there are no species presented that are listed under the [ESA] and managed by our agency” in the Project area. The USACE (2004) stated the same, noting that “long-term planning of Stamford’s biodiversity could establish the Mill River as a conduit for wildlife passage from inland parks to coastal environments.”

In 2002 correspondence related to the MRRP (Appendix B), the USFWS noted that transient bald eagles may be observed in the vicinity of the Project area on occasion. Bald eagles typically eat fish but will also eat small game and other foods depending on availability. The Bald and Golden Eagle Protection Act of 1940 (BGEPA) codified at 16 USC 668-668d, is a federal statute protecting two species of eagle. It currently prohibits anyone “taking” bald eagles without a permit.

The 1996 amendments to the Magnuson-Stevens Fishery Conservation Management Act strengthened the ability of the NMFS to protect and conserve the habitat of marine, estuarine, and anadromous finfish, mollusks, and crustaceans. This habitat is termed “essential fish habitat,” and is broadly defined to include “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” The USACE (2004), in their environmental assessment of Phase I of the MRRP, noted that Long Island Sound (including Stamford Harbor) is considered Essential Fish Habitat, indicating that these resources are necessary for spawning, breeding and feeding. The Mill River is not considered essential fish habitat. However, according to the NMFS there are fish species listed which use the tidal mouth and/or the freshwater reach of the Mill River at some point during their life cycles. These include pollock (*Pollachius virens*), cobia (*Rachycentron canadum*), winter flounder (*Pleuronectes americanus*), windowpane flounder (*Scopthalmus aquosus*), bluefish (*Pomatomus saltatrix*), summer flounder (*Paralichthys dentatus*), black sea bass (*Centropristus striata*), king mackerel (*Scomberomorus cavalla*), and Spanish mackerel (*Scomberomorus maculatus*) (USACE, 2004).

The Migratory Bird Treaty Act of 1918 (MBTA), codified at 16 USC Sections 703-708, 710-712), implemented the protection of migratory birds between U.S. and Great Britain (acting on

behalf of Canada). The migratory bird species protected by MBTA are listed in 50 CFR 10.13. Authority and responsibility for enforcement is with USFWS. Twenty four species of migratory birds that have been identified as “birds of conservation concern” by the USFWS (Appendix C) were predicted to possibly occur in Project area based on published range maps and habitat preferences, including some covered by the MBTA.

The Connecticut Endangered Species Act of 1989 was passed with the goal to conserve, protect, restore and enhance any endangered or threatened species and their essential habitat. In addition to endangered and threatened species, the 1989 Act includes “species of special concern”, or any native plant species or native non-harvested wildlife species documented to have a naturally restricted range or habitat in the state, to be at a low population level, to be in such high demand by man that its unregulated taking would be detrimental to the conservation of the population, or has been extirpated from the state.

The Connecticut DEEP maintains a Natural Diversity Database (NDDB), which maps the approximate known locations of state and federally listed endangered, threatened, and special concern species; as well as significant natural communities in Connecticut. A review of the NDDB map of June 2017 (DEEP 2017) showed that the Project area does not fall within an area with known state and federally listed species or significant natural communities.

### **3.5.2 Common Wildlife and Vegetation Species**

Aquatic resources of the Mill River through the Project area are currently limited due to the urbanization and channelization that has occurred. Centuries of development in the vicinity of the Project area has substantially impacted the channel, leaving a limited riparian corridor.

The Project area includes a playground area, grass area, and a limited riparian buffer along the Mill River which is degraded in certain sections and contains invasive species in other portions (Milone & MacBroom, Inc., 2006a). The Project area also includes small clusters of trees along the Mill River which provide limited habitat opportunities. Based on a field visit of the Project area and vicinity on May 18, 2006 (Milone & MacBroom, Inc., 2006b), the dominant vegetation along the river includes silver maple, red maple, black cherry, willow, cottonwood, sycamore, box elder, Norway maple, black locust, poison ivy, wild grape, and common reed, with invasive species including tree-of-heaven, multiflora rose, Japanese knotweed, purple loosestrife, narrow-leaved cattail, and oriental bittersweet.

Fauna in the Project area is extremely limited given the urban nature of the Project site. Some of the wildlife observed during the field investigation included belted kingfisher, osprey, cormorant, mallard ducks, Canada geese, warm water fish, and muskrats. The Connecticut DEEP has reported the presence of species such as coyote, red fox, skunk, white tailed deer and beaver in the area. Reptiles and amphibians such as spotted salamander, various turtle species and various frog species are common to Stamford; however, these species were not observed during site visits to the Project area (Milone & MacBroom, Inc., 2006a). As noted in Section 3.2, coastal resources such as shellfish are not present in Stamford Harbor or within the Mill River, and the

University of Connecticut Center for Land Use Education and Research (2014) Aquaculture Mapping Atlas depicts no active shellfish beds in the Mill River or Stamford Harbor.

The removal of the former Main Street dam just upstream of the Project area under Phase I of the MRRP has restored migratory movement upstream for diadromous fish through to at least Mill River Park for the first time since 1641. The river is presently tidally influenced at the Project area, with NMFS suggesting in 2002 and 2004 that the Project area may support warm water fish species including summer flounder and their forage, and occasional use by marine species such as bluefish or blue crab, and Connecticut DEEP noting the presence of alewife and blueback herring. However, NMFS indicated in 2004 that the Mill River was never a fully functional estuary due to a partial fall line of bedrock located approximately 200 feet upstream of Stamford Harbor, which restricts salt water from moving upstream, and noted concerns with potential changes in temperature, salinity, and water quality following storm events due to the likely degraded quality of the runoff from the adjacent urban watershed. A copy of this correspondence is included in Appendix B.

Due to their ubiquitous nature and sensitivity to pollution and other forms of habitat degradation, macroinvertebrates are popular bio-indicators (i.e., organisms that show significant changes in population with varying environmental conditions). Macroinvertebrate life cycles tend to be moderate in length relative to plants and fish, and thus offer information on seasonal and annual conditions in a river.

The Connecticut DEEP conducted macroinvertebrate sampling of the Mill River in October of 1997 and 2000. In 1997, eight percent of the species identified were considered pollution intolerant, and in 2000, only two percent of identified species were those considered intolerant. The low number of intolerant species indicates that water quality in the channel is degraded (DEEP, 2000).

### **3.6 Human Health and Safety**

The Mill River flows through an urbanized area, and its banks have been encroached upon by development upstream of and in the vicinity of the Project area. Household debris and bulky waste have been observed in the channel and along its banks. While the information in Section 3.3 notes that there are no known contaminated sites within the vicinity of the Project area, the information in Section 3.5 indicates that the Mill River water quality is degraded (particularly following storm events).

The vicinity of the Project area is densely developed, heavily populated, and located within the delineated FEMA floodplain. The Mill River Playground provides an open space passive recreational area for residents. The playground and open space is closed by the City during severe flood events. Therefore, widespread flood-related health or safety incidents have not occurred in the Project area, and the use of the Project area as open space prevents flooding damage from occurring to homes and businesses. However, access to the Mill River is



potentially hazardous based on the amount of bank scour occurring and the stability of the upper bank.

The downtown Stamford area, including the Project area, is patrolled by local police, and is under the purview of emergency services, including fire response and ambulance service. Such services would continue to be provided for the foreseeable future.

### **3.7 Cultural Resources**

Riverine environments can have historic or archeologic sensitivity. Whenever a project is located within a river corridor, there is a potential for culturally sensitive resources as rivers are areas where historic and pre-historic populations gathered. Thus, consultation with the appropriate agencies is warranted. Projects receiving Federal funding and permitting are required to undergo a review for compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (CFR 800).

The National Register of Historic Places (2017) database was accessed to determine if any structures in the vicinity of the Project area were listed on the National Register of Historic Places. The Main Street Bridge over the Mill River, located just outside the upstream boundary of the Project area, is listed on the National Register of Historic Places. The bridge was erected in 1888 and was listed for its significance related to engineering, politics and government, and transportation. It is a historic trestle bridge currently used as a pedestrian-only connection between the east and west banks of the river.

For projects involving disturbance of ground (excavation to surface placement of sediment) or structures (which may include encroachment), the grantee must contact the State Historic Preservation Office (SHPO), or Tribal Historic Preservation Officer (THPO) as appropriate, to determine whether or not historic properties are present, protective measures that may be necessary, and associated administrative and procedural needs. Once completed, the record of the grantee's communication with the SHPO's or THPO's office, including any cultural resources surveys prepared, and concurrence from the SHPO/THPO, should be provided to the Department of the Interior, Office of Environmental Policy and Compliance.

The grantee has consulted with the Connecticut SHPO on the Project. A Project Notification Form (PNF) was submitted to the Connecticut SHPO for review of the proposed improvements and a determination of effect. Supplemental information submitted for SHPO review included a project description, overview map, reduced-scale design plans, NRCS soils mapping of the Project area, and various historical mapping of the Project area. This information was submitted on June 7, 2016 and a response was issued on January 26, 2017 (Appendix B).

The grantee has consulted with the Mashantucket Pequot Tribal Nation and Mohegan Tribe of Indians of Connecticut on the Project. Tribal Historic Preservation Officers (THPO) from each Tribe were provided the PNF associated with the Connecticut SHPO review process on June 7, 2016, along with a project description and aerial overview map of the proposed work (copy of letters in Appendix B).

### **3.8 Socioeconomics, Environmental Justice, and Protection of Children**

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," requires Federal agencies to examine projects to determine whether they would have disproportionately high and adverse human health or environmental effects on minority or low-income populations.

According to the EPA (2016b), the Project area is located where 58% of the population is low income, 30% of the population is linguistically isolated, 29% of the population over age 25 has less than a high school education, and 87% of the population is minority. The 2010 United States Census Bureau (2013) also reports that the area has a high proportion of minority populations.

Executive Order 13045, "Protection of Children from Environmental Health Risks and Safety Risks," seeks to protect children from disproportionately incurring environmental health risks or safety risks that might arise as a result of Federal policies, programs, activities and standards. Environmental health risks and safety risks include risks to health and safety attributable to products or substances that a child is likely to come in contact with or ingest. As discussed in Section 3.9.1, the current use at the Project area is a City park (Mill River Playground) with a children's playground.

### **3.9 Land Use, Recreation, Public Safety, and Coastal Zone Management**

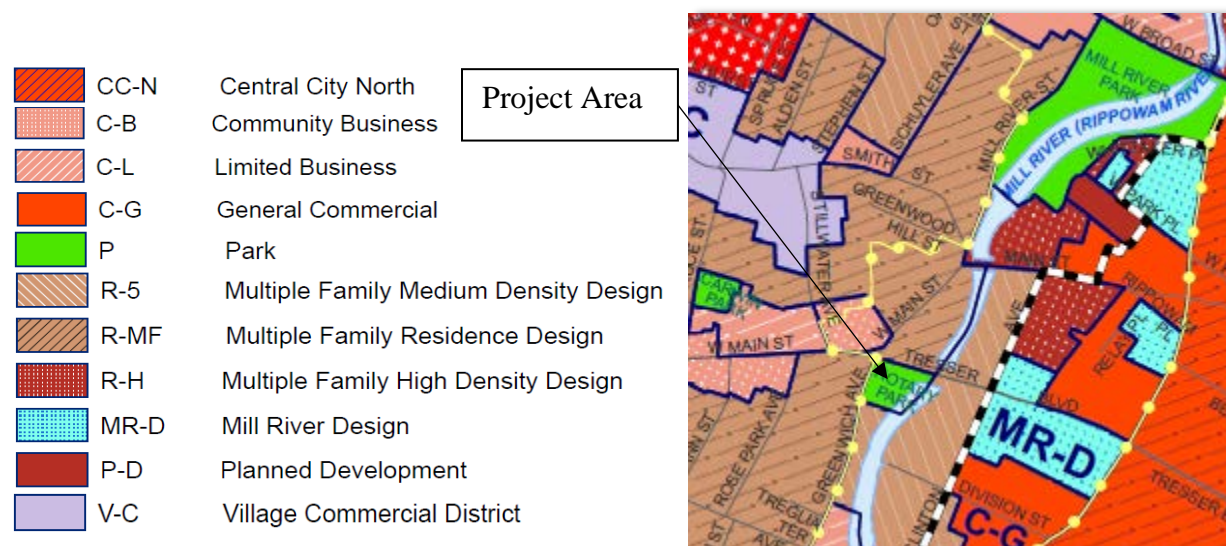
#### **3.9.1 Land Use**

The Project area is located in downtown Stamford, Connecticut, along the west bank of the Mill River. As shown in Figure 1-2, the northern extent of the Project area is marked by the historic Main Street trestle bridge; the southern extent is marked by Richmond Hill Avenue, with Tresser Boulevard (US Route 1), a primary roadway through the center of the city, lying between these extents. The Mill River Playground lies between the west bank of the Mill River and West Main Street between Main Street and Tresser Boulevard. The Project area is therefore currently open space surrounded by a heavily developed urban area.

The Mill River basin is an approximately 36.9-square-mile watershed located in southeastern New York and southwestern Connecticut according to the USGS (2012). Approximately 9% of the area is determined to be impervious, and an estimated 35.6% of the contributing watershed is Class 21-24 land use, which includes developed open space, low intensity, medium intensity and high intensity areas. While land use in the upper watershed is large lot, single-family residential, the overall Mill River watershed can be characterized as moderately urban.

The Project area is located within an urban area consisting of a mix of residential, commercial and industrial development. There is no sizable farmland within or adjacent to the Project area. As stated in Section 3.3, the USDA NRCS WSS was utilized to confirm soil types found within the Project area. Soils mapping of the Project area is provided in Appendix E and consists of Udorthents-Urban Land Complex, which is not rated as a Prime Farmland soil by the NRCS.

Zoning within the Project area is Zone R-MF (Multiple Family Residence Design), Zone P (Park), Zone R-5 (Multiple Family Medium Density Design), and Zone C-L (Limited Business) per the City of Stamford Zoning Board (2014). Land in the vicinity of the Project area includes additional multi-family, business, and park zones as shown on Figure 3-1.



**Figure 3-1 Stamford Zoning Map for Project Area Vicinity and Associated Legend**

### 3.9.2 Recreation

The Mill River Playground located in the Project area currently provides a play area for local children. A paved trail provides access through a portion of the Project area parallel to the Mill River near the Mill River Playground, but trail elements are not available south of Tresser Boulevard. The Project area is located south of the Mill River Park completed under Phase I of the MRRP (see Figure 3-1).

### 3.9.3 Coastal Zone Management

The Coastal Zone Management Act (CZMA) of 1972 provides assistance to states, in cooperation with federal agencies, or developing land and water use programs in coastal zones. Section 307 of the CZMA stipulates that where a federal project initiates reasonably foreseeable effects on any coastal use or resource, the action must be consistent to the maximum extent practicable with enforceable policies of the affected state's federally approved coastal management plan.

The National Oceanic and Atmospheric Administration's (NOAA) CZMA is administered in Connecticut through the Connecticut Coastal Management Act (CMA). In the City of Stamford, areas within the tidally-influenced SFHA are classified as coastal area. The entire Project area is within the coastal area per the CMA.

The Coastal Jurisdiction Limit (CJL) replaces the previous High Tide Line (HTL) regulatory limit for the Connecticut DEEP Office of Long Island Sound Programs (OLISP). The CJL

elevation for the City of Stamford (Long Island Sound) is 5.5 feet, NAVD88. The CJL has been added to the regulatory plan set, which is also in vertical datum NAVD88.

A portion of the Project would be conducted within the CJL such that a Certificate of Permission (COP) from Connecticut DEEP is required.

### **3.10 Air Quality and Noise**

#### **3.10.1 Air Quality**

Ambient air quality is protected by Federal and state regulations. The EPA has developed National Ambient Air Quality Standards (NAAQS) for certain air pollutants, and air quality standards for each state cannot be less stringent than the NAAQS. The NAAQS determined by EPA set the concentration limits that determine the attainment status for each criteria pollutant. EPA has designated the following criteria air pollutants under the NAAQS for Connecticut:

- Particulate matter: <10 micrometers in diameter (PM<sub>10</sub>) or <2.5 micrometers in diameter (PM<sub>2.5</sub>);
- Sulfur dioxide (SO<sub>2</sub>);
- Ozone (O<sub>3</sub>);
- Nitrogen dioxide (NO<sub>2</sub>);
- Carbon monoxide (CO); and
- Lead (Pb).

Under the Clean Air Act's NAAQS, the Project area is located in the New York-New Jersey-Long Island, NY-CT Area, which includes Fairfield County and the City of Stamford. According to the EPA (2017), the Greater Connecticut, CT area is a non-attainment area (classified marginal) for the 2008 Federal 8-hr Ozone standard. Therefore, the current designations for the Project area are:

- Attainment: CO, NO<sub>2</sub>, Pb, SO<sub>2</sub>, PM<sub>2.5</sub> and PM<sub>10</sub>
- Non-Attainment: Ozone

When a state has been designated as attainment for an air pollutant, all regions of the state are in compliance with all the standards (i.e., short term and long term; primary and secondary) for the particular pollutant. This is the case for NO<sub>2</sub>, CO, Pb<sub>2</sub> and SO<sub>2</sub>. When a state has been designated as non-attainment for an air pollutant, one or more of the standards for the pollutant have been violated in one or more regions of the state. The non-attainment designation that is subsequently applied to a region can reflect the "degree" of non-attainment depending upon a number of factors including the air pollution history in the region, previous designation of the region as either attainment or non-attainment, lack of air pollutant monitoring in the region, and inferences made based on pollutant monitoring done in adjacent or similar regions.

On October 1, 2015, the EPA lowered the federal 8-hour primary and secondary standard for ozone from 0.075 parts per million (ppm) (2008 standard) to 0.070 ppm (2015 standard). The EPA plans to formally designate attainment and nonattainment areas in late 2017. It is expected that Connecticut would continue to be in nonattainment for ozone.

Ozone, also known as ground-level ozone, is created by a chemical reaction between volatile organic compounds (VOCs) and oxides of nitrogen (NOx) in the presence of sunlight. These compounds are produced in greater quantities in more densely populated and commercially developed areas with sources including vehicles, consumer products and services, and residential fuel combustion.

### **3.10.2 Noise**

Noise and sound can directly or indirectly affect health, enjoyment, and well-being. High levels of noise can cause hearing loss, interfere with communication, disturb concentration, and cause stress. Moderate and low levels of noise can disturb sleep and annoy sensitive receptors.

In accordance with 24 CFR Part 51 Subpart B, the initial query for non-housing uses is whether ‘quiet is integral to the project’s function.’ Chapter 164 of the Stamford municipal code is known as the “City of Stamford Noise Control Ordinance.” The ordinance states that “people have a right to and should be ensured an environment free from excessive sound and vibration that may jeopardize their health or safety or welfare or degrade the quality of life.”

The Project area is located in a neighborhood that includes both residential and commercial structures. As an urban downtown area, a certain level of ambient noise is expected, including noise generated by local traffic. Other sources of noise, such as airports and rail lines, are not located in the immediate vicinity of the Project area and are unlikely to comprise a more than minimum amount of background noise near the Project area.

Chapter 164 of the Code of Ordinances in the City of Stamford (1999) specifies decibel limits for noise emitted beyond the boundaries of the premises which are the source of the noise. Activities in the Project area are currently exempt from this ordinance as the Mill River Playground, Rotary Park, and associated open space is a recreational use permitted by law. Construction activities are also exempt from these regulations during daytime hours, it being the express intention of this provision to prohibit the use of construction equipment and machinery after the hour of 8:00 p.m. and before the hour of 7:00 a.m. on Monday through Friday, before 8:00 a.m. on Saturday, and before 10:00 a.m. on Sunday.

### **3.11 Weather Intensity**

Increased weather intensity in the Project area may include changes in the frequency and intensity of precipitation and flooding and an overall rise in sea level along Long Island Sound (Western Connecticut Council of Governments, 2016).



The Northeastern United States has experienced a greater recent increase in extreme precipitation than any other region in the U.S.; between 1958 and 2010, the Northeast saw more than a 70% percent increase in the amount of precipitation falling in very heavy events (defined as the heaviest 1% of all daily events) (Western Connecticut Council of Governments, 2016). This increase results in increased risks to the Project area related to runoff and stormwater management, particularly in regards to riverine habitat (Section 3.5).

Sea level rise would also affect tidally-influenced stream sections of the Mill River, including the Project area (Western Connecticut Council of Governments, 2016). Water levels in the Mill River may increase over time as coastal water levels increase, and flood heights may also increase in the Project area.

## **4.0 Environmental Consequences**

### **4.1 Geology, Soils, and Sediment**

#### **No Action Alternative**

Under the No Action Alternative, the topography would not be altered, nor would areas of active erosion along the riverbank be stabilized. Over time, it is expected that the existing dilapidation of the stone masonry retaining wall along the riverbank would worsen via erosion to at least a minor level of impact, requiring expenditure and repair by the City.

#### **Proposed Action Alternative**

Under the Proposed Action, the topography in portions of the Project area would be permanently altered to support the proposed linear trail elements and park amenities. As the linear trail is proposed to be constructed at grade to the maximum extent possible, minimal surficial grading is anticipated.

During the Project installation period, there would be the potential for increased erosion and/or sediment migration out of the Project area and into the Mill River. Best Management Practices (BMPs) would be implemented during the Project installation period in accordance with the Connecticut Guidelines for Soil Erosion and Sediment Control (Connecticut Council of Soil and Water Conservation, 2002) including use of silt fences, straw bales, diversion dikes, swales, sedimentation basins/traps, truck wash areas/decontamination stations, stabilized Project area entrances for equipment and/or other means as a temporary structural practice to minimize erosion and sediment runoff until the Project area is stabilized with vegetation. Periodic sweeping of the Project area and driveway(s) would be performed to reduce fugitive dust and off-site tracking. The use of BMPs is expected to reduce the temporary potential impacts of sedimentation and erosion to be minor.

Overall, the long-term impact of the Proposed Action is expected to be beneficial to geology, soils, and sediment resources as the potential for erosion would be reduced.

### **4.2 Water Resources and Wetlands**

#### **No Action Alternative**

As described in Section 4.1, under the No Action Alternative areas of deterioration of the retaining wall would not be stabilized, which would introduce additional sediment into the Mill River and could lead to increased sediment deposition downstream in the river and potentially in Stamford Harbor. In addition, the existing riparian buffer would continue to provide only a negligible to minor benefit in filtering stormwater runoff moving across the Project area, which is expected to worsen in the future. The long-term impact associated with this alternative to water resources is expected to be minor.

The Project area is currently located within the SFHA, and would continue to be under the No Action Alternative. However, the existing structures are not habitable and are designed to be resilient to flooding.

### **Proposed Action Alternative**

The Proposed Action would provide a minor benefit to the quality of runoff leaving the Project area into the river through stabilization of the retaining wall and restoration of the riparian corridor adjacent to the river which would reduce sediment entering the waterway and enhance filtration capacity of the riparian area. It is expected that the Mill River would remain a Class A / Class SB surface water body as designated by the Connecticut DEEP.

Under the Proposed Action, the Mill River would continue to provide important wetland functions such as flood flow alteration, shoreline stabilization, wildlife habitat, recreational opportunities, and aesthetic quality. Stabilization of the retaining wall and restoration of the riparian corridor adjacent to the river is expected to provide a minor benefit to wetland resources via improved shoreline stabilization and overall aesthetic quality.

Impacts to water quality may occur due to turbidity generated by sediment migration as a result of restoration activities. Additional BMPs to those described in Section 4.1 would be utilized to reduce and/or minimize impacts to water resources associated with the Mill River during the Proposed Action installation period, including the following:

- No equipment, materials, or machinery would be stored, cleaned, refueled, maintained, or repaired within twenty-five (25) feet of the Mill River.
- No materials resulting from any clearing or restoration activity would be disposed of in any wetland or watercourse. All materials, such as invasive vegetation and woody debris, would be disposed at an appropriate landfill outside of the Project area.
- Restoration activities would comply with all Federal, State, and local laws, codes, ordinances and regulations that govern the control of sediment, erosion and stormwater during construction activities.

The use of BMPs is expected to reduce potential impacts to water resources from restoration activities to temporary and minor.

The Proposed Action would be created almost entirely at-grade and would be resilient to flooding consistent with the requirements of the NFIP. The minor grading associated with the linear trail and park amenities are not anticipated to result in an increase in flood heights of more than one foot, and therefore would have a negligible impact on flooding. While park amenities such as restrooms would be placed in the floodplain, these structures would not be located in the

floodway where they could obstruct flood flows (Appendix D), and these non-habitable structures would be designed compliant with the requirements of the NFIP.

The proposed LOMR is expected to result in a reduction in the regulatory flood height across the Project area. This is a socioeconomic benefit discussed in Section 4.6.

Overall, the short-term, temporary impact of the Proposed Action is expected to have a minor impact on water resources and flooding in the Project area. The long-term impact of the Proposed Action is expected to have a minor benefit on water resources and flooding in the Project area.

### **4.3 Biological Resources and Vegetation**

#### **No Action Alternative**

Under the No Action alternative, existing habitats, including a degraded riparian corridor, would remain in place in the Project area and would likely worsen over time with continued erosion of riverbanks. The No Action Alternative may have a minor impact on the red knot due to the potential further dilapidation of the masonry retaining wall resulting in erosion and sedimentation in the Mill River, which could impact invertebrate populations that would provide forage for the species.

The No Action Alternative may have a minimal impact on the Bald Eagles and other birds protected under the MBTA should erosion worsen to the point where existing trees are undermined by bank erosion which could eliminate potential resting areas. Impacts to the northern long-eared bat are not anticipated as they are unlikely to utilize the Project area.

The Project area is not within an area designated as essential fish habitat (Stamford Harbor). It is possible that continued erosion and resulting sedimentation from the Project area under the No Action Alternative could result in minimal impacts to essential fish habitat downstream in Stamford Harbor.

The No Action Alternative would likely result in continued infiltration and dominance of invasive species such as multiflora rose in the riparian corridor of the Project area, which are less preferable than native species. A minor impact may occur to macroinvertebrates in the Mill River, either through direct impacts via turbidity smothering sessile organisms or indirectly via sedimentation over benthic sources. The minor impact to macroinvertebrates would also produce a minor impact to predator species, including summer flounder, bluefish, belted kingfisher, osprey, cormorant, mallard ducks, Canada geese, and others.

#### **Proposed Action Alternative**

The IPaC Trust Resources Report dated June 6, 2016 (Appendix C) indicated that the red knot and the northern long-eared bat may occur in the Project Area (Section 3.5.1). Based upon review of the Project Area as discussed below, both species are considered unlikely to occur in

the Project Area. Endangered species consultation<sup>2</sup> was conducted with the USFWS New England Field Office. The consultation process included:

- Determining whether any listed, proposed, or candidate (threatened or endangered) species are likely to occur within the proposed project action area based statewide information on the USFWS website. Based only on the USFWS website data, both the red knot and northern long-eared bat may occur or could potentially be affected by activities within the proposed project area.
- Contacting the Connecticut Endangered Species Program (Natural Diversity Database (NDDDB) through Connecticut DEEP) for additional information on federally and state-listed species. Based on maps published by the NDDDB dated December 2017, threatened and endangered species have not been found in the Project area, nor are significant natural communities located in the vicinity of the Project area.
- Reviewing the information available from the IPaC report (Appendix C) and other sources of information regarding the habitat requirements of each species. As noted in Section 3.5.1, there is general lack of habitat for these species in the Project area such that it is unlikely that either species presently utilizes the Project Area. However, as there was the slight potential for listed species habitat to be present in the project area, a consultation letter was sent to the USFWS on August 7, 2017 (Appendix C).
- The USFWS New England Field Office was contacted on December 11, 2017, to follow up on the consultation letter (Appendix C). The USFWS New England Field Office responded on December 12, 2017 indicating the Project area “is developed and it looks like there may be no red knot habitat available in [the] project action area.” The USFWS further requested the submission of a Streamlined Consultation form for the northern long-eared bat (Appendix C).
- Based on the assessment dated December 12, 2017, by the USFWS (Appendix C), and the lack of habitat in the Project area, the Project will have no effect on the red knot. As the NDDDB does not identify any listed species for the Project area and there is no potential habitat for the red knot in the project action area, no further coordination with the USFWS is required per the endangered species consultation process through the USFWS New England Field Office. A “no species present” letter dated January 8, 2018 was downloaded from the USFWS New England Office website for the red knot (Appendix C).
- The northern long-eared bat Streamlined Consultation Form was submitted to the USFWS New England Field Office on March 1, 2018 (Appendix C). The USFWS did not respond within 30 days (by March 31, 2018) of submission of the Streamlined Consultation Form.

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<sup>2</sup> [https://www.fws.gov/newengland/EndangeredSpec-Consultation\\_Project\\_Review.htm](https://www.fws.gov/newengland/EndangeredSpec-Consultation_Project_Review.htm)

Therefore, per the Streamlined Consultation Form “the action agency may presume that its determination is informed by the best available information and that its project responsibilities under 7(a)(2) with respect to the [northern long-eared bat] are fulfilled”. Based on the lack of habitat in the Project area and the information reviewed during the USFWS consultation process, the Project is expected to have no effect on the northern long-eared bat. A “no species present” letter dated January 8, 2018, was downloaded from the USFWS New England Office website for the northern long-eared bat (Appendix C).

The bank improvements envisioned as part of the Proposed Action would prevent further sedimentation into the river to affect benthic food sources. The reduced sedimentation and incrementally improved water quality would benefit the macroinvertebrate population in the Mill River and Stamford Harbor upon which the red knot would feed, potentially making the vicinity of the Project area more desirable to the red knot during the early autumn each year. The increased macroinvertebrate populations would support increased fish populations, which could in turn provide a minimal benefit to bald eagles by making the vicinity of the Project area more desirable to that species.

Light poles are proposed which would be downward facing (dark-sky compliant). Use of such fixtures as part of the Proposed Action is not expected to impact migratory birds or birds which hunt at night. The ambient light level is proposed to be consistent with the lighting in the adjacent urban areas.

Temporary minor impacts to transient bald eagles are possible during restoration, primarily due to noise from equipment and increased activity in the Project area. The noise would potentially make bald eagles less likely to choose the Project area as a resting location, although after Project completion, the area would be more desirable to these species.

Stamford Harbor is identified by the NMFS as being essential fish habitat. As discussed above, reduction of sedimentation leaving the Project area into the Mill River would benefit sessile organisms and macroinvertebrates, which in turn would benefit fish populations which are dependent on such species. The Proposed Action is therefore expected to provide a minimal benefit to essential fish habitat. The NMFS determined “there may be some modest presence of species managed under the Magnuson-Stevens Fishery Conservation Management Act” and that “restoration of the Mill River may facilitate an enhanced use of the waterway by both those estuarine and diadromous species” (USACE, 2004).

The Proposed Action Alternative would restore the existing riparian corridor, resulting in removal of invasive vegetation in the Project area in preference to native species. This is expected to provide a long-term minor benefit for native vegetation in the area which in turn could provide a long-term minor benefit for wildlife which would utilize the riparian corridor. In addition, the improved riparian corridor would incrementally improve the quality of stormwater runoff which would benefit aquatic biological resources.

Long term, the Proposed Action is expected to provide a minimal benefit to other birds as the bank stabilization would make it less likely that the river bank would be undermined in the future, which would result in reduced roosting, resting, and nesting habitat.

Temporary restoration-related impacts could generate erosion, and runoff of eroded materials could produce sedimentation and turbidity in the Mill River which could produce minor impacts to sessile organisms and macroinvertebrates as described above. Temporary minor impacts to wildlife are possible during restoration, primarily due to noise from equipment and increased activity in the Project area which may encourage other wildlife to avoid the area temporarily until restoration activities are complete. Furthermore, injury or mortality of mammals, birds, and other small animals could occur through direct contact with equipment and traffic in the Project area.

A number of BMPs are proposed to reduce impacts to biological resources:

- Truck tires and equipment leaving the Project area would be periodically cleaned to prevent migration of invasive vegetation off-site.
- Erosion and sedimentation controls (as discussed in Section 4.1) would impede migration of small mammals and amphibians into the Project area.
- The proposed bank restoration would be timed to avoid in-water work during the low flow period between May 15 and September 30. This in-water restriction is based on an essential fish habitat recommendation for Stamford Harbor provided by the NMFS in a letter dated August 5, 2004 (Appendix B). Implementing this restriction would help to protect riverine ecology during the restoration effort. In addition, the COP (Appendix B) restricts work authorized under the COP to only being conducted at low tide.

Overall, the Proposed Action is expected to have a long-term minimal benefit to endangered species, and a long-term minor benefit to other biological resources in the Project area.

#### **4.4 Human Health and Safety**

##### **No Action Alternative**

Under the No Action alternative, the Project area would continue to be a playground and open space area and provide recreational opportunities such as passive recreation which are beneficial to human health, albeit without additional park amenities such as restrooms. The Project area would continue to be served by local emergency services. Access to the Mill River would continue to be ad hoc and potentially hazardous depending on the level of scour and the stability of the upper riverbank and retaining walls, which could require fencing or restoration in the future.

The Project area would continue to be located in the SFHA and contain flood-resilient open space amenities. The park would continue to be closed during flooding conditions for safety of residents, using signage and barriers as appropriate.

##### **Proposed Action Alternative**

Under the Proposed Action, the Project area would continue to be a playground and open space area and provide recreational opportunities such as passive recreation which are beneficial to



human health. Additional park amenities such as restrooms and lighting and a linear trail would be completed to improve human health and safety. The Project area would continue to be served by local emergency services. Restoration activities would repair the stability of the upper riverbank, thereby improving safety conditions along the Mill River. The revetment wall would also provide an area of safe, direct access to the river where none currently exists.

The Project area would continue to be located within the SFHA and contain flood-resilient open space amenities. The park and open space would continue to be closed during flooding conditions for safety of residents, using signage and barriers as appropriate. The Proposed Action would not change the frequency or magnitude of flooding, but would have a minor long-term benefit to human health and safety with regards to protecting the city from flooding by utilizing the riparian corridor and floodplain for non-structural, recreational uses. The lack of development would ensure that the necessary buffer from nearby development is provided for the river to expand during flooding.

Temporary risks to human health and safety are anticipated during the Proposed Action installation period. Some materials which could be hazardous to the public if mishandled, such as fuels and lubricants for vehicles and equipment, would be utilized during restoration activities. Other potential health hazards due to restoration activities include holes in the ground and active use of heavy equipment and machinery which could make sudden swings and turns. Such risks would be minimized by the following BMPs:

- Physical barriers such as fencing would be installed around the Project area to prohibit entry by the public during restoration, with signage providing appropriate instructions;
- All hazardous waste materials generated during restoration would be disposed of offsite in an appropriately licensed landfill; and
- Truck traffic would be limited to an agreed upon route and only during the hours permitted by the City of Stamford Code of Ordinances.

The BMPs would reduce the temporary risk to human health and safety to being minor during the construction period. Overall, the Proposed Action is expected to have a minor benefit to human health and safety in the Project area over the long-term due to improved lighting, recreational facilities built to current safety standards, and improved riverbank stability and access.

## **4.5 Cultural Resources**

### **No Action Alternative**

As historic properties are not located in the Project area, the No Action Alternative would not impact historic properties. The Main Street Bridge, located just outside the northern boundary of the Project area, would also not be affected by the No Action Alternative as restoration activities would not occur there.

Tribal resources have not been identified in the Project area. Therefore, impacts to tribal resources are considered unlikely.

### **Proposed Action Alternative**

The SHPO review determined that “no historic properties will be affected by the [Proposed Action]”, and that “no further review is requested” (Appendix B). This review is consistent with the absence of historic properties currently present at the Project area. As historic properties are not located in the Project area, the Proposed Action Alternative would not impact historic properties. The Main Street Bridge located just outside the northern boundary of the Project area would also not be directly affected by the Proposed Action Alternative, although creation of the linear trail may attract more interest in this historic feature by way of increased pedestrian traffic. Therefore, the Proposed Action is expected to have a minor benefit to the Main Street Bridge as a historic resource.

The Mohegan THPO responded on June 20, 2016, to the review request indicating that the “Mohegan Tribe does not have any concerns with the project as it is proposed.” The Mashantucket Pequot Tribal Nation THPO did not respond to the review request. In addition, tribal resources have not been identified in the Project area. Therefore, impacts to tribal resources are considered unlikely.

## **4.6 Socioeconomics, Environmental Justice, and Protection of Children**

### **No Action Alternative**

Under the No Action Alternative, the Project area would remain in its current state, with playground facilities at the Mill River Playground but limited opportunity for the local community, including low income families and children, to safely access the Mill River in this area for passive recreation and enjoyment. The lack of access to the riverbank and river would result in minor long-term impacts to the community, including substantial low income and minority populations and children.

### **Proposed Action Alternative**

Restoration activities are anticipated to benefit children and other city residents by providing additional park amenities and providing improved access to the natural resource that is the Mill River riparian corridor. According to the Natural Learning Initiative (2012), introducing children to the natural world provides benefits to their social, emotional and physical health. Providing access to nature for children within an otherwise developed City environment, which includes substantial low income and minority populations, is anticipated to encourage appreciation of the natural world and be beneficial consistent with the environmental justice goals of Executive Order 12898 and 13045, Protection of Children from Environmental Health Risks and Safety Risks.

Minor temporary impacts are expected during restoration, as the Project area would be closed to the public for safety reasons. The Mill River Playground and other open space in the Project area would be closed for approximately three months and unavailable such that children and adults would need to utilize Mill River Park (located upstream of Main Street) to play.

As the Proposed Action is upgrading an existing open space area, the Proposed Action would not adversely impact the demographic character of the neighborhood, displace any individuals, or harm any community institution. Furthermore, the Proposed Action would not impact any population group by creating barriers that would isolate a particular neighborhood or population group.

Temporary impacts are not expected to nearby businesses during restoration activities, as staging of equipment and vehicles is expected to occur within the Project area and not along nearby streets or parking areas. Minimal delays to traffic may result as a result of vehicles and workers entering and leaving the Project area and making deliveries to the Project area, although these should be relatively infrequent and of short duration.

Restoration activities would temporarily provide employment to contractors which would benefit certain business owners and may benefit low income and/or minority workers. This includes the potential for increased spending from workers on local eateries and potentially other businesses. Restoration activities would also indirectly provide a minimal economic benefit to suppliers. However, once complete, the Project area would have no further impact on employment or income patterns.

The LOMR would not result in any permanent direct impacts to the Project area, although it would require the expenditure of time and resources. The LOMR is expected to remove as many as 22 properties from the SFHA outside of the Project area, resulting in reduced flood insurance costs including to low-income and minority property owners and renters. The reduction in SFHA would also encourage private properties in the Mill River corridor to redevelop and thus improve the local economy. With the increased density available under the Mill River Corridor Plan (Stamford Urban Redevelopment Commission, 2001), the City anticipates over \$2 million annually in incremental real estate tax revenues from redevelopment complementary to the linear park and amenities envisioned under the MRRP.

The Proposed Action would not have adverse social and economic impacts on the City of Stamford. Overall, the Proposed Action is expected to provide a moderate benefit to socioeconomics, and minor benefits to environmental justice and protection of children in the vicinity of the Project area over the long-term.

#### **4.7 Land Use, Recreation, Public Safety, and Coastal Zone Management**

##### **No Action Alternative**

Under the No Action Alternative, the area would continue to exist as open space within an urban area. Land use, recreation and coastal zone management in the Project area would continue as it does today. Eventually, the playground amenities would need to be replaced, presenting a minor

impact over the long-term. Outside of the Project area, the SFHA would continue to be incorrectly mapped such that substantial improvement and redevelopment of areas in the Mill River corridor would continue to need to comply with local floodplain regulations.

The No Action Alternative would likely result in continued infiltration and dominance of invasive species such as multiflora rose in the riparian corridor of the Project area and access to the riverbank in the Project area would eventually be overgrown by invasive species. In addition, erosion of the riverbank would reduce safe access to the river. This would have a minor long-term impact on access to the riverbank of the Mill River and the overall aesthetics in the Project area.

### **Proposed Action Alternative**

Under the Proposed Action, the Project area would continue to be open space used as a public park, consistent with current use and existing zoning. The Proposed Action would renovate the existing playground, add park amenities such as restrooms and lighting, and improve access to the Mill River. These activities are expected to provide a moderate benefit to recreation in the Project area over the long-term. As the Mill River is a tributary to Stamford Harbor and Long Island Sound, increased accessibility to the river is consistent with the following CMA goal: *“to encourage public access to the waters of Long Island Sound by expansion, development and effective utilization of state-owned recreational facilities within the coastal area that are consistent with sound resource conservation procedures and constitutionally protected rights of private property owners.”*

The Project area does not contain Prime Farmland soil and as such, the Project is consistent with the Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; and is consistent with 7 CFR Part 658.

The Proposed Action is consistent with the federal Coastal Zone Management Act, Sections 307 (c) & (d) and consistent with coastal zone management in Connecticut. Specifically, the Proposed Action embraces the following key components of the Coastal Zone Management Program:

- Protecting natural resources – through establishment of riparian habitat in an urban riverine environment;
- Managing development in high hazard areas – through creation of an open, flood-resilient, passive recreation area; and
- Providing public access for recreation.

All work waterward of the CJL (approximately 1,175 square feet of impact) under Phase IIA has received a COP from Connecticut DEEP (Permit #201702962). The installation of the 140 linear feet of rock revetment retaining wall, which has a staircase profile, would provide a direct pedestrian access to the water edge where currently no access is available which would provide a moderate recreational benefit, particularly for anglers.

A portion of the Project would be conducted within the CJL, and a COP from Connecticut DEEP has been obtained dated June 30, 2017, to complete this work (Appendix B). An existing dilapidated stone masonry retaining wall would be removed in favor of a rock revetment retaining wall tied into the natural riparian vegetation at each end. This activity is categorized in the COP application dated March 23, 2017 as “substantial maintenance or repair of structures, fill, obstructions, or encroachments placed landward of the mean high water line and water ward of the coastal jurisdiction line, completed prior to October 1, 1987, and continuously maintained and serviceable since said date” and “minor alterations or amendments to pre-1995 unauthorized activities which do not interfere with navigation or littoral or riparian rights, and do not cause adverse impacts to coastal resources”.

The LOMR would remove approximately 22 properties from the SFHA, allowing for redevelopment to occur. Much of this activity would likely occur within the R-5 (Multiple Family Medium Density Design) zone adjacent to the eastern bank of the Mill River as shown on Figure 3-1. Redevelopment would be able to occur outside of the SFHA, providing greater flexibility on the types of residential development which could occur in the vicinity of the Mill River Playground.

Overall, the Proposed Action is expected to provide a long-term moderate benefit to recreation, land use, and coastal zone management in Project area.

## **4.8 Air Quality and Noise**

### **4.8.1 Air Quality**

#### **No Action Alternative**

The No Action alternative would not involve the use of equipment and machinery, so there would be no emissions and therefore no impacts to air quality would result under this alternative.

#### **Proposed Action Alternative**

Under the Proposed Action, no emissions would be generated by the site, and no additional idling or vehicle traffic is anticipated to occur at the site as parking would not be increased over existing conditions. Therefore, the long-term impact on air quality would be consistent with existing conditions and is expected to be negligible.

Equipment would be utilized and truck traffic would occur to and from the Project area during restoration processes. Any impacts to air quality associated with equipment would be temporary and minor. The Proposed Action is not likely to exceed the *de minimis* threshold for direct and indirect emissions of ozone as set by 40 CFR Part 93.153 due to the limited traffic likely to be needed for restoration. Thus, the Clean Air Act (CAA) Conformity requirements do not apply to the Proposed Action. The Proposed Action is consistent with the Clean Air Act as amended, particularly Section 176(c) & (d); and 40 CFR Parts 6, 51, and 93.

Fugitive dust would occur during the restoration period from the creation of exposed soils and traffic that may have minor impacts on local air quality. Even though the Proposed Action is not obligated to meet the CAA Conformity requirements, numerous controls are proposed for minimizing short-term impacts to air quality from fugitive dust and other pollutant emissions. The following BMPs have been identified for reducing the length of time that soils are exposed, to reduce off-site tracking, and to control vehicle and equipment emissions:

1. Restoration would be properly phased to minimize the length of time that soils are exposed before final materials are placed and landscaping is completed in order to minimize fugitive dust and sediment being blown from the Project area;
2. Exposed earth would be stabilized with grass, pavement, or other cover as early as possible to minimize fugitive dust and sediment being blown from the Project area;
3. Water or wetting agents would be used on exposed soil or gravel areas to reduce dust;
4. Stockpiled material would be covered, shielded, or stabilized as necessary to reduce dust;
5. Portable generators, on-site machinery, and vehicles would be properly maintained to operate efficiently without excessive smoke or emission;
6. Consideration would be given to using equipment with air pollution control devices and/or use of "clean" fuels including ultra-low sulfur diesel fuel (15 parts per million (ppm) of sulfur), compressed natural gas or emulsified fuels (e.g., Purinox, approved by the California Air Resources Board).
7. Anti-idling regulations would be followed.

The BMPs are expected to reduce the temporary impacts to having a negligible localized impact on air quality. Overall, the Proposed Action is anticipated to have a negligible impact to air quality in the Project area.

#### **4.8.2 Noise**

##### **No Action Alternative**

The No Action Alternative would not involve the use of equipment or machinery, or result in any associated noise. Noise levels would be consistent with current levels in the Project area. Therefore, noise impacts would not occur under this alternative.

## **Proposed Action Alternative**

The Proposed Action is not expected to result in long-term noise impacts. The Project area is expected to experience levels of noise consistent with existing noise levels following the restoration period.

Restoration activities would result in the use of vehicles which generate noise, which could result in temporary minor impacts to noise in the vicinity of the Project area. To reduce noise impacts, noise abatement measures would include installation and maintenance of properly functioning muffler devices on equipment and compliance with the City of Stamford and State of Connecticut noise performance standards. This includes restricting the use of noise generating equipment to certain daytime hours of the day per the City of Stamford Code of Ordinances. These noise abatement procedures, and compliance with performance standards, is expected to minimize noise-related impacts.

Overall, the Proposed Action is expected to have a negligible impact on noise levels in the Project area following restoration. Based on the above, the Proposed Action is consistent with the Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B.

## **4.9 Weather Intensity**

### **No Action Alternative**

Under the No Action alternative, the Project area would continue its current use, with increasing rainfall and runoff resulting in an increase in the rate of bank erosion in the Project area. Over time, sea level rise may result in increased water heights and increased erosion and potential flooding elevations at the site.

### **Proposed Action Alternative**

Under the Proposed Action alternative, the Project area would be stabilized such that increased precipitation would be slowed by the restored riparian buffer before entering the Mill River and the Project area would act as a natural buffer between the river and surrounding development, mitigating the impact to nearby development of future effects from increased weather intensity.



## 5.0 Cumulative Effects

The Council on Environmental Quality (CEQ) regulations for implementing NEPA define 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 regardless of what agency or person undertakes such other actions.

As discussed in Section 1.1, the Proposed Action is Phase IIA of the MRRP. The MRRP envisions pedestrian-friendly open space with river access being installed in Mill River Park (Phase I of the MRRP, located upstream of Main Street) downstream along both riverbanks to Richmond Hill Avenue (under Phase IIA (the Project) and Phase IIB of the MRRP) and even further downstream to Pulaski Street (under Phase III of the MRRP). As additional phases of the MRRP are completed, the cumulative benefits would incrementally increase. The following positive cumulative benefits are anticipated to occur in the Mill River corridor as a result of the ultimate completion MRRP:

- Improved passive recreation along linear trails connecting a large area, including the use of a historic trestle bridge (Main Street) which would provide for a continuous pedestrian recreation system through a portion of downtown Stamford;
- Improved recreational opportunities to access the river (e.g., fishing access points), particularly for low-income and minority populations in the vicinity of the Project area, and at controlled access points to provide cumulative effects for erosion control;
- Removal of invasive species along a much longer section of the river than the Project area, thereby providing greater support to native species and reducing the chance for reintroduction of invasive species via wind or water due to a limited restoration area; and
- Restoration of the riparian buffer over a continuous area, providing more opportunities to filter stormwater runoff (which may have a greater improvement on water quality to support macroinvertebrate populations) and providing more habitat for flora and fauna over a wider area.

Overall, long-term major cumulative benefits are expected to recreation from the Proposed Action, and long-term moderate cumulative benefits are expected to the biological environment, consistent with previous evaluations of the USACE (2004).

One cumulative benefit already mentioned (Section 3.4.4) associated with the Proposed Action is the FEMA LOMR which is anticipated to substantially reduce the SFHA and thereby promote redevelopment in adjacent parcels with uses complementary to the linear park, such as multi-family housing or businesses. Specific proposals for redevelopment or new complementary development are not known to the City at this time. The short-term cumulative effect of the LOMR would be to inform flood design requirements under Phase IIB as well as future phases of the MRRP, which is expected to provide a moderate benefit to the vicinity of the Proposed Action.

Long-term moderate cumulative benefits associated with the Proposed Action are anticipated. Furthermore, temporary cumulative impacts associated with the restoration activities are not

anticipated, as no other major construction projects are currently proposed in the vicinity of the Project area.

## **6.0 Agency Coordination and Public Involvement**

### **6.1 Agency Coordination**

Representatives of the following Federal, State, and local agencies, Tribes, and Project team members were consulted during planning of the Proposed Action and the development of this Environmental Assessment:

- City of Stamford
- U.S. Fish and Wildlife Service, Region 5
- U.S. Army Corps of Engineers
- Connecticut Department of Energy and Environmental Protection
- Connecticut State Historic Preservation Office
- Mohegan Tribal Historic Preservation Officer
- Mashantucket Pequot Tribal Nation Historic Preservation Officer

### **6.2 Public Involvement**

Resource agencies, local residents, and other stakeholders have been involved during various stages of development of the Mill River Park, prior to and during the current phase. The Project administrator, the Mill River Collaborative, is a highly visible organization within the community of Stamford. The website of the Mill River Collaborative ([www.millriverpark.org](http://www.millriverpark.org)) includes information available to the public regarding many aspects of the Mill River Park – both existing and planned activities. The website also offers residents, businesses, and stakeholders the opportunity to sign up to receive news and updates. The website provides the public opportunities to provide direct input on any aspect of the Mill River Park, Mill River Collaborative initiatives, and future plans, including the Proposed Action. The Mill River Collaborative issues annual reports that are posted on line and available to the public, and more specifically, the Stamford community.

The Board of Directors of the Mill River Park Collaborative includes representation from the City of Stamford, Stamford Partnership, Downtown Special Services District, the West Side and Downtown communities, Urban Redevelopment Commission, the corporate community, and Stamford at large. The Mill River Collaborative was established as a public/private partnership that would “provide collaborative leadership in creating and sustaining a successful Mill River Park.”

The Mill River Park Collaborative often hosts work with volunteer groups, working with a volunteer coordinator. Past activities have included clean up the riparian corridor and manual removal of invasive species.

A public community meeting was hosted by the Mill River Park Collaborative in March of 2017 at the Stamford Library for the purpose of discussing the Project and related actions within the Mill River corridor. The public was notified through electronic mail and social media, as well as advertisements that were posted in the Stamford Library.

The Stamford Advocate, the Stamford Daily Voice, and other publications routinely post articles regarding Mill River Park plans and progress, including funding successes and Project schedule. In this manner, the public is routinely informed of the activities of the Mill River Collaborative, including the Project.

Through the local permitting process, there are existing and suitable opportunities for regulators and residents to comment on and condition the Project's potential short-term and long-term impacts and mitigation measures. Property abutters receive notification of actions that require local permitting approval, including the Project, and have the opportunity to provide input through this public process. All local permitting meetings are open to the public and provide an opportunity for the public to comment.

Historically, public involvement sessions were held in conjunction with the development of the Mill River Greenway Master Plan, which included the Project area.

## **7.0 Compliance with Federal, State, and Local Laws**

The Proposed Action has been evaluated for consistency with applicable federal, state, and local laws, regulations, and programs. Note the following:

- 401 Water Quality Certificate – Not required
- Coastal Zone Management Federal Consistency Determination – A COP has been issued by the Connecticut DEEP for activities being conducted within the CJL (Appendix B). A request to Connecticut DEEP Office of Long Island Sound Programs (OLISP) was made on August 7, 2017 requesting certification that the activity complies with Connecticut's CZM program for activities affecting a state's coastal area. The DEEP replied on January 4, 2018 that issuance of the COP implies that coastal consistency has been met (Appendix B).
- Endangered Species Act, Section 7 Consultation (USFWS and NMFS) – Consultation with NMFS occurred in 2002 (Appendix B), and with USFWS on June 6, 2016, August 7, 2017, December 11 and December 12, 2017, and March 1, 2018 (Appendix C).
- Migratory Bird Treaty Act Consultation (USFWS) – Consultation with USFWS occurred on June 6, 2016 and on August 7, 2017 (Appendix C).
- National Historic Preservation Act – Consultation occurred with SHPO and THPOs (Appendix B); no additional work is required.

In addition to this Environmental Assessment, the following permits and/or consultations are also required by local, state and federal agencies:

- Permit to Conduct Regulated Activities (City of Stamford Environmental Protection Board)

Consultations with regulatory agencies, including DEEP have been held to confirm the soundness of the Project and the ability to receive permits. Refer to Appendix B for agency consultation and a copy of the General Permit issued by the USACE. No other permits have been issued.

## 8.0 List of Preparers

The following contributed to the development of this EA:

### U.S. Department of the Interior (DOI)

Name	Role
Andrew Raddant	Regional Environmental Officer
Diane Lazinsky	Regional Environmental Protection Specialist

### Cardno, Inc.

Name	Role	Project Responsibility
Bruce Hart	Senior Project Scientist	EA Peer Review
Alison Uno	Senior Project Scientist	EA Peer Review
Adele Clouse	Senior Staff Scientist	EA Peer Review
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### Mill River Collaborative

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### Milone & MacBroom, Inc.

Name	Role	Project Responsibility
Jeanine Armstrong Gouin, P.E.	Director of Water Resources Engineering & Environmental Science	EA Oversight & Consultant Review
Becky Meyer, P.E.	Project Engineer	Technical Contributor
Matthew Sanford, PWS	Lead Environmental Scientist	Wetland & Biological Assessment
James MacBroom, P.E.	Senior Vice President	Hydrologic & Hydraulic Assessment
Scott Bighinatti, CFM	Lead Environmental Scientist	EA Revisions
Annette Horner	Senior Administrative Assistant	Clerical

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## **10.0 List of Appendices**

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