DRAFT
Finding of No Significant Impact (FONSI)
Continued Operation and Maintenance Actions

Woonsocket Flood Risk Management Project
Woonsocket, Rhode Island

Pursuant to the Council on Environmental Quality (CEQ) regulations (40 *Code of Federal Regulations* [CFR] 1500-1508) for implementing the procedural provisions of the *National Environmental Policy Act* (NEPA) (42 U.S.C. 4321 et. seq.) and the U.S. Army Corps of Engineers (USACE) Regulation 33 CFR 230 (*Procedures for Implementing NEPA*), the U.S. Army Corps of Engineers conducted an environmental assessment (EA) of potential environmental effects associated with the continued operation and maintenance of the Woonsocket Flood Risk Management Project (FRMP) located in the City of Woonsocket, Rhode Island.

The Woonsocket FRMP protects sections of the City of Woonsocket from flooding events due to large storms. In 2009, USACE assumed ownership of two USACE-constructed local protection projects and all associated components (pump stations, levees, etc.) at the direction of the U.S. Congress in the *Military Construction Authorization Act for Fiscal Year 2008, Section 2875.* USACE classified these two projects into a single flood risk management project with three independent flood protection units: the Upper Woonsocket Section, the Social District, and the Hamlet District.

USACE operates the FRMP in accordance with its authorized purposes. Routine operations and maintenance actions were analyzed for the potential impacts to water resources, fish and wildlife, vegetation and wetlands, endangered and threatened species, socioeconomics, cultural resources, air quality and noise, and floodplains. The impacts associated with the operation and maintenance activities of this flood risk management project are not significant, and its presence ensures USACE has the ability to protect residential and commercial properties, and infrastructure within the City of Woonsocket during storms.

My determination of a Finding of No Significant Impact is based on the analysis in the EA and the following considerations:

Impacts on public health or safety: The operation and maintenance of the project in the urban areas of Woonsocket protects commercial areas, transportation facilities, public utilities, and homes, against flooding. This is a positive net benefit to the safety of the residents of Woonsocket.

Unique characteristics: The FRMP is located within the U.S. National Park Service's Blackstone River Natural Heritage Corridor. No specific restrictions are maintained for the FRMP's operation and maintenance.

Controversy: The operation and maintenance of the project is not controversial.

Uncertain impacts: The impacts of the proposed project are not uncertain; they are readily understood based on past operation, maintenance and recreation support activities.

Precedent for future actions: The operation and maintenance of the Federal project are part of the authorized purposes. Its continued use will not establish a precedent for future actions.

Cumulative significance: The continued operation and maintenance of the Federal project was determined to be non-significant when considered in the context of past, present and future impacts to the river ecosystem.

Historic resources: The operation and maintenance of the project will have no known adverse impact on historic properties, nor will it result in adverse impacts on properties eligible for listing on the National Register of Historic Places.

Endangered species: The operation and maintenance of this project will have no impacts to Federal threatened or endangered species or state-listed species of concern, rare or endangered species.

Potential violation of state or federal law: The operation and maintenance of the project will not violate Federal or state laws.

Based on my review and evaluation of the environmental effects as presented in the EA, I have determined that the continued operation and maintenance of the Woonsocket Flood Risk Management Project in Woonsocket, Rhode Island is not a major Federal action significantly affecting the quality of the human environment. Therefore, the ongoing operations and maintenance activities are exempt from the requirement to prepare an Environmental Impact Statement.

Date: _____

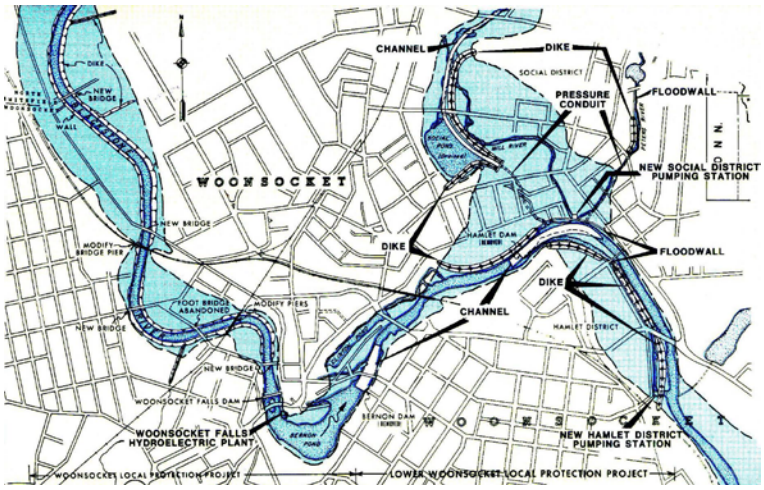
_____

Christopher J. Barron
Colonel, Corps of Engineers

US Army Corps of Engineers®
New England District

Woonsocket Flood Risk Management Project
Woonsocket, Rhode Island

Continued Operation and Maintenance
Environmental Assessment



U.S. Army Corps of Engineers
North Atlantic Division
New England District
Concord, Massachusetts

June 2016

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1 PURPOSE AND NEED

This Environmental Assessment (EA) addresses the potential environmental effects associated with routine operation and maintenance (O&M) activities conducted by the United States Army Corps of Engineers (USACE) at the Woonsocket Flood Risk Management Project (FRMP) (the Project) located in Providence County, the city of Woonsocket, Rhode Island. The activities described in this EA are necessary to ensure the proper and safe operation of the FRMP. Appropriate maintenance and operation of the FRMP is necessary to support the authorized flood reduction project purpose.

Certain operation and maintenance activities at federal flood risk management projects can potentially adversely affect the quality of the environment. This EA evaluates and considers potential effects from these types of actions.

The Woonsocket FRMP consists of two local flood protection projects originally designed and constructed by the U.S. Army Corps of Engineers. The first, the Upper Woonsocket section was completed in 1960 and is located on the Blackstone River. The second, the Lower Woonsocket section, was completed in 1967 and is located on the Blackstone River and two tributaries, the Mill River and Peters River. On completion, both projects were turned over to the city of Woonsocket for operation and maintenance. These two local protection works and the USACE-owned West Hill Dam in Uxbridge, Massachusetts, protect industrial and commercial establishments and densely populated residential areas from flood flows on the Blackstone, Mill, and Peters Rivers.

In January 2009, the Woonsocket FRMP was transferred to USACE ownership and control in accordance with Section 2875 of the National Defense Authorization Act for Fiscal Year 2008. The projects are considered to serve a single flood damage reduction function and have been designated as a single project with three individual components: the Upper Woonsocket Section, the Social District Unit and The Hamlet District Unit (see Section 5.4 for description). USACE New England District's Thames River Basin, specifically personnel at the West Hill Dam, are responsible for continued operation and maintenance of the FRMP.

2 PROJECT AUTHORIZATION

Assumption of Responsibility and Acquisition

The ownership and annual operation and maintenance for the Woonsocket FRMP is the responsibility of the USACE through the Military Construction Authorization Act for Fiscal Year 2008, Section 2875:

> *"(1) **ASSUMPTION OF RESPONSIBILITY**.-The Secretary of the Army, acting through the Chief of Engineers, shall assume responsibility for the annual operation and maintenance of the Woonsocket local protection project authorized by section 10 of the Act of December 22, 1944 (commonly known as the Flood Control Act of 1944; 58 Stat. 892, chapter 665), including by acquiring, in accordance with paragraph (2), any interest of the city of Woonsocket, Rhode Island, in and to land and structures required for the continued operation and maintenance, repair, replacement, rehabilitation, and structural integrity of the project, as identified by the city, in coordination with the Secretary.*

*"(2) **ACQUISITION**.-As a condition on the Secretary's assumption of responsibility for the Woonsocket local protection project under paragraph (1), the city of Woonsocket shall convey, not later than one year after the date of the enactment of the National Defense Authorization Act for Fiscal Year 2008, to the Secretary of the Army, by quitclaim deed and without consideration, all right, title, and interest of the city in and to the Woonsocket local protection project, including any interest of the city in and to land and structures required for the continued operation and maintenance, repair, replacement, rehabilitation, and structural integrity of the project, as identified by the city."*

Original Project Authorizations

The Woonsocket Local Protection project (Upper Woonsocket Local Flood Protection) was authorized by the Flood Control Act of 22 December 1944 (Public Law 534, 78th Congress, 2nd Session) in accordance with recommendations of the Chief of Engineers in House Document No. 624, 78th Congress, 2nd Session.

The Lower Woonsocket Local Protection project was authorized by the Flood Control Act of 14 July 1960 (Public Law 86-645, 86th Congress, 2nd Session) in accordance with recommendations of the Chief of Engineers in Senate Document No. 87, 85th Congress, 2nd Session.

3 SCOPE OF THE ENVIRONMENTAL ASSESSMENT

District commanders are responsible for developing, maintaining, and distributing an up-to-date operation and maintenance manual (Operations Manual) for each civil works project under their supervision. The manual provides guidance and instruction to project personnel for the proper upkeep, repair and maintenance of project features and facilities, and direction on essential project operations. The Operations Manual for the Woonsocket Local Protection Project was prepared in accordance with the requirements of ER 1130-2-500, Chapter 2 and Appendix B, dated 27 December 1996.

The Operations Manual contains site-specific details and actions to insure maximum protection against floods for which the project was designed. Failure to maintain and operate the project, as required by USACE Regulations and as detailed in the Operations Manual, can result in severe property damages, loss of life, and the waste of funds invested by citizens in a valuable flood control system.

This EA evaluates the potential environmental impacts from the operations and maintenance activities as outlined in the Operations Manual in compliance with the current federal laws, regulations, Executive Orders, and Executive Memorandum. It has been prepared to comply with the Council on Environmental Quality (40 Code of Federal Regulations (CFR) 1500) and U.S. Army Corps of Engineers NEPA regulations (33 CFR 230 and 235) for implementing the National Environmental Policy Act of 1969 (NEPA), and meets the compliance requirements of the USACE Environmental Review Guide for Operations (ERGO). NEPA requires the Federal government to consider environmental effects of a proposed action and solicit comments from interested agencies, groups, and the public.

CEQ regulations (40 CFR 1502.15) provide guidance on the level of analysis to be contained and presented in the NEPA documents. The analysis necessary should address *"the environment of the areas to be affected or created by the alternatives under consideration. The descriptions are to be no longer than is necessary to understand the effects of the alternatives. The data and analyses is to be*

commensurate with the importance of the impact, with less important material summarized, consolidated, or simply referenced." The intent is that USACE avoid inclusion of unnecessary information in the NEPA analysis, and concentrate efforts and attention on important issues. With this standard, USACE has identified only a few resources that are necessary to be evaluated in this analysis of the environmental impacts associated with the ongoing operations and maintenance activities at the Woonsocket FRMP.

4 PUBLIC INVOLVEMENT

USACE invites public participation in the NEPA process. Consideration of the views and information of all interested persons promotes open communication and enables better decision making. All agencies, organizations, and members of the public having a potential interest in the proposed action, including minority, low-income, disadvantaged, and Native American groups, are urged to participate in the decision making process.

Public participation opportunities with respect to this EA and decision making are guided by 33 Code of Federal Regulations Part 230. Upon completion, the EA will be made available to the public for 30 days to comment, along with a draft Finding of No Significant Impact (FONSI). At the end of the 30-day public review period, the U.S. Army Corps of Engineers will consider any comments submitted by individuals, agencies, or organizations on the potential effects from the continued operations and maintenance as evaluated in the EA and draft FONSI. USACE may then execute the FONSI and proceed with the ongoing operation and maintenance of the Federal project. If it is determined prior to issuance of a final FONSI that the activities associated with the operation and maintenance of the FRMP would result in significant environmental impacts, the USACE will publish in the *Federal Register* a Notice of Intent to prepare an Environmental Impact Statement and continue with the NEPA process.. Throughout this process, the public is able to obtain information on the status and progress of the proposed action and the EA through the New England District Public Affairs Office.

5 PROJECT INFORMATION

5.1 Location

The Woonsocket FRMP is located in Providence County, Rhode Island in an industrial area of the City of Woonsocket along the Blackstone River (Figures 1 and 2). The project area extends 8,300 ft downstream along the Blackstone River from the Massachusetts state line to the center of the city near the South Main Street Bridge and from the Bernon Street Bridge downstream for about 7,000 ft to the vicinity of the sewage treatment plant. The project also extends approximately 2,100 ft upstream along the Mill River from its confluence with the Blackstone River to Privilege Street and approximately 2,100 ft upstream along the Peters River to Mill Street. A small portion of the project along the west bank of the Blackstone River lies in North Smithfield.

5.2 Floodplains

The project is located within the floodplains of the Blackstone, Mill and Peters Rivers. The construction and operation of the Woonsocket FRMP facilities within the floodplain was authorized by the U.S. Congress; therefore, the facility location and its purposes in the floodplain are determined to be in the

public interest. Appendix C provides the Federal Emergency Management Agency (FEMA) maps for the project area.

5.3 Federal Land Ownership and Outgrants

The dam is the only structure that is fee-owned by the federal government. Fee-owned lands are real property for which the U.S. has all right, title, and interest rather than a partial interest. All remaining lands associated with the Woonsocket FRMP are in easement. Not all of the easements are flowage easements, and some consist of access easements that are needed for maintenance of the project and do not grant USACE authority to flood the land.

There are no outgrants associated with the Woonsocket FRMP. An outgrant is a written, legal document that authorizes the right to use real property managed by USACE and establishes the time-frame, consideration, conditions and restriction of its use.

5.4 Flood Risk Management Facilities

The Woonsocket Dam itself is not a structure designed for flood damage reduction but acts as a Mill/Penstock Dam for the Thundermist hydroelectric facility that is owned and operated for the City of Woonsocket. On occasion when water conditions warrant, USACE will operate the gates of the dam to reduce local isolated flooding upstream. USACE does not have an established flood management plan for the dam. The levees and pump stations that are associated with the Woonsocket FRMP are flood damage reduction components.

USACE classified the major components of the Woonsocket FRMP into three independent flood protection units as follows (Figures 1 and 2):

Upper Woonsocket Section – located on the Blackstone River, this includes the Woonsocket Falls Dam, a concrete overflow dam 266 feet long (a replacement of the original Woonsocket Falls Dam). The dam has four Tainter gates for crest control, one pumping station, four earth dikes totaling about 1,115 feet, and 316 feet of concrete floodwall. The project also includes 8,300 ft of channel improvements (the widening, deepening and straightening of the river channel) and stone slope protection along the banks upstream of the dam to the Massachusetts/Rhode Island state line. The project design flood is 30,000 cfs (cubic feet per second).

The Social District Unit - consists of 2,960 ft of earth dike and concrete floodwall. The river channel is deepened for about 600 ft adjacent to dike and floodwall. There is improvement to 1,700 ft of the Mill River channel, this is supplemented by 3,010 ft of earth dike and concrete floodwall, and 1,150 ft of twin-barreled pressure conduit. Along the Peters River there is 400 ft of channel improvement, 1,020 ft of earth dike and concrete floodwall, and 1,180 ft of pressure conduit. A pump station with a capacity of 119,400 gallons per minute (gpm) is provided for interior drainage. The project design flow is the Standard Project Flood which varies from 33,000 to 40,000 cubic feet per second (cfs) along the Blackstone River. The design floods on Mill River and Peters River are 8,500 cfs and 3,200 cfs, respectively.

The Hamlet District Unit - consists of about 3,100 ft of earth dike and concrete floodwall, and a pump station with a capacity of 58,800 gpm to provide for interior drainage.

Additionally, one highway bridge across the river (Singleton Street) was replaced as part of the project and three other highway bridges (River Street, Fairmount Street, Sayles Street) were constructed by the city of Woonsocket concurrently with the project. These structures were not transferred and are not under USACE O&M requirements. The East School Street Bridge is a dual purpose structure. It serves as a highway bridge and as a flood control feature. The bridge has upstream and downstream flood walls which tie into the Mill River Dikes.

5.5 Recreation Facilities

Recreation or natural resource management activities are not provided by USACE at this FRMP. The FRMP is, however, located within several Federal and State/Local recreation-based greenways. The Blackstone River as it flows past the rip rap stone protection is routinely used for recreational boating and fishing. The Woonsocket Bike path utilizes upper and lower sections of the Woonsocket FRMP. Recreation programs and related uses that involve the Woonsocket FRMP area include:

Blackstone River Valley National Heritage Corridor - The Woonsocket Local Protection Project is within the boundaries of the federally-designated Blackstone River Valley National Heritage Corridor. The national heritage corridor is under the management of the Department of the Interior, National Park Service. The Woonsocket FRMP is an existing authorized federal project within the boundaries of the designated natural heritage corridor. The Blackstone River is an American Heritage (AH) Designated River. AH rivers are Federally-designated to receive coordinating efforts of multiple governmental entities to further three objectives: natural resource and environmental protection, economic revitalization, and historic and cultural preservation.

Blackstone River Greenway - The Blackstone River Greenway is a recreational path that is sponsored by the Rhode Island Department of Transportation and Rhode Island Department of Environmental Management (RIDEM) (Figure 3). The greenway, once complete, will connect Worcester, Massachusetts to Providence, Rhode Island on both off-road and on-road marked routes. The sections of the bikeway that are located adjacent or within the Woonsocket FRMP include:

- Upper section — 8,000 ft adjacent to, but not within the boundaries of the project and approximately 200 linear ft within the project (where it crosses the channel)
- Lower section — 5,500 ft along the top of Hamlet and Social Dikes.

The greenway's development and construction project plans for those segments within the FRMP are subject to approval by the USACE Section 408 authority (40 CFR Section 408). USACE is not responsible for the maintenance of the bikeway nor its associated components.

North Smithfield (Rhode Island) Blackstone Greenway - The stone armoring associated with the Woonsocket FRMP is found along both banks of the Blackstone River in North Smithfield and is within the greenway. This area is included in the town's *Open Space and Recreation Pla*n.

Urban River Restoration Initiative Pilot - The Blackstone River is one of eight designated demonstration pilot projects identified in a 2002 Memorandum of Understanding (MOU) between the U.S. Army and the U.S. Environmental Protection Agency (EPA) to facilitate cooperation for environmental remediation and restoration of degraded urban rivers and related resources. The Blackstone and Woonasquatucket

American Heritage Rivers Urban Rivers Restoration Pilot is intended to showcase partnerships between the EPA and USACE along with other federal agencies, state environmental agencies, chambers of commerce, tourism councils, and non-profit environmental groups. Coordination with the National Park Service serves as a conduit to the environmental partners associated with the Blackstone River Natural Heritage Corridor Commission which works in partnership with Federal, State and local agencies, along with many non-profit and private organizations to protect the resources of the Blackstone Valley.

The MOU agrees to coordinate the planning and implementation of urban river cleanup and restoration to provide increasing coordination and cooperation with respect to restoring degraded urban rivers, and supports remedial, water quality and environmental restoration activities under the Clean Water Act (CWA), the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the Resource Conservation and Recovery Act (RCRA), and the Water Resources Development Act (WRDA) authorities. Primary considerations involve water quality, remedial and other environmental restoration activities. The effort promotes collaboration among businesses and the non-profit community within the watershed, and will advance pollution prevention, water quality improvements, and restoration of wildlife habitat, and will promote reuse by connecting the rivers to economic restoration through brownfields cleanup and improved river access. The rivers are contaminated by dioxin and toxic metals, which pose threats to human health, wildlife, fish habitats, and recreational fishing.

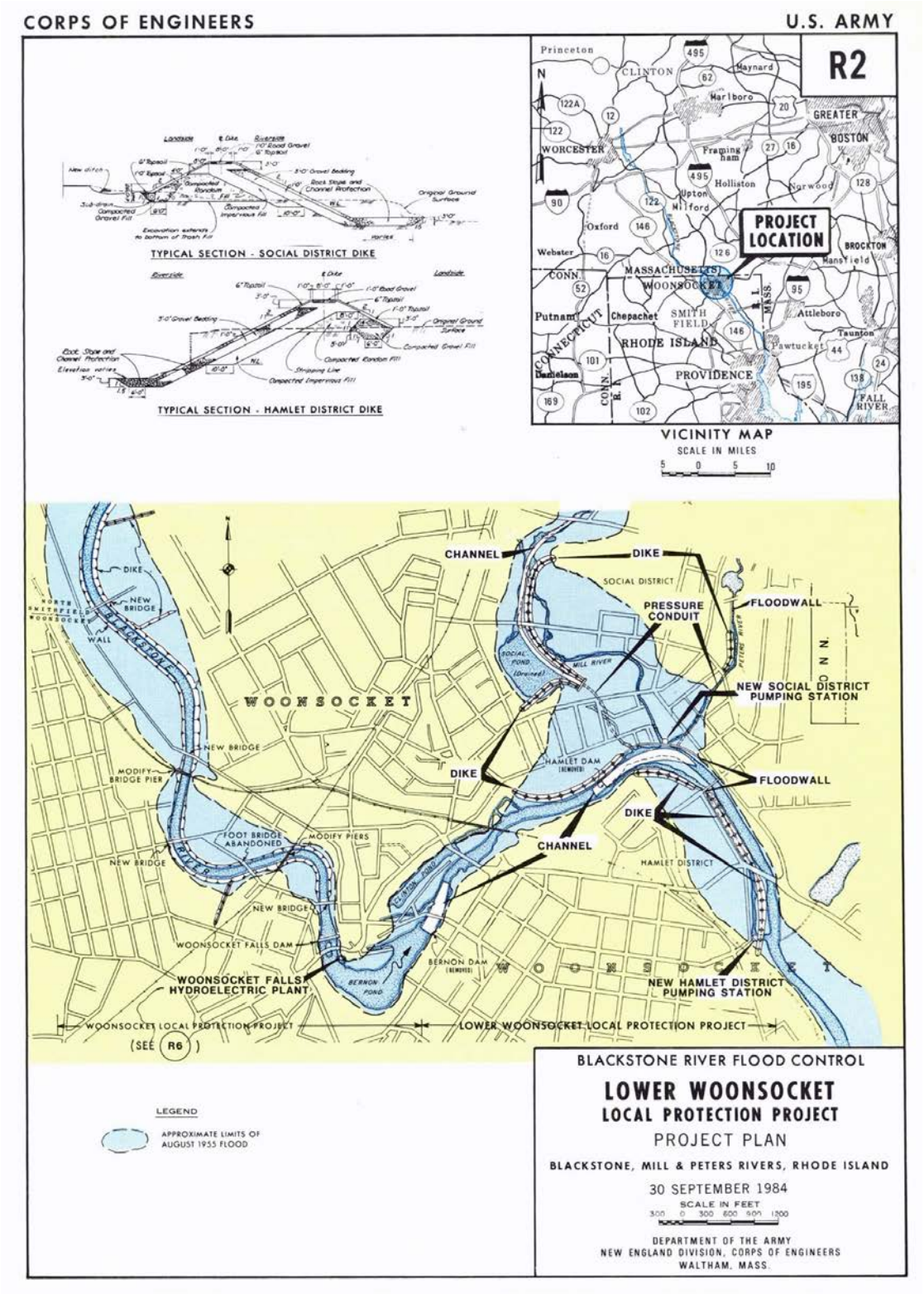

Figure 1- Location: Upper Woonsocket Flood Risk Management Project

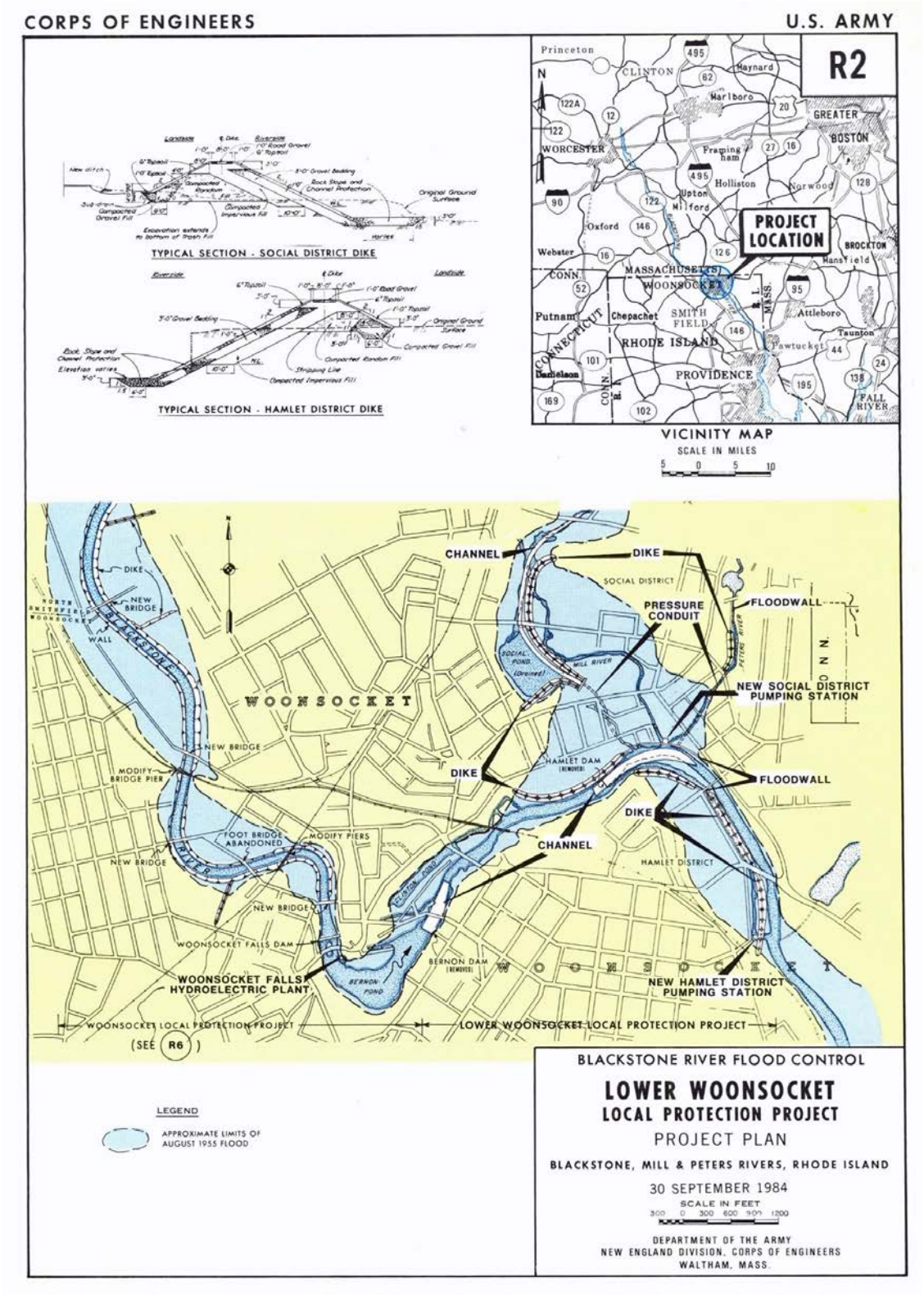

Figure 2- Location: Lower Woonsocket Flood Risk Management Project

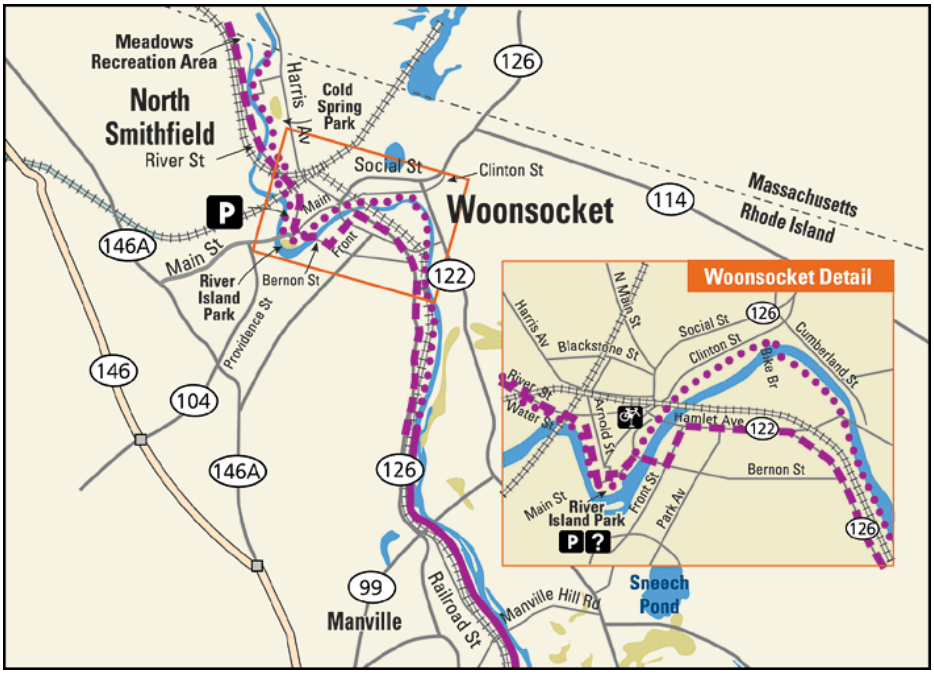

Figure 3 - Bike Path through the Woonsocket Section that includes the Federal project (http://www.blackstoneriverbikeway.com./ri_map.php)

6 ALTERNATIVES

The NEPA alternatives analysis provides the decision maker with a comparison of the alternative uses of available resources at a project. The Woonsocket FRMP was authorized by the U.S. Congress for the protection of the city of Woonsocket against flooding. The project operates as a water conveyance FRMP. As such, much of the project operates without requiring specific actions by USACE. Flood levees and walls convey the river without need of specific actions. Given this understanding, the considered alternatives are:

1. No Action Alternative - Continue to operate and maintain the FRMP as required by USACE regulations.
2. Increase the level of maintenance at the FRMP above required levels.
3. Decrease the level of maintenance at the FRMP below required levels.

Alternative 2 – increasing the level of maintenance at the FRMP above required levels is not cost effective nor necessary and will not be discussed further. Alternative 3 – decreasing the level of maintenance at the FRMP would make the project ineffective thus violating USACE requirements and thus is also removed from consideration and will not be discussed further.

7 PROJECT OPERATIONS AND MAINTENANCE

7.1 General Information

General operations for the Project fall into two categories: maintenance and flood damage reduction during storm events. Project specific components that require inspection and maintenance include: channel Improvement, dikes, floodwalls, closure structures, drainage structures, the Singleton Street pumping station, Social District pumping station, Hamlet District pumping station, the Woonsocket Falls dam, and miscellaneous facilities.

7.2 Operation for Authorized Purposes (Flood Damage Reduction)

The Project is designed to protect industrial and commercial establishments and densely populated residential areas from flood flows on the Blackstone, Mill, and Peters Rivers. It is designed to minimize the flood damage by maximizing flood water conveyance and using pump stations in sections of the dikes to discharge interior drainage during flood periods. The dam in not operated for flood control and has limited water regulation capability.

The Tainter gates of the dam are normally in the closed position and a small pool is retained upstream. The gates are generally not operated for downstream flood control, although on occasion they are raised temporary to alleviate temporary flooding upstream. The regulation of gates during floods has no appreciable effect on downstream flood stages. Increases in water volume associated with high rain events will incur minor fluctuations in water levels downstream, but these fluctuations are not dependent on the dam retaining water behind the structure. Increased flows that increase water levels downstream will become quickly dampened as the flow passes further downstream. Consequently, if the gates at the Woonsocket Falls Dam are operated improperly the result could negatively affect the operation of the non-Federal Thundermist Hydroelectric plant. When the gates need to be operated by USACE, flood damage reduction is the prime purpose, this purpose will override operational activities of the Hydroelectric plant. Operating concerns of the hydroelectric plant cannot dictate dam gate operations.

7.3 Maintenance of Project Facilities

Maintenance at the facility consists of any activity that is required to maintain the FRMP in a state of readiness to function properly in its authorized mission for flood risk management and damage reduction. This includes, but is not limited to, inspections, testing, operation, upkeep, and repair of equipment and structures such as the dam, pumps, closure structures, etc. Upkeep and repair activities generally include painting, sand blasting, scraping, lubricating, replacing fluids and oils, cleaning strainers and removing trash from trash racks. Other maintenance actions at a project of this nature include vegetation maintenance on levees and dikes, and channel maintenance.

7.4 Water Control Plan

The Woonsocket Dam does not have approved USACE Outflow Guidance. It is does not function as a flood control reservoir where outflow can be controlled. The dam has no capacity to hold back water to prevent flooding downstream, and when it is operated it reduces the potential for increases in water levels upstream that could influence the potential for flooding. Water regulation of this dam consists of maintaining the river stage behind the gates between 0' and 3' (by opening gates step by step as inflow

increases) and to avoid gate changes at a time that would increase the downstream river water level as it peaks at a flood level. The operation of the gates during high rain events allows waters to pass to maintain a pool level that keeps the backwater from causing flooding upstream. The dam does not prevent high flows downstream like other USACE flood control dams and reservoirs. The primary reason the dam exists is to create and maintain a small pool for hydro generation when flows are normal.

7.5 Master Plan and Operational Management Plan

A Master Plan (MP) and Operational Management Plan (OMP) are not required for the facility because the project does not include any fee-owned land. The dam is the only structure that is fee-owned by the federal government. USACE requires a MP and OMP be developed for all land originally or subsequently acquired for a project (Engineering Regulation (ER) 1130-2-550, 15 Nov. 1996). The MP is a strategic land use management document that guides the comprehensive management and development of project recreational, natural and cultural resources throughout the life of the project. The OMP is prepared to guide implementation of the resource objectives and development needs identified in the MP. This project does not have the requirement for a Natural Resources Management Plan.

7.6 Environmental Review Guide for Operations (ERGO)

USACE facilities are subject to the Environmental Review Guide for Operations (ERGO) program. USACE initiated the ERGO program as a comprehensive self-evaluation and program management system for achieving, maintaining, and monitoring compliance with environmental laws and regulations at Corps projects and facilities. Objectives of the ERGO program include:

- Enhancing Corps environmental compliance at Federal, State and local levels;
- Improving Corps environmental management;
- Building supportive financial programs and budgets; and
- Assuring supervisors that their environmental programs are being implemented effectively in accordance with Corps goals and objectives.

Periodic environmental compliance assessments at the facilities are necessary. These evaluations are designed to assess environmental compliance and provide necessary feedback to Project Managers for organizing, directing, and controlling environmental compliance and protection activities. A comprehensive ERGO assessment considers 13 major environmental compliance categories (Table 1). Within each category, practices and procedures are reviewed for compliance with Federal, State and local laws, DoD and USACE regulations, and good management practices. USACE staff are responsible for performing an internal self-assessment annually, with the exception of those years when an external assessment is being completed. This program is beneficial for identifying project operations that could have adverse impact on natural resources and requires adjustments or mitigations to minimize potential effects and ensure compliance with applicable laws. It has elevated the USACE compliance with environmental laws and regulations at its facilities.

Table 1 - ERGO Compliance Categories

ERGO Compliance Categories
• Air Emissions • Cultural and Historic Resources Management • Hazardous Materials Management • Hazardous Waste Management • Natural Resources Management • Other Environmental Issues • Pesticide Management • Petroleum, Oil, and Lubricant (POL) Management • Solid Waste Management • Special Pollutants Management (Radon, Asbestos, Polychlorinated biphenyls (PCBs), Noise) • Fuel Storage Tank Management • Wastewater Management • Water Quality Management

8 Affected Environment and Environmental Consequences

This section describes the environmental conditions in the area of the Woonsocket FRMP and the potential environmental consequences of ongoing operation and maintenance activities.

8.1 General Information

The watershed of the Blackstone River encompasses approximately 540 square miles and extends from Holden and Boylston, Massachusetts, north of Worcester to Central Falls and Pawtucket, Rhode Island to the south. The watershed encompasses the entire city of Woonsocket and the town of Cumberland.

The Blackstone River as it flows through the Project area is characterized by medium to medium-high residential development with high-density urban development in the city of Woonsocket (RI DEM Office of Water Resources, 2013). The FRMP is located in the urban area of Woonsocket except for a portion of the right bank above the Singleton Street Bridge that is in the town of North Smithfield. It is surrounded by the suburban communities of Cumberland, Lincoln, and North Smithfield. The USACE project extends from the Massachusetts-Rhode Island state line downstream for about 8,300 feet to the South Main Street Bridge; and from the Bernon Street Bridge downstream for about 7,000 feet to the vicinity of the sewage treatment plant. It also extends upstream along the Mill River approximately 2,100 feet from the confluence of the Blackstone River to Privilege Street, and upstream along the Peters River for about 2,100 feet to Mill Street. The Project's prominent feature is an extensive levee system constructed of stone rip rap.

Prior to USACE assuming ownership, the flood protection system had degraded over time as the city of Woonsocket lacked the resources to properly maintain the system over the long-term. When USACE assumed ownership, the stone rip rap was dominated by significant vegetation growth from several years of deferred maintenance under previous ownership. Vegetation on the levee system varied

widely from grassy ground cover, to dense scrub-shrub vegetation, to mature 10 to 12 inch dbh (diameter breast height) trees within the rip-rap protection. These areas provided a rich diversity of visual/aesthetic values, shade, wildlife habitat/corridors and riparian/vegetated buffer zones along the river and its tributaries. USACE was required to remove the vegetation material to restore the project to maintenance standards established in Federal regulations 33 CFR 208.10, 44 CFR 65, Engineering Technical Guidance letter 1110-2-570 and 1110-2-571, and USACE guidance and policy. The vegetation removal resulted in a loss of the habitat areas in order to restore the project to the maintenance standards established in Federal regulations. The vegetation on the structures threatened the integrity of the levee system, exposing it to the potential for failure due to, but not limited to, piping, tearout, and loss of compaction.

In compliance with NEPA, CEQ guidelines, and USACE regulations and guidance, the description of the affected environment and the project's expected environmental consequences in this EA focuses on those resources and conditions *potentially subject to impacts.* Typically, these include land use and recreation areas, geology and soils, aesthetics and visual resources, noise, biological resources (fisheries, wildlife, threatened and endangered species), wetlands and vernal pools, water resources, historic and cultural resources, air quality, socioeconomic resources or related environmental justice considerations.

Since not all of the resources listed above will be affected, this section limits the analysis to only those environmental and human resources that could potentially be affected by the continued operation and maintenance of the facility. This chapter also describes potential consequences and impacts for each environmental and human resource. An impact is defined as a consequence that could occur from modifying the existing environment due to operation and maintenance activities.

Resources that may be directly affected by O&M activities are discussed below. Appendix A lists the components of the FRMP and the potential site-specific actions or maintenance requirements that could have environmental effects. Unless noted, the potential environmental effects associated with the activity are considered routine, short-lived, and are not considered significant.

8.2 Vegetation

Affected Environment

In general, the Blackstone River basin and its tributaries, lakes and ponds support numerous wildlife, fisheries, and vegetation habitats. The upland/terrestrial habitat within and along the Woonsocket FRMP is limited and is confined to the dikes, levees, adjacent to the floodwall, and around pump stations, along the river channel, and near the dam.

Existing vegetation is of two general types: grasses and small shrubs. Limited riparian habitat is present along the river side of the structures and beyond the 15 foot vegetation free zone. Riparian vegetation is typically located adjacent to waterbodies such as rivers, streams, ponds and lakes. Riparian vegetation provides valuable environmental benefits such as nutrient cycling, water quality benefits, wildlife habitat, aesthetic and recreational value, hydrologic and hydraulic (i.e. energy dissipation) benefits, and channel stability (Fischenich and Copeland, 2001).

Environmental Consequences

The current and future maintained condition of the dike and levee system will be dominated by a vegetation free zone that extends to areas 15 feet on either side of levees and dikes (see Appendix B).

The U.S. Army Corps of Engineers Engineering Technical Letter (ETL) 1110-2-583, *Guidelines for Landscape Planting and Vegetation Management at Levee, Floodwalls, Embankment Dams, and Appurtenant Structures,* establishes a three-dimensional corridor for vegetation-free zones surrounding all levees, floodwalls, embankment dams, and critical appurtenant structures in all flood damage reduction systems. This applies to all vegetation except grass.

Grass species are permitted for the purpose of erosion control. Vegetation-free zones provide a reliable corridor of access to, and along, levees, floodwalls, embankment dams, and appurtenant structures. This corridor must be free of obstructions to assure adequate access by personnel and equipment for surveillance, inspection, maintenance, monitoring, and flood-fighting. In the case of flood fighting, this access corridor must also provide the unobstructed space needed for the construction of temporary flood-control structures. Access is typically by four-wheel-drive vehicle. For some activities, like maintenance and flood-fighting, access is required for larger equipment, such as tractors, bulldozers, and dump trucks.

The vegetation maintenance along the Blackstone River and its tributaries within the urban environments of Woonsocket would result in the long-term reduction or prevention of habitat for songbirds and small mammals, and fisheries that nest, forage, utilize shade cover and otherwise use for protection the riparian green space corridor. Vegetation maintenance on the structures will follow the USACE guidelines. Some types of vegetation, both woody (trees, shrubs, and vines) and non-woody (grasses and forbs), will be periodically cleared along the dikes, levees, and banks, as needed, to maintain the structures for safety, structural integrity, and functionality, and accessibility for maintenance, inspection, monitoring, and flood-fighting. USACE may use a state certified herbicide professional to kill weeds, eliminate vegetation on sections of the structures and property, kill poison oak, and treat tree stumps. These efforts do not result in significant adverse impacts. Maintaining a vegetation free zone is a requirement of the flood management capability.

In some instances, landscape planting and vegetation management can provide aesthetic and environmental benefits without compromising the reliability of levees, floodwalls, embankment dams, and appurtenant structures. Where the safety of the structure is not compromised, and effective surveillance, monitoring, inspection, maintenance, and flood-fighting of the facility are not adversely impacted, appropriate landscape planting (trees, shrubs, vines and grasses) may be incorporated. Any addition of landscape plantings to existing flood damage reduction systems must comply with the project's O&M manual. New plantings may not be approved without an appropriately detailed and documented engineering evaluation to ensure that design intent and safety criteria are maintained as originally authorized. The addition of landscape plantings is considered a positive, beneficial environmental impact.

8.3 FISH AND WILDLIFE

8.3.1 Fisheries and Aquatic Resources

Affected Environment

Benthic macroinvertebrates such as mayflies, stoneflies and caddis flies are found in and around the three rivers in the project area. These insect larvae and nymph populations are representative of the riverine habitats and are characteristic of freshwater environments.

Fisheries in the waters that flow through the Woonsocket FRMP consists of both warmwater and coldwater fisheries. The fish communities are dominated by warm-water species, especially those able to cope with the legacy of pollution and other degrading impacts the Blackstone River has sustained during its history of industrialization. The Blackstone maintains a healthy population of Common Carp, a fish first introduced to Rhode Island in 1880 (RI Division of Fish and Wildlife, 2015). Current fisheries that can be found in the waters that flow through the FRMP include Bluegill, Brown Bullhead, Bullhead Catfish, Calico Bass(White Crappie), Calico, Bass(Black Crappie), Chain Pickerel, Common Carp, Golden Shiner, Largemouth Bass, Northern Pike, Mirror Carp, Pumpkinseed, Rock Bass, Smallmouth Bass, Sucker, Sunfish, Yellow Bullhead, White Sucker, and Yellow Perch (Blackstone River, 2015). Anadromous fish were once abundant in the Blackstone River, and included salmon, shad, and river herring (alewife and blueback herring). The presence of these species were lost from industrialization and construction of several dams on the river resulting in a sharp decline of these populated fish runs. As the water quality improves under the increased management in the Blackstone River these species may have limited returns (Blackstone River, 2015). Federal and State agencies are actively pursuing plans to implement the *Blackstone River Strategic Anadromous Fish Restoration Plan* which identifies the first four dams on the lower Blackstone as appropriate for restoration.

Environmental Consequences

The operation and maintenance of the Woonsocket FRMP will not affect benthic macroinvertebrates. Fisheries and their habitats in the Blackstone River and tributaries are under intensive management for restoration from State and local advocacy organizations including, RIDEM, the Blackstone River Watershed Association, Friends of the Blackstone, Blackstone River Watershed Action Plan and Blackstone River Coalition.

The most significant threats to freshwater fish is the destruction or modification of habitat, which can result in population loss and reductions in species range. Streambank vegetation provides important cover for fish. Shoreline cover will be altered or lost along the river banks where the levee is maintained vegetation free along the river's edge. Fish that normally use these habitat areas for shade or nesting could be displaced. The degree of impact will vary depending on the frequency of future vegetation maintenance along the areas adjacent to the river, particularly where the flood control structures (dike/levee) are at the water's edge. In general, the ongoing maintenance that results in the reduction in vegetation on the banks adjacent to the waterbody will result in unavoidable permanent impacts to shade and nesting cover for fisheries.

Maintenance operations require the operation of the Tainter gates at the Dam to ensure functionality. Each gate is operated monthly as part of the maintenance schedule, except during periods when the gates are being used to maintain river levels behind the dam. The timing of the test should be such that it does not significantly impact river levels. These monthly operations consist of raising each gate one foot and then quickly lowering it back to the closed position. During the summer months of June through September, the tests may be performed every 60 days instead of monthly. Occasionally the gates are raised to a greater height resulting in loss of the pool. When this occurs aquatic species can be temporarily impacted: fish may be swept downstream, accumulated sediment behind the dam may move, there may be temporary loss of benthic fauna, and temporary loss of fish reproduction areas as river levels drop. The direct impact of this action will be realized only a short distance upstream and the affected areas are expected to quickly recolonize from upstream areas. The testing is only of short duration and the pool returns to its existing levels.

8.3.2 Wildlife

Affected Environment
Wildlife inhabiting the project area are those characteristic of urban environments. Species that can be found include gray squirrels, striped skunks, raccoons, opossums, red and gray foxes, and coyotes. These species are commonly found thriving in suburban neighborhoods (RIDEM, 2015).

Environmental Consequences
The primary impact to wildlife is from the long-term vegetation maintenance along the Blackstone River and its tributaries within the urban environments of Woonsocket. Any vegetation present will be used by wildlife and the areas along the river will act as a wildlife corridor. Overall the lack of vegetation diversity from maintenance actions will result in the permanent loss of habitats to songbirds and small mammals that nest, forage, utilize shade cover, and use riparian vegetation for protection. This impact is unavoidable.

8.4 Endangered and Threatened Species

The northern long-eared bat, listed as *Threatened* in May 2015, has not been found within the Project, and known roosts and hibernacula do not occur in the project area; however the area may serve as foraging habitat. Since the structures are required to be maintained as riprap and a vegetation free zone, it is not likely that the Woonsocket FRMP will provide supporting habitat.

There are no State-listed endangered, threatened, or of special concern in the vicinity of the Blackstone River as it flows through Woonsocket (Raithel, 2009).

The operation and maintenance of the project will have no significant impacts to Federal or state-listed species of concern, rare or endangered species.

8.5 Surface Water and Water Quality

8.5.1 Surface Water

Affected Environment
The Blackstone River Watershed, which is located in south-central Massachusetts and northern Rhode Island, has a length of about 77 km (48 mi) and an average width of 19.3 km (12 mi). The total drainage of the watershed in the Rhode Island section is 140 $mi^{2.}$ The river flows south from Worcester, MA to the Main Street Dam in Pawtucket, RI. The Blackstone River is the second largest source of freshwater to Narragansett Bay. In Rhode Island, the watershed encompasses a portion of the following cities and towns: Burrillville, Glocester, North Smithfield, Smithfield, Woonsocket, Cumberland, Lincoln, Central Falls, and Pawtucket (RI DEM Office of Water Resources, 2013).

The Blackstone River is classified as medium-sized, warm water system that has an average bank-full width of 115 ft. The Blackstone River, from the Massachusetts border in Woonsocket to its outfall 10 miles downstream in Pawtucket, is the one river in Rhode Island that meets the criteria for a medium river. Portions of this river in the northern part of the state are higher gradient with colder temperatures, but lower sections show the more typical pattern of higher sinuosity, broader floodplain valleys, associated riparian wetlands, and lower width/depth ratios (RI Division of Fish and Wildlife, 2015).

Environmental Consequences

The operation and maintenance actions of the Woonsocket FRMP are not expected to negatively affect surface waters. As part of its authorized flood control mission, there are several channel Improvements associated with the project to allow for flood water conveyance. The Project is designed to allow for the conveyance of flood waters and thereby has no activity that would alter the flowage of waters past the dikes or levees and other structures nor introduce pollutants or increase sedimentation into the water column. Pumping station operation would return waters to the Blackstone River. Any related operations and maintenance actions of the Project will not have an effect on the surface water of the Blackstone, Miller or Peters Rivers as they currently exist.

Appendix A lists typical maintenance actions that could be completed in the river to ensure the ability of the Project to operate as authorized. These can include but are not limited to: clearing of obstructions and debris to permit proper functioning of the project works, removal of vegetation growths that would reduce conveyance, and removal of shoal areas. These actions do not represent significant impacts to the resources, and do not require additional review under NEPA. There are typically no routine operation and maintenance actions at the Project that require fill to be placed into waterbodies of the U.S. Future maintenance activities that are determined to require fill to be placed into waterbodies will require review for compliance with Section 404 of the Clean Water Act.

8.5.2 Water Quality

Affected Environment

The Blackstone, Mill, and Peters Rivers are degraded by point and nonpoint source pollution that includes excess sediments, nutrients, and other pollutants. In general, the water quality of the Blackstone River and two of its main tributaries, the Mill River and the Peters River are too degraded to support a variety of river habitat and water-based activities. RIDEM has identified water quality impairments in the Blackstone River watershed. Section 303(d) of the Clean Water Act and EPA's Water Quality Planning and Management Regulations (40 CFR Part 130) require States to develop Total Maximum Daily Loads (TMDL's) for waterbodies that are not meeting designated uses.

The Blackstone River's Total Maximum Daily Load (TMDL) plan addresses pathogen impairments to the Rhode Island portion of the Blackstone River and its tributaries: Mill, Peters Rivera, and Cherry Brook as well as metals impairments to the Blackstone and Peters Rivers and Cherry Brook. These waters are listed on Rhode Island's 2012 303(d) List of Impaired Waters as impaired for pathogens as confirmed by elevated levels of enterococcus and fecal coliform bacteria, the Blackstone River is also listed as having elevated levels of lead and cadmium. Copper is elevated in Cherry Brook and Peters River. These waters do not support their designated uses that are associated with the enterococcus and fecal coliform bacteria criteria, which include primary and secondary contact recreational activities and for the metals impairments, the protection of aquatic life.

In addition, Rhode Island's 303(d) list also identifies the Blackstone River as impaired for dissolved oxygen, phosphorus, and biodiversity (as indicated by benthic macroinvertebrate bioassessments), and elevated levels of PCBs and mercury in fish tissue (RIDEM, 2013).

Table 2 - Selected waterbodies and impairments addressed by Blackstone River TMDL

Waterbody ID Number	Waterbody Description	Water Quality Classification	Water Quality Impairment
R10001003R-01A	Blackstone River from MA-RI border to CSO outfall at River and Samoset Streets in Central Falls, RI	B1	Pathogens, Cadmium, Lead
R10001003R-03	Mill River, Woonsocket, RI	B	Pathogens
R10001003R-04	Peters River, Woonsocket, RI	B	Pathogens, Copper

Source: taken from the Total Maximum Daily Load Analysis for the Blackstone River Watershed, Pathogen and Trace Metals Impairments, Final Report, February 2013

Environmental Consequences

The Blackstone, Mill and Peters Rivers are under intensive management. These waterbodies are three of five that are under a EPA approved Total Maximum Daily Loads (TMDLs) plan in the Blackstone River Watershed, for cadmium, lead, copper, fecal coliform bacteria, and enterococci bacteria. These waterbodies were included on the State's 2012 303(d) list and were prioritized for TMDL development. The purpose of the TMDLs for Rhode Island waters is to address metals and bacteria-related impairments to aquatic life use and contact recreation use, respectively, from point and nonpoint source pollution.

There are no identified USACE activities that could contribute as point source or non-point source pollution to further contribute water quality degradation. During flood operations there are no anticipated Corps activities that would contribute to negative water quality conditions. Water quality, however, could continue to be degraded by flood conditions through non-point source run-off. The operation of the facility and any associated maintenance actions would not have potential environmental effect on the water quality of the Blackstone, Mill and Peters Rivers.

8.6 Air Quality and Noise

Affected Environment

Ambient air quality is protected by Federal and State regulations. The EPA has developed the National Ambient Air Quality Standards (NAAQS) for certain air pollutants; state air quality standards cannot be less stringent that the NAAQS. Rhode Island and most of the Northeast U.S. does not meet the health-based air quality standards for ozone (RIDEM, Office of Air Resources, 2015). Providence County, Rhode Island, which includes the City of Woonsocket, is designated as a moderate ozone (8-hour) non-attainment area in an Ozone Transport Region thus the NOx and VOC thresholds apply (EPA, 2015).

Environmental consequences

Air Quality - Activities associated with O&M actions are evaluated for General Conformity (Clean Air Act, Section 176)(40 CFR 93, Subpart B). The General Conformity Rule applies to federal actions occurring in regions designated as being in non-attainment for the NAAQS or attainment areas subject to maintenance plans (maintenance areas). Clean Air Act compliance, specifically with EPA's General Conformity Rules, requires that Federal agencies, including the Department of the Army, review their actions that take place in non-attainment or maintenance areas for conformity. If the total direct and

indirect emissions caused by the operation of the facility are less than *de minimus* levels established in the rule, then a Record of Non-Applicability is prepared and signed by the installation's environmental coordinator (see Appendix D).

The EPA has allowed that certain actions are exempt from the general conformity rule because the expected air emissions are not likely to impact the State Implementation Plan. The list of exempt actions appears in 40 CFR 93.153 (c), and includes all activities expected to occur at the Woonsocket FRMP. The exemptions applicable to this site include: routine maintenance and repair, and route operations of facilities, mobile assets and equipment. Air quality is not expected to be impacted by the operation and maintenance activities. The Record of Non-applicability is in Appendix D of the EA.

Noise - During operation of the pump stations, the sound may elevate ambient noise levels. Closure or opening of the Tainter gates at the dam may also cause intermittent increases in noise levels. This noise is not excessive and the surrounding urban land mainly consists of commercial, industrial and transportation land uses, which have higher levels of ambient noise. These are not adverse impacts. (RIGIS, 2015). Therefore there will be no significant adverse impacts from the on-going maintenance activities as described in this EA.

8.7 SOCIOECONOMICS

Affected Environment
Socioeconomic factors include economic development, demographics, housing, quality of life, environmental justice, and protection of children.

Environmental justice is the fair treatment for people of all races, cultures, and incomes, regarding the development and implementation (or lack thereof) of environmental laws, regulations, and policies. EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, directs Federal agencies to address environmental and human health conditions in minority and low-income communities. A memorandum from President Clinton concerning EO 12898 stated that Federal agencies would collect and analyze information concerning a project's effects on minorities or low-income groups when required by NEPA. If such investigations find that minority or low-income groups experience a disproportionate adverse effect, then avoidance or mitigation measures are necessary.

Executive Order 13045, *Protection of Children from Environmental Health and Safety Risks*, requires Federal agencies, to the extent permitted by law and mission, to identify and assess environmental health and safety risks that might disproportionately affect children. The Army takes precautions for the safety of children, including the use of fencing and signage.

Environmental Consequences
Implementing the proposed action or any of the alternatives would not adversely affect the region or local economic development, demographics, housing, quality of life, environmental justice, and protection of children. USACE will continue to operate the project in accordance with the Congressionally-authorized purposes for the project by providing flood protection. There are no expected impacts to economic development, demographics, housing, quality of life, environmental justice, and protection of children.

8.8 HISTORIC AND ARCHEOLOGICAL RESOURCES

Affected Environment

Prior to the arrival of European settlers in the seventeenth century, three Native American tribes lived in the area of Woonsocket, the Nipmucs, Wampanoags, and Narragansetts. In 1661, Roger Williams purchased the area from the Nipmucs, but the first settlers didn't arrive until the 1670s. The first saw mill and dam was constructed at Woonsocket Falls. The waterpower of the Blackstone, Mill, and Peters Rivers were used during the eighteenth century to power small saw, grist, and other mills, but it wasn't until there was a means to transport goods to markets that Woonsocket became an industrial village. The Blackstone Canal was constructed in the 1820s, and although unreliable, did provide a source of transportation between Worcester and Providence. With the arrival of the railroad in 1847, several mill villages sprang up. Woonsocket Falls Village was founded in the 1820s, with textile mills being the economic mainstay. Cotton and woolen textiles, and then later rubber manufacturing along the Blackstone River propelled the region to prosperity.

Woonsocket was established as a town in 1867 when three villages in the town of Cumberland, namely Woonsocket Falls, Social, and Jenckesville, officially became the town of Woonsocket. In 1871, three additional industrial villages in Smithfield, Hamlet Bernon, and Globe, were added to the town establishing its present boundaries. Woonsocket was incorporated as a city in 1888. Woonsocket went through several periods of economic boom and bust during the nineteenth and twentieth centuries. Most of its textile mills closed permanently after World War II. Some of the city's large mill buildings have been put to other uses while others sit vacant.

Many of the historic mill structures, civic buildings, and residences along the Blackstone, Mill, and Peters Rivers have been listed on the National Register of Historic Places, symbols of the significance of Woonsocket's industrial past.

Environmental Consequences

The operation and maintenance of the Woonsocket FRMP will have no effect on historic properties. The RI State Historic Preservation Officer is expected to concur with this determination.

9 CUMULATIVE IMPACT

Cumulative impact is the impact on the environment that results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of which agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Although the individual impact of a project might be minor or locally isolated, the additive or synergistic effects from all the projects could be significant.

Cumulative impacts associated with the operation and maintenance of the FRMP are associated with habitat quality in the project vicinity. Free-flowing, undisturbed rivers provide habitat values and ecosystem functions that generally benefit the human environment. Over time, numerous changes to the Blackstone River have degraded its functioning and ecosystem value. Development in the watershed has increased the peaks of flows and the temperature of water flowing into the river. Changes in the timing and duration of peak flows caused by development in the watershed and the construction of dams and flow control structures affects sediment deposition patterns. Removal of

vegetation in various locations along the banks of the river also contributes to increased water temperature. Continued maintenance of the levees and associated structures prevent shading of the rivers in the project area, continuing to allow for elevation of water temperatures and subsequently limiting habitat for temperature sensitive species of fish and benthic invertebrates. Continued maintenance of channel areas by removing shoals prevents increasing biodiversity of aquatic species and minimizes habitat complexity necessary to support such diversity. These impacts were determined to be non-significant when considered in the context of past, present, and future impacts to the river ecosystem as the majority of the impact was associated with the original construction of the project and the continued maintenance of the facility does not contribute significantly to degradation of the current environmental condition.

10 COORDINATION

Agencies consulted in the preparation of this NEPA document include:

- U.S. Fish and Wildlife Service
- U.S. National Park Service
- RIDEM

A Public Notice for preparing this Environmental Assessment for the operation and maintenance at the Woonsocket FRMP was issued to federal and state agencies and other interested parties (see Appendix A). The comment period closed on ____.

The draft Environmental Assessment and Finding of No Significant Impact was mailed to agencies and individuals whom have an interest in comment on the O&M activities.

The New England District Public Affairs Office issued a press release on ___ that notifies the public of the availability of the draft EA and FONSI and the timeline to submit comments.

11 NEPA CATEGORICAL EXCLUSIONS

Certain actions when considered individually and cumulatively do not have significant effects on the quality of the human environment and are categorically excluded from NEPA documentation. However, district commanders should be alert for extraordinary circumstances that may dictate the need to prepare an EA or an EIS. Even though an EA or EIS is not indicated for this Federal action because the operation and maintenance actions are categorically excluded, that fact does not exempt the action from compliance with any other Federal law, therefore this document provides assurance that compliance with these laws is documented. For example, compliance with the Endangered Species Act, the Fish and Wildlife Coordination Act, the National Historic Preservation Act, the Clean Water Act, etc., is always mandatory, even for actions not requiring an EA or EIS (33 CFR 230.9 (a)).

The USACE procedures for implementing NEPA established in Engineering Regulation (ER) 200-2-2 (4 March 1988) and 33 Code of Federal Regulations 230.9, lists certain activities at existing Corps projects that are categorically excluded from NEPA documentation. These include:

- Activities at completed USACE projects which carry out the authorized project purposes. Examples include: routine operation and maintenance actions, general administration, equipment purchases, custodial actions, erosion control, painting, repair, rehabilitation, replacement of existing

structures and facilities such as buildings, roads, levees, groins and utilities, and installation of new buildings utilities, or roadways in developed areas.

- Minor maintenance dredging using existing disposal sites.
- Planning and technical studies which do not contain recommendations for authorization or funding for construction, but may recommend further study. This does not exclude consideration of environmental matters in the studies.
- All Operations and Maintenance grants, general plans, agreements, etc., necessary to carry out land use, development and other measures proposed in project authorization documents, project design memoranda, master plans, or reflected in the project NEPA documents.
- Real estate grants for use of excess or surplus real property.
- Real estate grants for Government-owned housing.
- Exchanges of excess real property and interests therein for property required for project purposes.
- Real estate grants for rights-of-way which involve only minor disturbances to earth, air, or water:
  - Minor access roads, streets and boat ramps.
  - Minor utility distribution and collection lines, including irrigation.
  - Removal of sand, gravel, rock and other material from existing borrow areas.
  - Oil and gas seismic and gravity meter survey for exploration purposes.
- Real estate grants of consent to use Government-owned easement areas.
- Real estate grants for archeological and historical investigations compatible with the Corps Historic Preservation Act responsibilities.
- Renewal and minor amendments of existing real estate grants evidencing authority to use Government-owned real property.
- Reporting excess real property to the General Services Administration for disposal.
- Boundary line agreements and disposal of lands or release of deed restrictions to cure encroachments.
- Disposal of excess easement interest to the underlying fee owner.
- Disposal of existing buildings and improvements for off-site removal.
- Sale of existing cottage site areas.
- Return of public domain lands to the Department of the Interior.
- Transfer and grants of lands to other Federal agencies.

Table 4 lists general flood control activities at the Woonsocket FRMP that are considered routine operation and maintenance actions that carry out authorized project purposes and are therefore categorically excluded from further NEPA documentation. Appendix A provides a more site specific detailed list of potential operation and maintenance actions by structural component. The identified activities are considered minor actions and, in some cases, they are conducted in accordance with existing protocols established to minimize environmental impacts. These actions are completed in accordance with all federal environmental laws, regulations, and executive orders.

Table 3 - General Operations and Maintenance Actions at Existing Facilities

General Operations and Maintenance Actions at Existing Facilities	
• Flood Control Operation • Renewals of Real Estate Leases and Licenses • Culvert Installation and Maintenance • Vegetation Control (chemical/mechanical) • Tree removal • Installation of Safety Railings/Fences/Guardrails • Sign Installation • Flood Debris Removal • Asbestos and Lead Paint Removal • Insect and Rodent Control/Eradication • Log Boom Replacement • Utility line maintenance by Lessee • Snow removal • Grading and gravelling access roads • Construction of Storage Buildings • Flood water pumping	• Automating Piezometers • Replacing Roofs • Repaving Project Roads • Curing Encroachments • Sealing Upstream Concrete Wall Joints • Remedying Deficiencies Listed in Periodic Inspections • Repairing and/or Replacing Bridges • Road Surfacing (gravel/pavement), Repairs, Ditch Maintenance • Road Gate Installation/Vehicle Access Control Measures (blocking off with boulders, etc.) • Erosion control • Shoal removal • Minor dredging and channel improvements (subject to Clean Water Act Section 404 review)

12 REFERENCES

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13 COMPLIANCE WITH FEDERAL ENVIRONMENTAL STATUTES, EXECUTIVE ORDERS AND EXECUTIVE MEMORANDUM

Federal Statutes

1. Archaeological Resources Protection Act of 1979, as amended, 16 USC 470 et seq.

Compliance: Not applicable.

2. Preservation of Historic and Archeological Data Act of 1974, as amended, 16 U.S.C. 469 et seq.

Compliance: The Project has been coordinated with the Rhode Island State Historic Preservation Officer.

3. American Indian Religious Freedom Act of 1978, 42 U.S.C. 1996.

Compliance: Must ensure access by Native Americans to sacred sites, possession of sacred objects, and the freedom to worship through ceremonials and traditional rites. There are no sites located on the Project.

4. Clean Air Act, as amended, 42 U.S.C. 7401 et seq.

Compliance: Public notice of the availability of this report to the Environmental Protection Agency is required for compliance pursuant to Sections 176c and 309 of the Clean Air Act.

5. Clean Water Act of 1977 (Federal Water Pollution Control Act Amendments of 1972) 33 U.S.C. 1251 et seq.

Compliance: The action will not require review under the Clean Water Act Section 404(b) (1) Guidelines (40 CFR Part 230). Future maintenance actions that may require the discharge of dredged or fill material into waters of the U.S. may require future review.

6. Coastal Zone Management Act of 1982, as amended, 16 U.S.C. 1451 et seq.

Compliance: Not Applicable. The project does not occur in the coastal zone.

7. Endangered Species Act of 1973, as amended, 16 U.S.C. 1531 et seq.

Compliance: Coordination through the U.S. Fish and Wildlife Service (USFWS) New England Field Office Section 7 website has not identified any requirements for consultation under Section 7. This project will have no impact on any endangered and threatened species under jurisdiction of the National Oceanic and Atmospheric Administration Fisheries Service (NOAA Fisheries) pursuant to Section 7 of the Endangered Species Act. This satisfies the requirements for coordination under the ESA.

8. Estuarine Areas Act, 16 U.S.C. 1221 et seq.

Compliance: Not Applicable. This report is not being submitted to Congress.

9. Federal Water Project Recreation Act, as amended, 16 U.S.C. 4601-12 et seq.

Compliance: Public notice of availability of this EA and FONSI to the National Park Service (NPS) and Office of Statewide Planning relative to the Federal and State comprehensive outdoor recreation plans signifies compliance with this Act.

10. Fish and Wildlife Coordination Act, as amended, 16 U.S.C. 661 et seq.

Compliance: Coordination and full consideration of comments from the USFWS and relevant State of Rhode Island fish and wildlife agencies as a result of the 30-day public review period signifies compliance with the Fish and Wildlife Coordination Act.

11. Land and Water Conservation Fund Act of 1965, as amended, 16 U.S.C. 4601-4 et seq.

Compliance: Public notice of the availability of this report to the National Park Service (NPS) and the Office of Statewide Planning relative to the Federal and State comprehensive outdoor recreation plans signifies compliance with this Act.

12. Marine Protection, Research, and Sanctuaries Act of 1971, as amended, 33 U.S.C. 1401 et seq.

Compliance: Not Applicable. The operation of the project does not involve the transportation or disposal of dredged material in ocean waters pursuant to Sections 102 and 103 of the Act, respectively.

13. National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470 et seq.

Compliance: Coordination with the State Historic Preservation Office signifies compliance.

14. Native American Graves Protection and Repatriation Act (NAGPRA), 25 U.S.C. 3000-3013, 18 U.S.C. 1170

Compliance: Regulations implementing NAGPRA will be followed if discovery of human remains and/or funerary items occur during implementation of this project.

15. National Environmental Policy Act of 1969, as amended, 42 U.S.C 4321 et seq.

Compliance: Preparation of the Environmental Assessment signifies partial compliance with NEPA. Full compliance shall be noted at the time the Finding of No Significant Impact is signed by the District Engineer.

16. Rivers and Harbors Act of 1899, as amended, 33 U.S.C. 401 et seq.

Compliance: No requirements for projects or programs authorized by Congress. The project is operated pursuant to the congressionally approved authority.

17. Watershed Protection and Flood Prevention Act as amended, 16 U.S.C 1001 et seq.

Compliance: Floodplain impacts have been considered in project planning. The project will not result in the loss of floodplain.

18. Wild and Scenic Rivers Act, as amended, 16 U.S.C 1271 et seq.

Compliance: Rhode Island has approximately 1,392 miles of river, but no designated wild & scenic rivers. The Blackstone River is a designated American Heritage River.

19. Magnuson-Stevens Act, as amended, 16 U.S.C. 1801 et seq.

Compliance: Not applicable. The project does not require coordination with the NOAA Fisheries Service for an Essential Fish Habitat (EFH) Assessment.

EXECUTIVE ORDERS

1. Executive Order 11593, Protection and Enhancement of the Cultural Environment, 13 May 1971

Compliance: Coordination with the Rhode Island Historic Preservation Officer signifies compliance.

2. **Executive Order 11988, Floodplain Management, 24 May 1977 amended by Executive Order 12148, 20 July 1979; subsequently amended by Executive Order 13690, January 30, 2015.**

Compliance: Public notice of the availability of this report or public review fulfills the requirements of Executive Order 11988, Section 2(a) (2).

3. **Executive Order 11990, Protection of Wetlands, 24 May 1977.**

Compliance: Public notice of the availability if this report for public review fulfills the requirements of Executive Order 11990, Section 2 (b).

4. **Executive Order 12114, Environmental Effects Abroad of Major Federal Actions, 4 January 1979.**

Compliance: Not applicable to projects located in the United States geographical boundaries.

5. **Executive Order 12898, Environmental Justice, 11 February 1994.**

Compliance: The project will not have a significant impact on minority or low-income population, or any other population in the United States.

6. **Executive 13007, Accommodation of Sacred Sites, 24 May 1996**

Compliance: Not applicable. There are no known Sacred Sites within the USACE project limits.

7. **Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. 21 April, 1997.**

Compliance: Not applicable. The project would not create a disproportionate environmental health or safety risk for children.

8. **Executive Order 13061, and Amendments – Federal Support of Community Efforts Along American Heritage Rivers**

Compliance: The Environmental Assessment considers the Federal action that may affect the quality of the Blackstone River, an American Heritage River.

9. **Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, 6 November 2000.**

Compliance: Consultation with Indian Tribal Governments, where applicable, and consistent with executive memoranda, DoD Indian policy, and USACE Tribal Policy Principles signifies compliance.

EXECUTIVE MEMORANDUM

1. **Analysis of Impacts on Prime or Unique Agricultural Lands in Implementing NEPA, 11 August 1980.**

Compliance: There are no prime agricultural lands under or on the project.

2. **White House Memorandum, Government-to-Government Relations with Indian Tribes, 29 April 1994**.

Compliance: Consultation with Federally Recognized Indian Tribes, where appropriate, signifies compliance.

APPENDIX A
ROUTINE OPERATIONS AND MAINTENANCE ACTIONS

Appendix A
Routine Operations and Maintenance Actions

The following activities, except where noted, would not incur adverse environmental effects at the Woonsocket Flood Risk Management Project. Maintenance actions can be initiated after periodic inspections of the improved channels and floodways. ***Activities involving instream work that ensure the channels function as designed may require review under Section 404 of the Clean Water Act, and subsequently may require Section 401 Water Quality Certification depending on the type of activity.***

Channel Improvement

- Removal of obstructions to ensure the approach and egress channels adjacent to the improved channel or floodway are clear of obstructions and debris
- Maintain the channel of the Blackstone River downstream from the project so that it is capable of carrying flood flows (**May require evaluation under Section 404 of the Clean Water Act**).
- Removal of debris, weeds, and wild growth sufficient to ensure that the channel or floodway is not restricted for water flow.
- Removal of encroachments such as dumped waste materials or any other types of encroachment on the channel. The channel or floodway is not to be restricted by the depositing of waste materials, building of unauthorized structures or other encroachments.
- Removal of shoal areas. Shoal areas are to be removed without creating a condition so that the slopes of the channel and existing banks are not undercut. Existence of shoal areas will be apparent from inspections during times of low flow (**May require evaluation under Section 404 of the Clean Water Act**).
- Repair of river banks that have been damaged by rain or wave wash or sloughing using bank run gravel and rock similar to, or larger than that used in the original construction. River banks are not to be damaged by rain or wave wash, and that no sloughing of banks should occurred (**May require evaluation under Section 404 of the Clean Water Act**).
- Replacement of lost riprap rock due to slides, erosion or vandalism.
- Maintenance of the derrick stone on the left bank above Sayles Street to ensure stability that could occur from movement or loss of stone.
- Painting the rock bolt nuts and plates that secure derrick stones

Dikes

- Removal of vegetation - Slopes, including those protected by rock or gravel, are to be free of debris; rock and gravel slopes are to be free of vegetation
- Mowing - grassed slopes are mowed at least once per year.
- Reseeding to reestablish turf
- Repair and replace dislodged stones
- Minor erosion repair
- Removal of burrowing animals that constitute a hazard to any embankment
- Inspections of grassed areas including slopes

- Repair of drains, pervious blankets, etc., when the failures or incipient failures are of substantial magnitude
- Inspection, repair, replacement and painting of pipes and associated items of observation risers.
- Repair and replacement of gutters that are experiencing erosion at edges, caused by flows beyond the capacity of the gutter or by blockage

Floodwalls

- Removal of vegetation so that no trees exist, the roots of which might extend under the wall and offer accelerated seepage paths
- Repair of cracking, chipping, or breaking concrete. The concrete has not undergone cracking, chipping, or breaking to an extent
- Removal of encroachments
- Removal of trash
- Erosion control of banks near the floodwall. No bank caving conditions are to exist riverward of the wall
- Repair of Toe drainage systems and pressure relief wells

Closure Structures

- Placement of sandbags for road closures or other necessary items during times of emergency

Drainage Structures

- Maintenance of inlet and outlet channels near drainage structures from accumulation of trash, drift or debris
- Erosion remediation
- Cleaning of drainage structures, including standard manholes
- Maintenance of stone slopes at storm drain discharge locations.
- Removal of debris at Flap valves
- Painting
- Lubricants – apply water resistant lubricant to stem of the sluice

Pumping Stations - Singleton Street Pumping Station, Social District Pumping Station, Hamlet District Pumping Station

- Pumping Plant inspections
- Painting
- Routine maintenance: lubrication, replacement of mechanical and electrical parts, storage and use of cleaning chemicals for cleaning plant, buildings, and equipment, repainting as necessary, and lubricating all machinery.
- Disposal of hazardous materials (i.e. ant-freeze, batteries, etc.) in accordance federal, state, and local regulations.

Woonsocket Falls Dam

- Routine maintenance: painting, lubrication, replacement of mechanical and electrical parts, storage and use of cleaning chemicals for cleaning plant, buildings, and equipment, repainting as necessary, and lubricating all machinery.
- Painting - exterior metalwork, such as pipe railings, trash racks, cover plates, exterior gate hoists, etc.
- Gate and Gate Hoist - each gate shall be operated monthly as part of the maintenance schedule, except during periods when the gates are being used for river level regulation. The timing of this test should be such that it does not significantly impact river levels. These monthly operations should consist of raising each gate one foot and then quickly lowering it back to the closed position. During the summer months of June through September, the tests may be performed every 60 days instead of monthly.
- Wire Rope & Drums - inspection, repair or replacement as necessary of cables and drums

Miscellaneous structures and facilities

Mill River Conduit. The Mill River Conduit is a two-cell box culvert of reinforced concrete design. The cells have rectangular shaped inside dimensions of 12 ft by 21 ft. The conduit passes beneath two city streets (Social and Clinton) and several paved areas carrying commercial traffic.

- General maintenance on this structure may consist of removal of vegetation and trash from the waterway, removal of sediment accumulation or placement of small volumes of riprap in the waterway to minimize erosion. Placement of material in the waters of the U.S. may require review of the action under Section 404 of the Clean Water Act, if it is determined that the volume exceeds the USACE review threshold. The placement of material or removal of sediment are maintenance actions and are not considered adverse impacts.

Peters River Conduit. The Peters River Conduit is a one-cell rectangular shaped box culvert of reinforced concrete design with inside dimensions of 10 ft by 17 ft. The conduit passes beneath Elm and Cumberland Streets carrying commercial traffic.

- General maintenance on this structure may consist of removal of vegetation and trash from the waterway, removal of sediment accumulation or placement of small volumes of riprap in the waterway to minimize erosion. Placement of material in the waters of the U.S. may require review of the action under Section 404 of the Clean Water Act, if it is determined that the volume exceeds the USACE review threshold. The placement of material or removal of sediment are maintenance actions and are not considered adverse impacts.

Ponding Areas. At the pumping stations, small ponding areas were constructed immediately adjacent to these stations.

- removal of all silt, debris, trash, or dumped material and vegetation

East School Street Bridge. The East School Street Bridge is a dual purpose structure. It serves as a highway bridge and as a flood control feature. The bridge has upstream and downstream flood walls which tie into the Mill River Dikes.

APPENDIX B

REPRESENTATIVE PHOTOGRAPHS OF THE WOONSOCKET FLOOD RISK MANAGEMENT PROJECT

APPENDIX C

FEMA FLOOD PLAIN MAPS

APPENDIX D

CLEAN AIR ACT
RECORD OF NON APPLICBILITY

GENERAL CONFORMITY - RECORD OF NON-APPLICABILITY

Project Name: Woonsocket Flood Risk Management Project
Project/Action Point of Contact: Thames River Basing Operations Manager, U.S. Army Corps of Engineers
Phone: (508) 987-0108
Begin Date: 2015

General Conformity under the Clean Air Act, Section 176 has been evaluated for the project according to the requirements of 40 CFR 93, Subpart B. The requirements of this rule are not applicable to this project/action because:

(X) The project/action is an exempt action under 40 CFR 93.153(c) (2) (IV) and (xiii) —

(c) The requirements of this subpart shall not apply to the following Federal actions:
(2) Actions which would result in no emissions increase or an increase in emissions that is clearly *de minimis:*
(iv) Routine maintenance and repair activities, including repair and maintenance of administrative sites, roads, trails and facilities.
(xiii) Routine operation of facilities, mobile assets and equipment

Supporting documentation and emissions estimates are
( ) ATTACHED
( ) APPEARS IN THE NEPA DOCUMENTATION
(X) OTHER

SIGNED

Joseph B. Mackay, Chief Environmental Resources Section

APPENDIX E
PUBLIC NOTICE

APPENDIX F

COMMENTS AND RESPONSES ON THE EA AND FONSI