

Draft Environmental Assessment

St. Augustine Seawall

City of St. Augustine, St. Johns County, Florida

FMA-PJ-04-FL-2010-002

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FEMA

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Acronyms and Abbreviations

ACHP	Advisory Council on Historic Preservation
APE	Area of Potential Effects
BMP	Best Management Practice
CAA	Clean Air Act
CDBG	Community Development Block Grant
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CO	carbon monoxide
CWA	Clean Water Act
CZC	Coastal Zone Consistency
CZMA	Coastal Zone Management Act
dB	decibel
DNL	Day-Night Average Sound Level
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ERP	Environmental Resources Permit
FDEP	Florida Department of Environmental Protection
FDEM	Florida Division of Emergency Management
FEMA	Federal Emergency Management Agency
FHBM	Flood Hazard Boundary Map
FIRM	Flood Insurance Rate Map
FLUCFCS	Florida Land Use, Cover, and Forms Classification System
FMA	Flood Mitigation Assistance
FONSI	Finding of No Significant Impact
HARB	Historic Architectural Review Board
HUD	U.S. Department of Housing and Urban Development
MANLAA	May Affect, But Not Likely to Adversely Affect
MSL	mean sea level
NAAQS	National Ambient Air Quality Standards

Acronyms and Abbreviations

NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NFIRA	National Flood Insurance Reform Act
NGVD	National Geodetic Vertical Datum
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NO ₂	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O ₃	ozone
OSHA	Occupational Safety and Health Administration
P.L.	Public Law
Pb	lead
PM _{2.5}	particulate matter less than 2.5 microns
PM ₁₀	particulate matter less than 10 microns
RCRA	Resource Conservation and Recovery Act
SHPO	State Historic Preservation Office
SO ₂	sulfur dioxide
SWPPP	Stormwater Pollution Prevention Plan
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USCB	U.S. Census Bureau
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

SECTION ONE INTRODUCTION

1.1 PROJECT AUTHORITY

The City of St. Augustine has applied to the Federal Emergency Management Agency (FEMA) for assistance with a Flood Mitigation Assistance (FMA) project under subapplication number FMA-PJ-04-FL-2010-002. FEMA provides FMA funds to assist States and communities in implementing measures that reduce or eliminate the long-term risk of flood damage to buildings and other structures insured under the National Flood Insurance Program (NFIP). The FMA program is authorized pursuant to Section 1366 of the National Flood Insurance Act of 1968, as amended (42 U.S.C. § 4104c) with the goal of reducing or eliminating claims under the NFIP. The FMA program regulations are contained in Title 44 C.F.R. part 78.

In accordance with 44 C.F.R. § 10.9, FEMA Implementing Procedures, this Environmental Assessment (EA) has been prepared pursuant to Section 102 of the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. § 4332), and as implemented by the regulations promulgated by the President's Council on Environmental Quality (CEQ) (40 C.F.R. parts 1500-1508). The purpose of the EA is to analyze the potential environmental impacts of the proposed action, and to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

1.2 PROJECT LOCATION

The City of St. Augustine, the county seat of St. Johns County, is located in the northeast corner of Florida on the Atlantic Coast. The City proposes to construct a seawall 12 feet waterward of an existing historic seawall along Avenida Menendez that extends from near the Santa Maria Restaurant down to the Florida National Guard facilities. The proposed seawall would be approximately 1,200 feet long and border the Matanzas River. The approximate central coordinates of the site are latitude 29.891918°, longitude -81.31077° (Figures 1 and 2, Appendix A).

1.3 DESCRIPTION OF PROPOSED PROJECT

The City of St. Augustine proposes to preserve the existing seawall and construct a new seawall waterward of the historic seawall, in order to provide the businesses and residents, within Historic Districts 1 and 2, as well as the Florida National Guard Headquarters, with Category 1 storm surge (7.4 feet above MSL) protection. The proposed project is to construct a seawall 12 feet waterward of an existing eroding historic seawall. The proposed seawall would consist of two sections. The lower section would be concrete sheet pile, with a top elevation of 4.8 feet National Geodetic Vertical Datum (NGVD). The upper section would be cast-in place concrete, with a top elevation of 7.7 NGVD. The top elevation of the new seawall is designed to protect the City from Category 1 storm surges. The space between the old and new seawalls would be filled in with clean sand material and a 12-foot wide promenade would be constructed on top of it and encapsulate the historic seawall for its preservation. Approximately 1,200 linear feet of coping (the masonry covering course of the historic seawall) would be left exposed to facilitate viewing by the public. Depending upon the final grade on the landward side of the affected historic seawall, the exposure will range from 0 to 30 inches to the top of the seawall, as defined by the granite coping. The construction of the new seawall consists of installing approximately

1,200 linear feet of new concrete precast driven panel seawall with concrete piles driven to 22.0 to 27.0 feet below MSL and soil anchors supporting the seawall and the 12-foot wide promenade, and other architectural, landscape, electrical, and utility appurtenances waterward of the existing historic seawall.

In addition, three stormwater treatment vaults would be constructed to provide stormwater treatment at three outfalls along the proposed seawall. The proposed stormwater management system would consist of an exfiltration trench and three Vortechincs stormwater treatment vaults to improve the water quality at the discharge from existing hydrologic basins of the City of St. Augustine. The system would be installed along the new seawall promenade. The exfiltration trench would provide treatment to runoff from the proposed 1,200-foot long, 12-foot wide impervious promenade between the existing and proposed seawalls. The Vortechincs vaults would be connected to three existing outfalls (one vault per outfall), to provide stormwater treatment to approximately 18.3 acres in the City of St. Augustine. Each vault would be installed underneath the proposed promenade. The outfall pipes would be extended from each vault and through the new seawall to discharge to the Matanzas River.

Under the Proposed Action Alternative, construction of the new seawall would affect Waters of the U.S. There would be permanent impacts on 0.010 acre of smooth cordgrass (*Spartina alterniflora*), 0.051 acre of oyster beds, and 0.288 acre of tidal flats (mudflats) waterward of the historic Avenida Menendez seawall. These impacts have been permitted by the U.S. Army Corps of Engineers (USACE) with permit number SAJ-2004-3490-MRE and would be mitigated by the creation of a minimum of 0.05 acre (2,178 square feet) of tidal marsh wetlands within the area noted on the project drawings in the USACE permit (see Appendix B). This area would be excavated as necessary to match the elevations of the adjacent marsh and planted with smooth cordgrass on, at minimum, 1.5-foot centers. Since the City of St. Augustine had originally sought funding for the proposed project through a Community Development Block Grant (CDBG) from the U.S. Department of Housing and Urban Development (HUD), the USACE permit has already been issued.

SECTION TWO PURPOSE AND NEED

The objective of FEMA's FMA program is to assist States and communities in implementing measures that reduce or eliminate the long-term risk of flood damages to structures caused by severe storm events and natural disasters. The purpose of the proposed action alternative presented in this EA is to provide the businesses and residents within Historic Districts 1 and 2 with Category 1 storm surge protection, while protecting the existing historic coquina seawall and creating a promenade between the existing and proposed seawalls.

The existing seawall along Avenida Menendez and south of the Bridge of Lions was constructed by the U.S. military between 1834 and 1842. The seawall was made from coquina stone and cemented with tabby. Granite blocks were placed atop the coquina for both practical and aesthetic purposes, although no attempt was made to level the seawall or dress the coquina stone.

The seawall protects an area of the St. Augustine bayfront in which both residential and commercial structures exist, as well as the Florida National Guard Headquarters. Historic Districts 1 and 2 occupy this area. This seawall has been tested with the impact of several tropical storms and hurricanes that have contributed to its deterioration. In the last several years, extensive damage has occurred due to hurricane, tropical storm, and extreme tidal events (e.g., Hurricane Floyd in 1999 and tropical storm Gabrielle in 2001). The wind and wave action have undermined the very support of the structure, causing it to crack and break apart and even topple over in several strategic areas. Numerous locations within the coquina stone wall contain pockets where the stone has been removed and the opening scoured through tidal action (see photographs in Appendix C). Most of the pockets occur toward the seawall base, near the foundation stone. In some areas, these pockets are 3 feet deep (approximately half the seawall's thickness). If no action is taken, the risk of total seawall failure will increase with every storm event, and could cause devastating damage to public and private property, with maximum damage resulting from flooding and/or wave action caused by the Matanzas River.

Based on this history of flooding and on the condition of the existing seawall, FEMA has determined that a need exists to provide flood protection for this area of the City of St. Augustine.

SECTION THREE ALTERNATIVES

This section describes the alternatives that were considered in addressing the purpose and need stated in Section Two. In this EA, two alternatives are evaluated: the No Action Alternative and the Proposed Action Alternative, which would constitute construction of a new seawall 12 feet from the existing seawall to provide protection to the business and residential structures located within Historic Districts 1 and 2 in the event of a Category 1 storm surge, while preserving the historic coquina seawall. Two different alternatives were considered and dismissed as not feasible.

3.1 ALTERNATIVE 1: NO ACTION

Under the No Action Alternative, the existing coquina seawall would be left in its current condition and would continue to be damaged by storm surges. The existing seawall is not structurally sound and is in danger of collapsing during a tropical storm or hurricane. Additionally, the existing seawall is not high enough to prevent flooding during Category 1 storms and does not protect the business and residential structures.

3.2 ALTERNATIVE 2: CONSTRUCTION OF A NEW SEAWALL

Under the Proposed Action Alternative, the City of St. Augustine proposes to preserve the existing seawall and construct a new seawall. The new seawall would lie 12 feet waterward of the existing historical seawall located along Avenida Menendez and would extend southward from the Santa Maria Restaurant to the Florida National Guard facilities. The total length of the new seawall would be approximately 1,200 feet. By constructing a new seawall to a height of 7-feet 7-inches and creating a promenade between the existing and proposed seawalls., the preservation of the existing seawall would be accomplished.

On January 20, 2004, the City Archaeologist discovered coquina pavers 7 inches below the foundation (according to Page 8 of the City Historian Report) in excess of 1 foot, 8 inches thick (not visible at low tide), extending about 10 feet seaward from the seawall base, covered by silt and oyster beds. The pavers were originally laid at water level and formed a ledge/walkway. Over the last 150 years they have subsided and disappeared into the shoreline's muck. With this discovery, the Proposed Action Alternative was modified to preserve the pavers, an integral part of the historic seawall. The new seawall would be constructed 12 feet from the existing seawall rather than the originally proposed 10 feet. Once completed, the proposed seawall would provide the businesses and residents within Historic Districts 1 and 2, as well as the Florida National Guard Headquarters, with Category 1 storm surge (7.4 feet above MSL) protection, while preserving the existing historic coquina seawall and creating a promenade between the existing and proposed seawall. The new seawall east of the existing seawall would be detached from the historic seawall in order to preserve the integrity of the historic seawall.

In addition, three stormwater treatment vaults would be constructed to provide storm water treatment at three outfalls along the proposed seawall. The proposed stormwater management system would consist of an exfiltration trench and three Vortech stormwater treatment vaults to improve the water quality at the discharge from existing historic hydrologic basins of the City of St. Augustine. The system would be installed along the new seawall promenade. The exfiltration trench would provide treatment to runoff from the proposed 1,200-foot long and 12-foot wide impervious promenade between the existing and proposed seawalls. The Vortech

vaults would be connected to three existing outfalls (one vault per outfall) to provide stormwater treatment to approximately 18.3 acres in the City of St. Augustine. Each vault would be installed underneath the proposed promenade. The outfall pipes would be extended from each vault and through the new seawall to discharge to the Matanzas River.

3.3 ALTERNATIVES CONSIDERED AND DISMISSED

The City of St. Augustine considered two other alternatives. One alternative is to rehabilitate the existing seawall. Structural rehabilitation of the historic seawall consisted of drilling vertical boreholes into the seawall's coquina fabric, inserting stainless steel rods along the entire seawall, and tying the back of the seawall with stainless steel rods anchored to a concrete dead-man constructed along the land side of the seawall. This alternative is not feasible for two reasons. First, coquina is a very brittle stone and the historic seawall could be seriously damaged during the drilling of the boreholes. Second, the existing seawall is not high enough to prevent flooding during Category 1 storm surges. The other alternative is to construct a new seawall 4 feet waterward from the existing seawall. This alternative is not feasible because it would have an adverse effect on the historic fabric of the existing seawall, including the seawall's foundation and pavers that lie in front of it. For these reasons, these alternatives were not considered feasible and were dismissed from further consideration.

SECTION FOUR AFFECTED ENVIRONMENT AND IMPACTS

The following table summarizes the potential impacts of the Proposed Action Alternative and conditions or mitigation measures to offset those impacts and the No Action Impacts. Following the summary table, any resource areas for which potential impacts were identified, as well as high-priority resources, including floodplains, Waters of the U.S., environmental justice, biological resources, and cultural resources, are discussed in greater detail.

Affected Environment	Impacts from Proposed Action	Mitigation	No Action Impacts
Geology and Soils	<p>Although the seawall will be driven 22 to 27 feet below MSL, there will be no adverse effects on the geological condition.</p> <p>Excavation and removal of soils between the existing and proposed seawalls would result in minor, long-term impacts to soils.</p>	<p>A National Pollutant Discharge Elimination System (NPDES) permit from Florida Department of Environmental Protection (FDEP) must be applied for, which entails preparation of the Stormwater Pollution Prevention Plan (SWPPP) prior to construction.</p> <p>Implementation of appropriate best management practices (BMPs) would be required at the construction location, including the installation of silt fence on the uplands and floating turbidity curtains in the water.</p> <p>Excavated soil and waste materials would be managed and disposed of in accordance with applicable local, State, and Federal regulations.</p>	Continued soil erosion and destruction to the seawall and its foundation.
Surface Water	<p>Surface waters would be affected as part of the proposed new seawall, but this is accounted for in the FDEP Permit.</p> <p>There may be short-term impacts on downstream surface waters during construction.</p>	<p>Three stormwater treatment vaults will be constructed to provide stormwater treatment at three stormwater outfalls along the proposed seawall.</p> <p>A SWPPP must be prepared and a NPDES permit must be obtained prior to construction; appropriate BMPs, such as installing turbidity curtains would be required.</p>	None.
Groundwater	No impacts to groundwater are anticipated.	None.	None.
Floodplains	Positive impacts will be seen in the project area by providing protection from a Category 1 storm surge. No impacts to regulatory floodplains are anticipated.	None.	Continued flooding of businesses and residential properties, within Historic Districts 1 and 2, as a result of Category 1 storm surge.

Affected Environment and Impacts

Affected Environment	Impacts from Proposed Action	Mitigation	No Action Impacts
Waters of the U.S. Including Wetlands	Permanent impacts to 0.010 acre of smooth cordgrass (<i>Spartina alterniflora</i>), 0.051 acre of oyster beds, and 0.288 acre of tidal flats (mudflats) waterward of the historic Avenida Menendez seawall.	Within 2 years of the date of issuance of the U.S. Army Corps of Engineers (USACE) permit, the permittee would create a minimum of 0.05 acre (2,178 square feet) of tidal marsh wetlands. This area would be excavated as necessary to match the elevations of the adjacent marsh and planted with smooth cordgrass on, at minimum, 1.5-foot centers.	None.
Transportation	Temporary increases in traffic volumes on Avenida Menendez and other roads in the immediate vicinity of the site during construction due to increased construction traffic. Avenida Menendez may be partially closed during construction activities. No long-term transportation impacts are anticipated as a result of the proposed action.	Construction vehicles and equipment would be stored onsite during project construction, and appropriate signage would be posted on affected roadways.	None.
Environmental Justice	All populations would benefit from the Proposed Action.	None.	None.
Air Quality	Short-term, minor impacts to air quality during the construction period.	Construction contractors would be required to keep fuel-burning equipment running times to a minimum; engines would be properly maintained.	None.
Noise	Short-term, minor impacts to noise levels at the proposed project site during the construction period.	Construction would take place during normal business hours and equipment would meet all local, State, and Federal noise regulations.	None.
Biological Resources/ Threatened and Endangered Species	Permanent impacts to 0.010 acre of smooth cordgrass and 0.051 acre of oyster beds. "May Affect, But Not Likely to Adversely Affect" (MANLAA) determination for the manatee. No impacts to any other federally protected species are anticipated.	Within 2 years of the date of issuance of the USACE permit, the permittee would create a minimum of 0.05 acre (2,178 square feet) of tidal marsh wetlands. This area would be excavated as necessary to match the elevations of the adjacent marsh and planted with smooth cordgrass on, at minimum, 1.5-foot centers. See USACE Permit No. SAJ-2004-3490-MRE for manatee conditions.	None.

Affected Environment and Impacts

Affected Environment	Impacts from Proposed Action	Mitigation	No Action Impacts
Historic and Other Cultural Resources	The proposed project would result in adverse effects to historic properties.	A Memorandum of Agreement among FEMA, the Florida Division of Emergency Management, the City of St. Augustine, the Advisory Council on Historic Preservation, and the Florida State Historic Preservation Officer has been negotiated and is expected to be executed in August 2011. The executed document resolves adverse effects under Section 106 of the National Historic Preservation Act.	The existing seawall, a historic property, would continue to deteriorate due to storm surges and regular tidal activity.
Hazardous Materials	No hazardous materials or waste impacts are anticipated.	Any contaminated or hazardous materials discovered, generated, or used during construction would be handled and disposed in accordance with applicable local, State, and Federal regulations.	None.
Safety	Positive impacts to public safety are anticipated because the new seawall would protect the business and residential structures located within Historic Districts 1 and 2 in the event of a Category 1 storm surge.	All construction activities would be performed using qualified personnel and in accordance with the standards specified in Occupational Safety and Health Administration (OSHA) regulations; appropriate signage and barriers should be in place prior to construction activities to alert pedestrians and motorists of project activities.	None.
Socioeconomic Resources	No adverse socioeconomic impacts are anticipated. No permanent employment positions would be created or lost; temporary jobs would be created during the construction of the new seawall. During construction the commercial businesses would remain open with access being limited some, but with proper signage directing costumers to their businesses.	None.	None.

4.1 GEOLOGY AND SOILS

The proposed project area and St. Johns County are located in the Northern Central Highlands physiographic province of Florida. The topography of this portion of St. Johns County is characterized by gentle to flat land surfaces derived from former marine terraces. St. Johns County is underlain by hundreds of feet of marine sands, clays, and carbonates. The subject property is immediately underlain by recent deposits of sands, clays and other marine sediments, followed by specific marine sediments of the Hawthorn Group. The lithologies of the sediments from the Hawthorn Group are highly variable, both vertically and laterally. The sediments of this group consist primarily of sands, clays, limestones, dolomites, and various other marine sediments (USGS 1990). The subject property is located in an area dominated by the Holocene system, geological formations that run along the northeastern coast of Florida (USGS 1990). The U.S. Geological Survey (USGS) 7.5 minute topographic map for the St. Augustine quadrangle in St. Johns County, Florida shows the proposed project site to be located approximately 6 feet below MSL (USGS 1992).

According to the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) online Web Soil Survey, the proposed project site is almost entirely in water and partially in the St. Augustine-Urban land complex, whose series soils are characterized by somewhat poorly drained soils on uplands whose slopes range from 0 to 2 percent (USDA/NRCS 2009).

The site visit conducted by the City of St. Augustine Archaeologist identified coquina pavers 7 inches below the foundation, in excess of 1 foot, 8 inches thick, extending about 10 feet seaward from the seawall base, establishing that the natural soils of the proposed site had been previously disturbed.

No Action Alternative – Under the No Action Alternative, construction of the new seawall would not occur and there would continue to be soil erosion and destruction to the seawall and its foundation.

Proposed Action Alternative – Under the Proposed Action Alternative, construction of the proposed new seawall would have temporary impacts to the soils during construction. Excavation and removal of soils between the existing and proposed seawalls for the new 12-foot wide promenade would result in minor, long-term impacts to soils. Trenching activities for the seawall are not anticipated, as the installation of approximately 1,200 linear feet of new concrete precast panel seawall with concrete piles would be driven through the water and intercoastal floor to 22.0 or 27.0 feet below MSL. However, this action would not adversely affect the geologic conditions. Appropriate best management practices (BMPs) would be implemented throughout the project area. BMPs could include the installation of silt fences to prevent soil erosion and run-off into the water from the uplands and floating turbidity curtains in the water during construction. Excavated soil and waste materials would be managed and disposed of in accordance with applicable local, State, and Federal regulations. If contaminated materials are discovered during the construction activities, the work would cease until the appropriate procedures and permits can be implemented.

Since more than 2 acres of soil would be disturbed, the applicant would be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit from the Florida Department of Environmental Protection (FDEP) and to prepare a Stormwater Pollution Prevention Plan

(SWPPP) prior to construction; this SWPPP must include BMPs to minimize erosion of soils from the construction area and reduce offsite sediment transport.

4.2 WATER RESOURCES

4.2.1 Surface Water

The Clean Water Act (CWA), as amended in 1977, established the basic framework for regulating discharges of pollutants into the Waters of the U.S.

The proposed project site topography is level with a moderate slope to the east. Elevations of the site are approximately 6 feet below MSL (see Figure 1, Appendix A). The proposed project site is located within the Matanzas River. Matanzas River is a narrow, tidally influenced estuary that is part of the Intracoastal Waterway, which connects to the Atlantic Ocean at the southern end of Anastasia Island.

No Action Alternative – Under the No Action Alternative, no construction would occur and there would be no impacts to surface water.

Proposed Action Alternative – Under the Proposed Action Alternative, surface waters would be impacted, but the impacts have already been permitted by FDEP Permit No. 55-230514-001-ES (see Appendix B). As part of the project, three stormwater treatment vaults will be constructed to provide stormwater treatment at three stormwater outfalls along the proposed seawall. The applicant may be required to prepare a SWPPP and obtain a NPDES permit for these impacts. To reduce impacts to surface water, the applicant would implement appropriate BMPs, such as installing silt fences on the uplands and floating turbidity curtains in the water during construction.

4.2.2 Groundwater

The subject property is located in an area where groundwater is dominated by the surficial aquifer system, mostly consisting of unconsolidated sand with a few beds of shell and limestone with a thickness of 150 feet in eastern St. Johns County. This aquifer system generally yields small volumes of water. The rocks that comprise the surficial aquifer system in this area are Holocene in age (USGS 1990).

No Action Alternative – Under the No Action Alternative, no construction would occur and there would be no impacts to groundwater.

Proposed Action Alternative – Under the Proposed Action Alternative, construction activities do reach a sufficient depth to impact groundwater, as the groundwater is at the surface in the area of the promenade and since most of the work to be done is in the Matanzas River. Consultation and permitting with USACE and FDEP has already occurred and appropriate mitigation for impacts has been identified and stated in the permit to occur after construction (see Attached USACE and FDEP permits in Appendix B).

4.2.3 Floodplains

Floodplains refer to the 100-year floodplain as defined by FEMA, and are shown on Flood Insurance Rate Maps (FIRMs) or Flood Hazard Boundary Maps (FHBMs) for all communities

participating in the NFIP. The 100-year floodplain designates the area inundated during a storm having a 1-percent chance of occurring in any given year.

Presidential Executive Order (EO) 11988 (Floodplain Management) and FEMA's implementing regulations at 44 C.F.R. part 9 require FEMA to avoid direct or indirect support of development within the 100-year floodplain whenever there is a practicable alternative. Consistent with EO 11988 and 44 C.F.R. part 9, FIRMs were examined and an 8-step checklist for actions located in a floodplain was prepared during the preparation of this EA (see Appendix B). All of the proposed project area is located in Flood Zone AE, within the 100-year mapped flood zone [FIRM Panel Number 12109C0318H, FEMA September 02, 2004 (see Figure 3, Appendix A)].

The existing seawall protects an area of the St. Augustine bayfront in which both residential and commercial structures exist, as well as the Florida National Guard Headquarters. Historic Districts 1 and 2 occupy this area. In the last several years, extensive damage has occurred due to hurricane, tropical storm, and extreme tidal events (e.g., Hurricane Floyd in 1999 and tropical storm Gabrielle in 2001). According to the storm surge evacuation map for St. Johns County dated March 30, 2011, this area of the city lies within a Category 1 to 2 storm surge evacuation zone (FDEM, 2011). The storm evacuation routes for this area – Interstate 95 and Highway 1 – are west of the project.

No Action Alternative – Under the No Action Alternative, construction of the new seawall would not occur and there would continue to be flooding of businesses and residential properties within Historic Districts 1 and 2.

Proposed Action Alternative – The proposed seawall would be built within the 100 year floodplain to the height of 7.7 feet and would protect from category 1 storm surges. In a letter dated July 28, 2010 the city's floodplain administrator stated the city's intent to issue a floodplain permit for building the seawall. Climate change including sea-level rise and storm intensity and/or frequency is anticipated to increase the vulnerability of the City of St. Augustine to storms. Construction of the proposed seawall would create a beneficial impact to the project area, including Historic Districts 1 and 2, by reducing the future flooding events up to a Category 1 storm-surge. However, storm surges larger than Category 1 that could overtop the 7.7 foot height of the seawall would result in flooding. The proposed seawall location would not impact the evacuation of this area since evacuation routes lie further inland.

Based on the 8-step process there would be minimal adverse impacts, if any, to the floodplain, but the seawall would provide improved flood protection to the downtown businesses and residents.

4.2.4 Waters of the U.S. Including Wetlands

The USACE regulates the discharge of dredged and fill material into Waters of the U.S., including wetlands, pursuant to Section 404 of the CWA. Additionally, Presidential EO 11990 (Protection of Wetlands) and FEMA implementing regulations for EO 11990 at 44 C.F.R. part 9 require FEMA to avoid, to the extent possible, adverse impact to wetlands.

The Coastal Zone Management Act (CZMA) enables coastal States, including Florida, to designate State coastal zone boundaries and develop coastal management programs to improve protection of sensitive shoreline resources and guide sustainable use of coastal areas. According

to the National Oceanic and Atmospheric Administration (NOAA), the proposed project site is located within the Florida Coastal Zone (NOAA 2004).

No Action Alternative – Under the No Action Alternative, there would be no construction and no impacts to Waters of the U.S., including wetlands, would occur. Also, no impacts would occur within the coastal zone.

Proposed Action Alternative – Under the Proposed Action Alternative, construction of the new seawall would impact Waters of the U.S. It would specifically impact two tidal habitat wetland communities, according to the Florida Land Use, Cover, and Forms Classification System (FLUCFCS): oyster bars populated with *Crassostrea* spp. (FLUCFCS 654) and freshwater marsh dominated by smooth cordgrass (FLUCFCS 6421). Tidal flats, devoid of vegetation would also be impacted. According to the U.S. Fish and Wildlife Service (USFWS), National Wetlands Inventory, Wetlands Mapper (see Figure 4, Appendix A), impacts would specifically be to an Estuarine, Subtidal, Unconsolidated Bottom, water regime wetland that is permanently flooded with tidal water (USFWS 2009). A USACE permit has already been issued for the Proposed Action and authorizes construction of approximately 1,200 linear feet of vertical seawall 12 feet waterward of the historic Avenida Menendez seawall, while impacting 0.01 acre of smooth cordgrass, 0.051 acre of oyster beds, and 0.288 acre of tidal flats (mudflats) waterward of the historic seawall; removal of a small section of a pile supported walkway accessing the Santa Maria restaurant; and installation of an "LU" shaped pile-supported walkway that would maintain access to and from this restaurant. The work is to be completed in accordance with the attached permit number SAJ-2004-3490-MRE and plans dated March 24, 2005. The original USACE permit was extended until March, 24, 2012. During the Section 404 permitting process for the project, USACE did not discover any issues related to Waters of the U.S. or wetlands. FEMA deems this permit and its mitigation conditions as the necessary NEPA consultation for this section. The USACE permit conditions will be added to the FEMA grant agreement.

Additionally, an Environmental Resource Permit (ERP) from FDEP for water quality certification, concurrence with Coastal Zone Consistency (CZC), and authorization/lease for Sovereign Submerged Lands was issued and will expire on February 12, 2012 (see Appendix B for permit and extension letter).

4.3 TRANSPORTATION

The proposed project is located at the historic seawall and waterward along Avenida Menendez, extending from near the Santa Maria Restaurant down to the Florida National Guard facilities, at St. Francis Street, which would be the southern terminus of the project. The proposed seawall would be approximately 1,200 feet long and border the Matanzas River. The major road north of the project is King Street, which is also the Bridge of Lions as it crosses over the Matanzas River. The approximate central coordinates of the site are latitude 29.31°, longitude -81.31°.

No Action Alternative – Under the No Action Alternative, no construction would occur and there would be no impacts to transportation.

Proposed Action Alternative – Under the Proposed Action Alternative, there would be a minor temporary increase in the volume of construction traffic on roads in the immediate vicinity of the proposed project site that could potentially result in a slower traffic flow during the construction phase. To mitigate potential delays, construction vehicles and equipment would be stored on site during project construction, and appropriate signage would be posted on affected roadways.

No long-term transportation impacts are anticipated as a result of the proposed project.

4.4 ENVIRONMENTAL JUSTICE

EO 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) mandates that Federal agencies identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations.

According to the 2000 Census, the City of St. Augustine has a population of 11,592 individuals. In 1999, the median household income reported in the community was \$35,358, with 15.8 percent of individuals living below the poverty level. The median household income reported in all of St. Johns County was \$50,009, with 8.0 percent of individuals living below the poverty level. The median household income in the State of Florida was \$38,819, with 12.5 percent of individuals living below the poverty level (USCB 2000).

Minorities represented 18.8 percent, 9.1 percent, and 22.0 percent of the City of St. Augustine, St. Johns County, and the State of Florida populations, respectively. In the City of St. Augustine, 24.9 percent of citizens over the age of 5 are living with a disability. Comparatively, 18.7 percent of people in St. Johns County, and 22.2 percent of people in the State of Florida, are living with a disability.

No Action Alternative – Under the No Action Alternative, construction would not occur and the businesses and residents within Historic Districts 1 and 2 would remain at risk for future disaster events, such as Category 1 storm surges. There would be no disproportionately high or adverse impact on minority or low-income portions of the population—all populations would continue to be at risk.

Proposed Action Alternative – The Proposed Action Alternative would benefit the city population as a whole by preventing flooding to business and residential structures within Historic Districts 1 and 2 from Category 1 storm surges and providing a promenade to all populations. There would be no disproportionately high or adverse impact on minority or low-income portions of the population—all populations would benefit from the protection provided by the proposed project.

4.5 AIR QUALITY

The Clean Air Act (CAA) of 1970 requires that States adopt ambient air quality standards. The standards have been established in order to protect the public from potentially harmful amounts of pollutants. Under the CAA, the U.S. Environmental Protection Agency (EPA) establishes primary and secondary air quality standards. Primary air quality standards protect the public health, including the health of “sensitive populations, such as people with asthma, children, and older adults.” Secondary air quality standards protect public welfare by promoting ecosystems health, and preventing decreased visibility and damage to crops and buildings. EPA has set National Ambient Air Quality Standards (NAAQS) for the following six criteria pollutants: ozone (O₃), particulate matter (PM_{2.5}, PM₁₀), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), and lead (Pb). According to FDEP’s 2009 Air Quality Data Report, Duval County, to the north, (the county closest to St. Augustine that was monitored) meets all NAAQS criteria (FDEP 2009).

No Action Alternative – Under the No Action Alternative, no construction would occur and there would be no impacts on air quality.

Proposed Action Alternative – Under the Proposed Action Alternative, there would be no long-term impacts on air quality. Short-term impacts on air quality may occur during construction of the new seawall. Emissions from fuel-burning internal combustion engines (e.g., heavy equipment) could temporarily increase the levels of some of the criteria pollutants, including CO, NO₂, O₃, PM₁₀, and non-criteria pollutants such as volatile organic compounds. To reduce the emission of criteria pollutants, fuel-burning equipment running times would be kept to a minimum and engines would be properly maintained.

4.6 NOISE

Noise is generally defined as unwanted sound. Sound is most commonly measured in decibels (dB) on the A-weighted scale, which is the scale most similar to the range of sounds audible to the human ear. The Day-Night Average Sound Level (DNL) is an average measure of sound. The DNL descriptor is accepted by Federal agencies as a standard for estimating sound impacts and establishing guidelines for compatible land uses. EPA guidelines, and those of many other Federal agencies, state that outdoor sound levels in excess of 55 dB DNL are “normally unacceptable” for noise-sensitive land uses such as residences, schools, or hospitals. The proposed project site is located in a commercial/residential area.

No Action Alternative – Under the No Action Alternative, no construction would occur and there would be no impacts to noise levels.

Proposed Action Alternative – Under the Proposed Action Alternative, temporary short-term increases in noise levels are anticipated during the construction period. To reduce noise levels during that period, construction activities would take place during normal business hours. Equipment and machinery used at the proposed project site during construction would meet all local, State, and Federal noise regulations.

4.7 BIOLOGICAL RESOURCES

Section 7 of the Endangered Species Act of 1973 (16 U.S.C. § 1536) requires Federal agencies to determine the effects of their proposed actions on threatened and endangered species of fish, wildlife, and plants, and their habitats, and to take steps to conserve and protect these species.

The proposed project site is in the Matanzas River and there is a potential for the West Indian manatee to be present in these waters.

No Action Alternative – Under the No Action Alternative, there would be no impacts to biological resources, including federally protected species.

Proposed Action Alternative – Under the Proposed Action Alternative, 1,200 linear feet of a new seawall would be placed in Waters of the U.S. and would impact 0.01 acre of smooth cordgrass and 0.051 acre of oyster beds; these impacts would be mitigated by creating a minimum of 0.05 acre (2,178 square feet) of tidal marsh wetlands by excavation to match the elevations of the adjacent marsh and by planting with smooth cordgrass on, at a minimum, 1.5-foot centers within the area noted on the project drawings (see Appendix B). During the course of the permitting process, USACE consulted with the USFWS who stated "May Affect, But Not Likely to Adversely Affect" (MANLAA) determination for the manatee. No impacts to any other federally

protected species are anticipated. Additionally, during the permitting process, USACE initiated the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act with National Marine Fisheries Service (NMFS) and USFWS (Appendix B). As a result of that consultation, the permittee shall comply with the manatee protection construction conditions, as stated in Permit number SAJ-2004-3490-MRE (see Appendix B). Per FEMA's follow-up emails with USFWS and NMFS (see email consultation in Appendix B), FEMA deems the original consultation between USACE and NMFS and between USACE and USFWS as completion of consultation requirements under the Magnuson-Stevens Fishery Conservation and Management Act for this Federal action. Therefore, FEMA will not pursue further consultation at this time with NMFS or USFWS. The USACE permit conditions will be added to the FEMA grant agreement.

4.8 HISTORIC AND OTHER CULTURAL RESOURCES

The National Historic Preservation Act (NHPA) of 1966, (Public Law [P.L.] 89-665; 16 U.S.C. § 470, et seq.) as amended, outlines Federal policy to protect historic properties and promote historic preservation in cooperation with States, Tribal Governments, local governments, and other consulting parties. The NHPA established the National Register of Historic Places (NRHP) and designated the State Historic Preservation Officer as the entity responsible for administering State-level programs. The NHPA also created the Advisory Council on Historic Preservation (ACHP), the Federal agency responsible for overseeing the Section 106 process and providing commentary on Federal activities, programs, and policies that affect historic properties.

NHPA Section 106 (Section 106) (16 U.S.C. § 470f) and its implementing regulations (36 C.F.R. part 800) outline the procedures for Federal agencies to follow to take into account the effect of their actions on historic properties. The Section 106 process applies to any Federal undertaking that has the potential to affect historic properties, defined in the NHPA as those properties that are listed in or eligible for listing in the NRHP. Although buildings and archaeological sites are most readily recognizable as historic properties, a diverse range of resources are listed in the NRHP, including roads, landscapes, and vehicles. Under Section 106, Federal agencies are responsible for identifying historic properties within the Area of Potential Effects (APE) for an undertaking, assessing the effects of the undertaking on those historic properties, if present, and considering ways to avoid, minimize, and mitigate any adverse effects. Because Section 106 of the NHPA is a process by which the Federal government assesses the effects of its undertakings on historic properties, it is the primary regulatory framework that is used in the NEPA process to determine impacts on cultural resources.

Previous Section 106 Consultation. Prior to FEMA's receipt of the subgrant project application from the City of St. Augustine, the City had been coordinating with regulatory agencies and resource stakeholders since 2002, including the City's Historic Architectural Review Board (HARB) and the Florida Division of Historical Resources (DHR [SHPO]). During that time, the City has sought funding sources for the proposed undertaking, including from the U.S. Department of Housing and Urban Development (HUD). Additionally, the City of St. Augustine was issued a permit by the USACE Jacksonville District in March 2005 (recently extended through March 24, 2012). CDBG funding is no longer being sought for the proposed undertaking, and FEMA is the sole Federal funding agency associated with the proposed project. With the receipt of the grant application, FEMA initiated Section 106 consultation, building on,

to the extent appropriate, the City's efforts to coordinate with resource agencies since 2002 in fulfilling its regulatory responsibilities.

Area of Potential Effects. In accordance with 36 C.F.R. §800.4(a), FEMA has defined an APE consistent with the scale and nature of the undertaking (Appendix A). The APE encompasses those areas within which the undertaking may directly or indirectly cause alterations in the character or use of historic properties. The APE includes the area of potential ground-disturbing activity associated with the undertaking, within which historic properties such as archaeological resources will be directly affected. Additionally, the APE accounts for potential indirect, visual effects along the major vistas of the Avenida Menendez, St. Francis Street, and Bridge Street, and across the open land on the east side of Marine Street, across from the National Guard property (St. Francis Barracks) at the south end of the project area.

Above-ground Resources. The existing seawall, known as the Avenida Menendez Seawall, is constructed of coquina stone laid in ashlar courses and capped with a layer of granite coping stones. The seawall is within the St. Augustine Town Plan Historic District (a.k.a., the St. Augustine Historic District) that was listed in the NRHP in 1970. Portions of the St. Augustine Town Plan Historic District are within the St. Augustine Town Plan Historic District National Historic Landmark (NHL).

In a letter to the FDEP dated May 17, 2004, the SHPO stated that "it is the opinion of this office that the old seawall along Avenida Menendez appears to meet the criteria for listing" in the NRHP, and that the "nature and/or location of the new seawall construction is such that it will have an adverse effect on the historic characteristics of the old...seawall, which may qualify it for listing." A Florida Historic Structure Form prepared by Taylor Engineering and dated March 3, 2005, recommends that the seawall be considered a potential contributing resource to an NRHP Historic District (presumed to be the St. Augustine Town Plan Historic District). The form indicates approval by SHPO staff on December 19, 2003. Accordingly, FEMA has determined that the Avenida Menendez Seawall is eligible for listing in the NRHP both individually and as a contributing resource within the NRHP-listed historic district.

As stipulated in 36 C.F.R. § 800.4(b), FEMA has made a reasonable and good faith effort to carry out identification of historic properties within the APE. Because of the widely acknowledged historic significance of the City of St. Augustine and the density of historic properties therein, built resources within the City have been well documented and limited on-site survey was necessary. SHPO staff aided in the identification effort by providing existing National Register Inventory Nomination Forms and Florida Historic Structure Forms to FEMA's contractor, URS Group, Inc. (URS). URS conducted additional primary-source research at the National Archives and Records Administration (NARA) in College Park, Maryland, and online research was directed toward obtaining maps and photographic documentation of the APE. Review of this information by URS Architectural Historians meeting the *Secretary of the Interior's Professional Qualification Standards* (36 C.F.R. part 61) resulted in the identification of twenty-seven historic properties within the APE. Of these, two properties, the St. Augustine Town Plan Historic District and the Alvarez House, are currently listed in the NRHP. One property, the Avenida Menendez Seawall, was formally determined eligible for listing in the NRHP in 2003-2005, as noted above. The remaining twenty-four properties are located in the St. Augustine Town Plan Historic District. These properties were evaluated and determined to be contributing resources to the Historic District and that eight were also determined to be individually eligible for listing in the NRHP.

Archaeological Resources. An archaeological survey conducted by City Archaeologist Carl Halbirt in January 2005 identified coquina pavers extending approximately 10 feet seaward from the seawall base. The pavers, covered by silt and oyster beds, are not visible at low tide. To preserve the pavers, an integral part of the historic seawall, Halbirt recommended that the new seawall be constructed 12 feet from the existing seawall rather than the originally proposed 10 feet. Halbirt also recommended that additional archaeological investigations be carried out along the historic seawall in conjunction with construction activities. FEMA determined there was a high probability for the presence of additional archaeological historic properties within the archaeological APE.

To identify and evaluate archaeological historic properties that may be affected by ground disturbing activities associated with the undertaking, FEMA retained URS to conduct Phase I archaeological testing within the archaeological APE. The scope of work for this undertaking was designed in consultation with, and subsequently approved by, FEMA, the City, and the SHPO. The investigations were conducted in accordance with guidelines established in *The Historic Preservation Compliance Review Program of the Florida Department of State Division of Historical Resources: A Guide to the Historic Preservation Provisions of State and Federal Environmental Review Laws* (1990), and the *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation* (Federal Register 48, No 190, 1983). The Phase I archaeological survey was implemented to identify unrecorded components and/or features of the NRHP-eligible seawall and NRHP-listed Historic District or other historic properties that could be adversely affected by the project.

The primary goal of the Phase I archaeological survey was to determine and delineate archaeological resources within the archaeological APE and provide initial assessment on resource eligibility. Fieldwork, consisting of a combination of maritime and terrestrial archaeological survey techniques, was conducted in February 2011. The archaeological APE for this project consists of a 1,200-ft (366 meter [m])-long section of the Avenida Menendez Seawall. The marine component of the archaeological APE extends 40 ft (12 m) into the Matanzas River from the eastern face of the historic seawall and includes an area of seagrass to be mitigated. The terrestrial component of the archaeological APE comprises the southernmost 150 ft (46 m) of the seawall to the eastern edge of Avenida Menendez where it was suspected that a boat basin, contemporary with the seawall, was once located but subsequently filled in the 1890s.

For the maritime portion of the project area, the surveyors used a gradiometer with Global Positioning System (GPS) unit in shallow water, a marine magnetometer and side scan sonar in deeper water, hydro-probing and shovel trenching to define the limits of the historic seawall's toe feature and other buried resources, a pedestrian survey to search for pier and dock remnants, and dredging to excavate small test pits within the footprint of the three stormwater treatment vaults proposed as part of the undertaking. For the terrestrial portion of the survey, the investigators used a terrestrial magnetometer with GPS unit, ground penetrating radar, and the excavation of backhoe trenches to attempt to find and sample the former boat basin.

No previously unknown historic properties in the archaeological APE were identified by the Phase I archaeological survey. The toe feature and boat basin, both character-defining features of the NRHP-eligible Avenida Menendez Seawall, were confirmed to be extant and intact in the archaeological APE.

No Action Alternative – Under the No Action Alternative, implementation of the Avenida Menendez Seawall Mitigation Project would not occur. The existing NRHP-eligible seawall would continue to deteriorate from regular tidal inundation and storm surges, and the NRHP-listed Historic District would continue to be damaged by storm activity.

Proposed Action Alternative – FEMA has determined that the proposed undertaking will have a direct adverse effect on the Avenida Menendez Seawall from encapsulation and penetration by the soil anchors, and an indirect adverse effect on the St. Augustine Town Plan Historic District from the change in character that will result from the addition of the new seawall and promenade.

On November 9, 2010, FEMA sent a Section 106 consultation initiation letter with its findings and determinations to date to the SHPO, the National Park Service (NPS), the Seminole Nation of Oklahoma, the Miccosukee Tribe of Indians of Florida, and the Seminole Tribe of Florida, and indicating its intent to develop an agreement document to resolve adverse effects. In a letter dated November 24, 2010, the SHPO concurred with FEMA's determination that the proposed undertaking would have an adverse effect on the Avenida Menendez Seawall. The SHPO expanded upon their November 24 comments in a follow-up letter dated January 5, 2011 stating that the historic seawall will be directly impacted by the installation of soil anchors to support the new seawall and the stormwater treatment vaults. Furthermore, the construction of the new seawall may have indirect visual impacts to the adjacent historic buildings and district. In addition, the SHPO stated that potentially significant underwater archaeological resources, including historic docks and coquina pavers, may be impacted by the new seawall.

In a letter dated December 9, 2010, FEMA notified the ACHP of its adverse effect finding and that the SHPO had concurred to proceed with the resolution of adverse effects through the execution and implementation of an agreement document. In this letter FEMA also identified the City of St. Augustine, the SHPO, the NPS National Historic Landmarks Program, the Seminole Nation of Oklahoma and the Seminole Tribe of Florida as consulting parties to the Section 106 process.

On May 26, 2011, FEMA sent a Section 106 consultation letter with its findings and determinations resulting from the archaeological investigations to the SHPO. This letter included a *Draft Management Summary of the City of St. Augustine Seawall Phase I Archaeology Project* prepared by URS in March 2011. In accordance with the Archaeological Resources Protection Act of 1979 (P.L. 96-95; 16 U.S.C. § 470aa-mm), which requires that locational information for archaeological sites be restricted, the *Management Summary* has been redacted from Attachment B of the Draft EA.

FEMA's has led Section 106 consultation to resolve the undertaking's adverse effects on historic properties through the development of a Memorandum of Agreement (MOA), pursuant to 36 C.F.R § 800.14(b). Through an in-person meeting with consulting parties in St. Augustine on February 2, 2011, and a series of conference calls with consulting parties (October 5 and December 15, 2010, and February 16, March 9, March 23, April 13, and April 27, 2011), an MOA has been negotiated and is expected to be executed by August 2011. As part of the resolution of adverse effects, minimization measures including increased landward exposure of the Avenida Menendez Seawall, specified maximum height for the new seawall, and guidelines for landscape and hardscape elements, were incorporated into the final design. Additionally, the City of St. Augustine shall retain a qualified individual with demonstrated expertise in the

treatment of historic coquina construction to advise the City of St. Augustine and their construction contractor. The City of St. Augustine will also provide a City Inspector to monitor construction activities for the full duration of the undertaking for the purpose of ensuring that there are no unforeseen adverse effects to the Avenida Menendez Seawall or other historic properties. Vibration monitoring shall be conducted for the full duration of pile driving operations at seven specified points so as to not exceed the indicated threshold. Lastly, the City of St. Augustine shall develop, create, and disseminate public interpretation materials relating to the Avenida Menendez Seawall.

The executed MOA and completion of the mitigation stipulated therein will constitute resolution of adverse effects on historic properties.

4.9 HAZARDOUS MATERIALS

Hazardous substances are defined as any solid, liquid, contained gaseous or semisolid waste, or any combination of wastes that pose a substantial present or potential hazard to human health and the environment. Hazardous substances are primarily generated by industry, hospitals, research facilities, and the government. Improper management and disposal of hazardous substances can lead to pollution of groundwater or other drinking water supplies, and the contamination of surface water and soil. The primary Federal regulations for the management and disposal of hazardous substances are the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA).

No Action Alternative – Under the No Action Alternative, no construction would occur and there would be no impacts to hazardous materials or waste.

Proposed Action Alternative – Under the Proposed Action Alternative, no hazardous materials or waste are anticipated. FEMA requires that construction debris, as well as any potentially hazardous materials encountered during construction, be properly handled and disposed of in accordance with applicable local, State, and Federal regulations.

4.10 HUMAN HEALTH AND SAFETY

Safety and security issues considered in this EA include the health and safety of the area residents and businesses and the public-at-large, and the protection of personnel involved in activities related to the proposed construction of the new seawall.

No Action Alternative – Under the No Action Alternative, there would be no construction, and therefore no direct impacts on safety of the population. If a Category 1 storm surge and flooding events were to occur, businesses and residents of this area, including children, would continue to be at risk.

Proposed Action Alternative – Under the Proposed Action Alternative, the construction of the new seawall would provide flood protection for businesses and residents of Historic Districts 1 and 2, including children, during Category 1 storm surges.

Construction activities could also present safety risks to those performing the activities. To minimize risks to human health and safety, all construction activities would be performed using qualified personnel trained in the proper use of the appropriate equipment, including all appropriate safety precautions. Additionally, all activities would be conducted in a safe manner

in accordance with the standards specified in the Occupational Safety and Health Administration (OSHA) regulations. The appropriate signage and barriers would be in place prior to construction activities to alert pedestrians and motorists of project activities. There would be no disproportionate health and safety risks to children.

4.11 SOCIOECONOMIC RESOURCES

The proposed project site is located in the central portion of the City of St. Augustine, and is bound by residential and commercial areas to the west, and the Matanzas River to the east. The total population of the City of St. Augustine, as measured by the 2000 census, was 11,592 with 61.9 percent of citizens over the age of 16 participating in the work force. Leading employment sectors are management, professional, and related occupations (32.0 percent); sales and office occupations (28.7 percent); and service occupations (21.0 percent).

Leading industries include educational, health, and social services (19.1 percent); arts, entertainment, recreation, accommodation, and food services (17.1 percent); and retail trade (15.7 percent).

No Action Alternative – Under the No Action Alternative, there would be no impacts on socioeconomic resources.

Proposed Action Alternative – Under the Proposed Action Alternative, impacts on socioeconomic resources would be minimal. No permanent employment positions would be created or lost; temporary jobs would be created during the construction of the new seawall.

SECTION FIVE CUMULATIVE IMPACTS

According to CEQ regulations, cumulative impacts represent 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 (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 (40 C.F.R. § 1508.7).” In accordance with NEPA and to the extent reasonable and practical, this EA considers the combined effect of the Proposed Action Alternative and other actions occurring or proposed near the proposed project site.

The City of St. Augustine, the county seat of St. Johns County, is located in the northeast corner of Florida on the Atlantic Coast. The project area is mainly built-up urban residential and commercial. Two other flood mitigation projects are being conducted by the City of St. Augustine: 1) replacement of the storm sewer system along King Street from Highway 1 to the bay waterfront starting in fall 2011 through the end of 2012, and 2) drainage upgrades along Riberia Street currently in progress with work continuing through the end of 2012. Also, the city’s Storm Water Master Plan will be updated in 2012; the updated plan will identify additional areas where drainage improvements are necessary and will also evaluate and recommend changes to existing flood- and drainage-related ordinances as needed.

Construction or re-habilitation projects, including improvements to the city’s drainage system, roadways, and other ongoing maintenance activities in the area of the proposed seawall construction may have cumulative temporary impacts on traffic and air quality in St. Johns County by increasing criteria pollutants during construction activities. The area is highly developed, and no other cumulative impacts are anticipated. Currently pedestrians already use the wide grassy area adjacent to the street as a sidewalk. The proposed promenade should not bring that much additional pedestrian traffic to the area, especially since the promenade will end at the Florida National Guard facility on the south. Due to the mitigation measures described wherein, no cumulative impacts to water, biological, or cultural resources are anticipated.

SECTION SIX PUBLIC INVOLVEMENT

FEMA is the lead Federal agency for conducting the NEPA compliance process for the City of St. Augustine's proposed new seawall project in the City of St. Augustine in St. Johns County, Florida. It is the goal of the lead agency to expedite the preparation and review of NEPA documents and to be responsive to the needs of the community and the purpose and need of the proposed action while meeting the intent of NEPA and complying with all NEPA provisions.

As part of NEPA compliance, the City of Augustine will notify the public of the availability of this Draft EA and the next level through publication of a public notice in the major local daily published newspaper (see Appendix E for draft public notice). FEMA will conduct a 14-day public comment period starting on the first publication date of the public notice.

Prior to FEMA involvement, the USACE issued a public notice on July 19, 2004 for permit #SAJ-2004-3490-MRE. The public notice was sent to all interested parties including the appropriate State and Federal agencies. On September 17, 2004, the USACE coordinated the comments received in response to the public notice with the City (subapplicant). In a document dated October 2004, the subapplicant sent a response to the concerns presented.

In addition, the City of St. Augustine City Commission discussed the proposed project during their regular meetings held on January 27, 2003, March 27, 2006, and September 8, 2008. The City's HARB also held public hearings for the proposed project on August 18, and September 15, 2005, and February 16, 2006.

SECTION SEVEN AGENCY COORDINATION AND PERMITS

FEMA has determined that the following agencies and organizations were consulted during the environmental permitting process before preparation of this Draft EA:

- National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Region
- U.S. Fish and Wildlife Service, North Florida Ecological Services Field Office
- U.S. Army Corps of Engineers, Jacksonville District
- Florida Department of Environmental Protection, Northeast District
- Florida Division of Historical Resources (SHPO)
- NPS, National Historic Landmarks Program
- Advisory Council on Historic Preservation
- Seminole Nation of Oklahoma
- Miccosukee Tribe of Indians of Florida
- Seminole Tribe of Florida
- 1000 Friends of Florida
- City of St. Augustine HARB
- Florida Department of Military Affairs
- Florida Trust for Historic Preservation
- Lighthouse Archaeological Maritime Program
- NPS, Castillo de San Marcos National Monument
- Office of U.S. Congressman John Mica
- Old City South Neighborhood Association
- Old Town Association
- St. Augustine Archaeological Association
- St. Augustine Historical Society
- St. Johns County Planning Commission

The consultation letters and e-mails to date are included in Appendix B.

In accordance with applicable local, State, and Federal regulations, the applicant would be responsible for acquiring any additional necessary permits before starting construction at the proposed project site.

SECTION EIGHT REFERENCES

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APPENDIX A
FIGURES

APPENDIX B
AGENCY COORDINATION, PERMITS, 8-STEP CHECKLIST, AND DRAFT MEMORANDUM OF AGREEMENT

APPENDIX C
PHOTOGRAPHIC LOG

APPENDIX D
SUBGRANT PROJECT APPLICATION, FMA-PJ-04-FL-2010-002

APPENDIX E
PUBLIC NOTICE OF DRAFT ENVIRONMENTAL ASSESSMENT