

## 4.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The baseline condition of the affected environment (or existing conditions) serves as the basis for analysis of effects and comparison of each alternative. The current conditions and any known trends are described to provide a foundation for assessing the consequences of the alternatives. The resources and potential impacts discussed in the following sections include topics identified during public and agency scoping. Effects are quantified where possible and qualitative discussions are also included. This affected environment and environmental consequences section is divided into the following nine subject areas: (1) natural resources, (2) cultural resources, (3) noise, (4) vibration, (5) visual and aesthetic resources, (6) air quality, (7) hazardous waste, (8) socioeconomics and land use, and (9) transportation and infrastructure. Technical Environmental Studies (TES) have been

prepared for natural resources, cultural resources, noise, vibration, air quality, hazardous waste, and socioeconomic and land use. A technical memo has been prepared for traffic. These disciplines are summarized in this section and further information regarding these resources can be found in the Attachments. The analyses in this section utilized the project's Study Area, which has the following approximate boundaries: the portion of the Hudson River which encompasses piers within the Study Area to the east; Baldwin Avenue (in Weehawken) to the north; the Palisades to the west; and 18th Street, Washington Boulevard, and 14th Street (in Jersey City) to the south (see **Figure 4.1**). Some disciplines; however, used discipline-specific analysis areas, which are explained within their respective methodology discussions.

The following terminology is used throughout the impact analysis section of this document to describe the nature of impacts arising from the three Build Alternatives and the No Action Alternative.

### *Short-term or long-term*

These characteristics are determined on a case-by-case basis and do not refer to any rigid time period. In general, short-term effects are those that would occur only with respect to a particular activity, for a finite period of time, or only during the time required for construction activities. Long-term effects are those that are more likely to be persistent and chronic.

### *Direct or indirect*

As stated in Council on Environmental Quality (CEQ) regulations (40 CFR Part 1508.8), a direct effect is

caused by and occurs contemporaneously at or near the location of the action. An indirect effect is caused by a proposed action and might occur later in time or be farther removed in distance, but is still a reasonably foreseeable outcome of the action. For example, a direct effect of erosion on a stream might include sediment-laden waters in the vicinity of the action, whereas an indirect impact of that erosion might be lack of spawning habitat and lowered reproduction rates of indigenous fish downstream.

### *Negligible, minor, moderate, or major*

These relative terms are used to characterize the magnitude or intensity of an impact. Negligible effects are generally those that might be perceptible but are at the lower level of detection. Impacts are considered minor if project-related impacts would occur, but



View looking east at Long Slip Canal



**Figure 4.1** Study Area

*The following statutes are not analyzed further in this document, since none of the resources identified are in close proximity to the Project.*

*Wild and Scenic Rivers Act of 1968 (16 U.S.C. 1271 et seq.)*

*Airport Hazards (24 CFR 51 Subpart D)*

*Farmland Protection Policy Act (7 U.S.C. 4201 et seq, implementing regulations 7 CFR Part 658, of the Agriculture and Food Act of 1981, as amended).*

*Coastal Barrier Resources Act of 1982 (16 U.S.C. 3501)*

resources would retain existing character and overall baseline conditions. Impacts are considered moderate if project-related impacts would occur and resources would partially retain existing character. Some baseline conditions would remain unchanged. Finally, project-related impacts that are considered major would create a high degree of change within the existing resource character and overall condition of resources.

#### *Adverse or beneficial*

An adverse effect is one having unfavorable or undesirable outcomes on the man-made or natural environment. A beneficial effect is one having positive outcomes on the man-made or natural environment. A single act might result in adverse effects on one

environmental resource and beneficial effects on another resource.

#### *Significant or Intensity*

Significant effects are those that, in their context and due to their intensity (severity), meet the thresholds for significance set forth in CEQ regulations (40 CFR Part 1508.27). The intensity of an effect is determined through consideration of several factors, including whether an alternative might have an adverse impact on the unique characteristics of an area (e.g., historic properties or ecologically-critical areas), public health or safety, endangered or threatened species, or designated critical habitat. Effects are also considered in terms of their potential for violation of federal, state, or local environmental law; the degree of uncertainty, unknown effects, or unique or unknown risks; and if there are precedent-setting effects.

#### *Context*

The context of an effect can be localized or more widespread (e.g., regional).

#### *Cumulative effects*

Cumulative effects are described in the next section of this document (see Section 5.0). CEQ has defined cumulative effects (40 CFR 1508.7) as impacts on the environment which result 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.

A discussion of mitigation measures and best management practices (BMPs) is provided following the discussion of impacts for each alternative. These sections describe mitigation measures and BMPs applicable to the Resist component, the DSD component, or measures that are applicable to both. In addition, mitigation measures and BMPs are applicable to all Build Alternatives, unless otherwise specified.

The U.S. Department of Housing and Urban Development (HUD) policies require analysis of a number of environmental protection statutes in all National Environmental Policy Act (NEPA) documents. The following statutes are not analyzed further in this document, since none of the resources identified are in close proximity to the Project.

#### **Wild and Scenic Rivers Act of 1968 (16 U.S.C. 1271 et seq.)**

The Wild and Scenic Rivers Act of 1968 protects selected rivers in a free-flowing wild and scenic condition (16 U.S.C. 1271) and prohibits federal support for activities that would harm a designated river's free-flowing condition, water quality, or outstanding resource values. The nearest designated wild and scenic river, the Musconetcong River, is located approximately 41 miles to the west of the Study Area. Therefore, the Project would have no impact to designated Wild and Scenic rivers.

#### **Airport Hazards (24 CFR 51 Subpart D)**

HUD regulations at 24 CFR 51 Subpart D are applied

to prevent incompatible development in close proximity to civil airports and military airfields. For the purpose of this regulation, a civil airport is defined as an existing airport that is designated as a commercial services airport in the National Plan of Integrated Airport Systems, prepared by the Federal Aviation Administration (FAA). HUD funding is generally not permitted for projects within an Airport Clear Zone (an area extending 3,000 feet from the end of a civil airport runway) or in an Accident Potential Zone (an area extending approximately 15,000 feet from a military airfield runway). The nearest commercial service airports are Newark Liberty International Airport (approximately 6.5 miles to the west) and LaGuardia Airport (approximately 7.3 miles to the east). Teterboro Airport is located approximately 5 miles to the north of the Study Area, but it is classified by the FAA as a general aviation airport and is not considered under this regulation. The nearest military airfield is Lakehurst Naval Air Station, which is located approximately 50 miles to the south of the Study Area. Therefore, the Project is not within an Airport Clear Zone or an Accident Potential Zone and is in compliance with 24 CFR 51 Subpart D.

#### **Farmland Protection Policy Act (7 U.S.C. 4201 et seq, implementing regulations 7 CFR Part 658, of the Agriculture and Food Act of 1981, as amended).**

HUD-funded projects must consider impacts on farmlands of statewide or national importance. Projects that are located in areas that are already committed to urban use (such as through zoning

regulations) or are not located within designated prime or unique farmland are not subject to the Farmland Protection Policy Act. According to the USDA soil classifications of the Study Area (see discussion in Section 4.1.2.2), the soils on-site are primarily urban land and historic fill, which are not prime or unique farmland. In addition, zoning within the Study Area is a mix of commercial, residential, and industrial (see Section 4.8.2.2) and does not contain areas zoned for agricultural uses. Therefore, the Farmland Protection Policy Act is not applicable to the Project.

#### **Coastal Barrier Resources Act of 1982 (16 U.S.C. 3501)**

The Coastal Barrier Resources Act (CBRA) of 1982 prohibits federally funded projects on designated relatively undeveloped coastal barriers along the Atlantic and Gulf coasts. No federally-funded projects can occur in an area designated within the CBRA, with the exception of exempt activities (such as nature trails) after consultation with the U.S. Fish and Wildlife Service (USFWS). The nearest CBRA Unit to the Study Area is NY-60P Jamaica Bay in Queens and Brooklyn, New York, approximately 10 miles to the southeast of the Study Area. Therefore, the Project would not impact the CBRA system and it is in compliance with the CBRA.

HUD policies also provide for an analysis of project sustainability. Sustainability is a central component of the Project. According to the United Nations, “a sustainable society meets the needs of the present without sacrificing the ability of future generations

and non-human forms of life to meet their own needs.” In recent years, sustainability has taken an increasingly important role in project development and implementation with recognition that fostering sustainable societies would be made more difficult with climate change.

Current guidance on sustainability and energy usage within the federal government originates from two executive orders: EO 13653 *“Preparing the United States for the Impacts of Climate Change”* (November 1, 2013) and EO 13693 *Planning for Federal Sustainability in the Next Decade* (March 19, 2015). Executive Order 13653 requires federal agencies to modify their policies and planning to recognize climate change, modernize federal programs to support climate resilient investments and establishes a federal Council on Climate Preparedness and Resilience. Executive Order 13693 sets targets for federal agencies to reduce: greenhouse gases, energy utilization by facilities and vehicles, potable water utilization, and waste generation. This executive order also establishes a Federal Interagency Sustainability Steering Committee and requires each agency to develop a sustainability plan.

In accordance with these executive orders, HUD established a Federal Sustainability Plan on November 19, 2015. Goal 10 in the current plan provides that HUD would manage the effects of climate change on the agency’s operations and mission, in both the short and long term.

The comprehensive urban water strategy that was developed as a part of the Project would directly enhance the resiliency and sustainability of the Study Area in the face of climate change impacts, such as sea level rise. The components of the Project advance sustainability objectives by enhancing coastal resiliency; protecting the communities of Hoboken, Jersey City, and Weehawken from storm-related flood damages; and promoting sustainable infrastructure. Therefore, the Project, in its entirety, is in compliance with EO 13653 and EO 13963.

## **4.1 Natural Resources**

### **4.1.1 Methodology**

The methodology for the natural resources analysis involved three major tasks: data collection and review, site reconnaissance, and assessment of potential impacts. Available information regarding existing conditions was assembled and reviewed to describe the Study Area relative to geology, soils, groundwater, surface water quality, aquatic ecology, floodplains, tidelands, wetlands, upland vegetation, and wildlife. For purposes of this analysis, the Study Area is defined as a 1,253-acre area, which includes 1,020 acres of uplands and 233 acres of the Hudson River. A natural ecosystems analysis area (see **Figure 4.2**) was also defined to include a 150-foot buffer around the Study Area to evaluate impacts to natural resources that may extend beyond the Study Area. For example, noise generated from construction activities along the project boundary could travel up to

150 feet beyond the Study Area, potentially affecting any sensitive wildlife in this buffer zone. The Project Area, which is defined as the potential area of ground disturbance during construction activities, is also depicted in **Figure 4.2**.

The affected environment for each resource (e.g., geology, soils, and endangered species) presents the information obtained from the natural ecosystems analysis area reconnaissance, review of federal and state studies and mapping, wetland delineation, and agency coordination. Resources that were reviewed, but which yielded no pertinent information, are not cited in this report.

Existing information identified in literature and obtained from government and non-government agencies included documents such as: studies conducted within the Lower Hudson River Estuary/Hudson River; New York/New Jersey Harbor Estuary Program; New York City Department of Environmental Protection (NYCDEP) Harbor Water Quality Survey (NYCDEP 2010b); USFWS National Wetland Inventory (NWI) maps; US Environmental Protection Agency (EPA) Regional Environmental Monitoring and Assessment Program (R-EMAP); Federal Emergency Management Agency (FEMA) flood insurance rate maps; and United States Army Corps of Engineers (USACE) studies conducted as part of the New York and New Jersey Harbor Navigation Project.

The delineation of wetlands in the Study Area was conducted in accordance with the 1989 Federal