

4.0 SUMMARY OF MITIGATION AND PERMITS

A summary of the various laws and coordination requirements that may affect or influence the proposed alternatives are summarized in this section.

4.1 COMPLIANCE WITH VARIOUS LAND USE POLICIES AND CONTROLS

4.1.1 National Environmental Policy Act (42 USC 4321, et seq.)

The National Environmental Policy Act of 1969, as amended, contains policy and guidance to ensure that potential impacts from proposed federal actions are assessed using a systematic and interdisciplinary approach. This EA has been prepared in accordance with *Section 102(2)(c)* of NEPA, CEQ regulations on implementing NEPA procedures (40 CFR 1500-1508), and FEMA regulations on implementing NEPA procedures (44 CFR Part 10).

4.1.2 Clean Air Act (42 USC 7401 et seq.)

The rules governing the determination of conformance of an action with the Clean Air Act, as amended, are set forth in 40 CFR Parts 6, 51, and 93. The Clean Air Act, as amended, provides for protection and enhancement of the nation's air resources. Particulate matter resulting from construction activities and fumes from vehicles and heavy machinery would have a short-term air quality impact on the immediate vicinity, but no permanent or long-term air quality impact on the immediate vicinity. The applicant would be responsible for obtaining and compliance with all applicable air quality control regulations. The 1990 Clean Air Act, as amended, established general conformity requirements that apply to federal actions in areas designated *nonattainment* for any of the criteria pollutants under the Clean Air Act.

4.1.3 Clean Water Act (33 USC 1251, et seq.) and Executive Order 11990 - Protection of Wetlands

The Clean Water Act, as amended, regulates discharges to the waters of the United States. Compliance with applicable provisions of the Clean Water Act will be accomplished by coordination with the appropriate resource agencies, submittal of permit applications, if required, and response to agency review. Section 404 of the Act regulates the discharge of dredged or fill materials into navigable waters. Any point sources of pollution associated with the proposed action will comply with NPDES permit requirements. This Act would also include stormwater discharges associated with industrial activity, and those discharges originating from large and medium municipal separate storm sewer systems. Releases of stormwater runoff to area streams would adhere to state and local water quality requirements and permit conditions.

Executive Order 11990 - Protection of Wetlands directs federal agencies to take action to minimize the destruction of wetlands on their property (Executive Order 11990, Section 1[a]).

4.1.4 Rivers and Harbors Act of 1899 (33 USC 401 et seq.)

Section 10 of the Rivers and Harbors Act prohibits the unauthorized obstruction or alteration of any navigable water of the United States.

4.1.5 Executive Order 11988 - Floodplain Management

Executive Order 11988 – Floodplain Management requires that federal agencies avoid activities that directly or indirectly result in development of floodplain areas. Portions of the WTC site are located in the 100-year or 500-year floodplain. The City of New York has adopted FEMA guidelines regarding construction within floodplain Zone A (100-year floodplain), which requires that a hydraulic analysis be performed and, in general, that structures be elevated above the base flood elevations. Impacts to floodplains would not be anticipated and the applicant will comply with the requirements of Executive Order 11988. Proposed development would be reviewed and approved by the local Floodplain Administrator.

4.1.6 Coastal Zone Management Act

The Coastal Zone Management (CZMA) Act of 1972, as amended, provides for the effective management, beneficial use, protection, and development of the resources of the nation's coastal zone. The CZMA directs federal agencies proposing activities or development projects, within or outside of the coastal zone, that could affect any land or water use or natural resource of the coastal zone, to assure that those activities or projects are consistent, to the maximum extent practicable, with the approved state programs.

4.1.7 Coastal Barrier Resources Act

The Coastal Barrier Resources Act of 1982 requires that no new expenditures or financial assistance be made available for various construction projects within the boundaries of the Coastal Barrier Resources System. The USFWS designates coastal barrier resources. The WTC is not located within a designated coastal barrier zone.

4.1.8 Fish and Wildlife Coordination Act (16 USC 661 et seq., and Endangered Species Act (16 USC 1531 et seq.)

Section 10 of the Fish and Wildlife Coordination Act (16 USC 661-666) directs federal agencies to consult with USFWS, the National Marine Fisheries Service, and state agencies before authorizing alterations to water bodies. The purpose of the Act is to ensure that wildlife conservation receives equal consideration, and that wildlife management issues are coordinated with other features of water resources programs. Section 7 of the Endangered Species Act of 1973, as amended, requires the responsible

federal agency to consult with USFWS and the appropriate state fish and wildlife agency, in this case the New York State Department of Conservation, concerning endangered and threatened species under their jurisdiction. In compliance with these regulations, appropriate federal and state agencies were contacted to determine the potential for the proposed action to impact threatened or endangered species habitat and fish and wildlife habitat. Endangered and threatened species and critical habitat are not affected by the proposed project.

4.1.9 Migratory Bird Treaty Act (16 USC Section 703 et seq.)

The Migratory Bird Treaty Act protects game, non-game, and insectivorous birds that migrate with the changing seasons. The act makes it illegal to hunt, take, capture, or kill any migratory bird without an appropriate permit. The migratory birds are listed in 50 CFR 10.13. This protection includes the bird, the bird's nests, and their eggs from hunting, killing, possession, selling, or buying unless otherwise permitted by regulations.

4.1.10 Federal Noxious Weed Act (7 USC 2801 et seq.) and the National Invasive Species Act of 1996 (16 USC 4701)

The Federal Noxious Weed Act prohibits introducing exotic species into any natural ecosystem, and requires control or eradication of exotic species and noxious weeds from federal lands. The National Invasive Species Act of 1996 mandates a ballast water management program for armed forces vessels to demonstrate technologies and practices to prevent the introduction of aquatic non-indigenous species into waters of the United States. Under Executive Order 13112, "Invasive Species," all alien or exotic species are to be controlled on federal land to the maximum practicable extent. FEMA will ensure that Naval activities, or those conducted by an eligible applicant, are in accordance with federal noxious weed and invasive species programs.

4.1.11 Local Land Use Plans

A Special Manhattan District has been established for the area bounded by West Street, Broadway, Murray Street, Chambers Street, Centre Street, the centerline of the Brooklyn Bridge, the East River, and the Battery Park Waterfront.

4.1.12 Administration of Environmental Policy

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* and Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, mandate that federal agencies identify disproportionately high and adverse human health or environmental effects on minority and low-income populations and children. No disproportionate impact to minority or low-income persons living in area surrounding the WTC would be anticipated as a result of the implementation of the proposed action alternatives. No disproportionate environmental health or safety risks to children would be anticipated as a result of the implementation of the proposed action alternatives.

4.1.13 National Historic Preservation Act (16 USC 470(f))

In compliance with applicable federal laws, regulations, and procedures regarding historic preservation, potential impacts to cultural resources have been evaluated.

If, however, any archeological or historical remains are uncovered during construction or demolition activities, construction/demolition would cease, and the New York State Historic Preservation Officer would be notified.

4.1.14 Prime and Unique Farmland Soils (7 USC 4201 et seq.)

The purpose of the Farmland Protection Policy Act is to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses. There are no prime and unique farmland soils located in the vicinity of the WTC site and no impacts are expected.

4.1.15 Resource Conservation and Recovery Act (RCRA) (42 USC 6901 et seq.)

RCRA and subsequent amendments established a cradle to grave system for the tracking, management, generation, transportation, treatment, storage, disposal, and recycling of waste materials. Construction of buildings, demolition of subway systems, roadways, and other infrastructure to provide for repair or replacement would not be expected to generate significant volumes of hazardous waste. In any event, the applicant would be responsible for disposing of any wastes generated during demolition, repair, restoration, replacement in accordance with applicable regulations, including asbestos and lead. Impacts related to the generation, storage, treatment, or disposal of hazardous wastes would not be significant.

4.1.16 Occupational Safety and Health Act of 1970 (PL 91-596)

The OSHA is implemented by 29 CFR 1910 and pertains to health and safety protection of workers.

4.1.17 Executive Order 13186 Migratory Bird Protection

Executive Order 13186 directs federal agencies to take action to implement the Migratory Bird Treaty Act. The United States has recognized the critical importance of migratory birds, their great ecological and economic value, and has ratified international, bilateral conventions for the conservation of migratory birds. Each federal agency that may take actions that could result in a measurable negative effect on migratory bird populations is directed to develop and implement a Memorandum of Understanding (MOU) with the U.S. Fish and Wildlife Service within two years that shall promote conservation of migratory bird populations.

4.2 ENERGY REQUIREMENTS AND CONSERVATION POTENTIAL

Energy in the form of various fossil fuels, electricity, and natural gas would be required during construction of any of the proposed action alternatives. Long-term operation and maintenance activities would also consume energy resources. Energy requirements for the proposed action alternatives would be similar to pre-disaster conditions and therefore would have little impact on the energy requirements of the New York Metropolitan Region. Energy efficient construction materials and devices would likely be installed in accordance with the energy conservation plan adopted by the City of New York titled, *Saving Power, Saving Money: An Energy Efficiency Plan for New York City* (New York City Council 2001).

4.3 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Construction, maintenance, and use of the proposed WTC infrastructure restoration require the commitment of various resources. These resources include the commitment of labor, capital, energy, biological resources, building materials, and land resources. Short-term commitments of labor, capital, and fossil fuels would result directly from construction, and indirectly from the provisions of services to the sites during construction. Long-term commitments of resources would result directly from maintenance and occupancy of the commercial and residential buildings, and indirectly from the provisions of water, sewage, electricity, gas, and solid waste services during construction and long-term operation.

Duration of the commitment of land, construction materials, underground utilities, and necessary infrastructure and available resources is long-term.

4.4 RELATIONSHIP BETWEEN LOCAL SHORT-TERM USE OF THE HUMAN ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Short-term commitments would include labor, capital, and fossil fuels that result directly from construction activities, and indirectly from the provision of services to the any of the site during construction. Physical systems would be modified during construction. Commitments of infrastructure would exert a long-term impact on the environment in the immediate vicinity of each construction site, but no impact on the area-wide environment. Over the long term, implementation of any of the proposed action alternatives would enhance the morale and quality of life of all residents of New York and New Jersey.

4.5 UNAVOIDABLE ADVERSE IMPACTS

Short-term adverse impacts from construction of any of the proposed action alternatives would include the following: soil disturbance and erosion, air emissions, and noise. Long-term impacts include increase in utility use and potential increase in traffic to lower Manhattan. These unavoidable impacts, and any related mitigation or funding solutions,

are discussed in the previous sections of this PEA, and are not anticipated to be significant. Although not necessarily a comprehensive list, environmental issues that may need to be addressed during the long-term recovery process include:

- Air emissions from vehicles/equipment during construction (Clean Air Act);
- Noise control during the construction period (Noise Control Act);
- Stormwater runoff and the associated potential impacts on potential aquatic resources (Clean Water Act and Endangered Species Act);
- Historic and archaeological concerns (National Historic Preservation Act and Archaeological Resource Protection Act);
- Potential impact in the coastal zone (Coastal Zone Management Act);
- Impact of facilities constructed in the floodplain (Executive Order 11988); and,
- Cumulative impacts

4.6 MEANS TO MITIGATE ADVERSE ENVIRONMENTAL IMPACTS

4.7 ENVIRONMENTAL PERMITS