

Draft Environmental Assessment

City of New Orleans

West Bank Natatorium and Splash Park

FEMA-1603-DR-LA

New Orleans, Orleans Parish, Louisiana

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FEMA

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LIST OF ACRONYMS AND ABBREVIATIONS

ABFE	Advisory Base Flood Elevation
ASHERA	Asbestos Hazard Emergency Response Act
AI	Area of Interest
APE	Area of Potential Effects
BFE	Base Flood Elevation
BMP	Best Management Practices
CAA	Clean Air Act
CBD	Central Business District
CBRA	Coastal Barrier Resources Act
CBRS	Coastal Barrier Resources System
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
C.F.R.	Code of Federal Regulations
CNO	City of New Orleans
CPRA	Coastal Protection & Restoration Authority
CTR	In-House Contract Consultant
CUP	Coastal Use Permit
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
dBA	decibel, on the A-weighted Scale
DEA	Draft Environmental Assessment
DFIRM	Digital Flood Insurance Rate Map
DHS	U.S. Department of Homeland Security
DNL	Day-Night Average Sound Level
DoA	U.S. Department of the Army
EA	Environmental Assessment
EDMS	Electronic Document Management System
EIS	Environmental Impact Statement
EL	Elevation
E.O.	Executive Order
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map

FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
GHG	Greenhouse Gas
GPO	U.S. Government Printing Office
HEAG	Highest Existing Adjacent Grade
HSDRRS	Hurricane Storm Damage Risk Reduction System
HUD	U.S. Department of Housing and Urban Development
IER	Individual Environmental Report
LA GOHSEP	Louisiana Governor's Office of Homeland Security and Emergency Preparedness
LaDOTD	Louisiana Department of Transportation and Development
LDEQ	Louisiana Department of Environmental Quality
LDNR	Louisiana Department of Natural Resources
Lf	linear feet
LPDES	Louisiana Pollutant Discharge Elimination System
NAAQS	National Ambient Air Quality Standards
NAVD	North American Vertical Datum
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOPBR	New Orleans Public Belt Railroad
NORDC	New Orleans Recreation Development Commission
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OCM	Office of Coastal Management
OSHA	Occupational Safety and Health Administration
PA	Programmatic Agreement Public Assistance
P.L.	Public Law
RCRA	Resource Conservation and Recovery Act
RHA	Rivers and Harbors Act
SARA	Superfund Amendments and Reauthorization Act
SELA	Southeast Louisiana Urban Flood Control Project
sf	square-foot, square feet

SFHA	Special Flood Hazard Area
SHPO	State Historic Preservation Office/Officer
SIP	State Implementation Plan
SOV	Solicitation of Views
TSCA	Toxic Substances Control Act
USACE	U.S. Army Corps of Engineers
U.S.C.	U.S. Code
USDOC	U.S. Department of Commerce
USDOJ	U.S. Department of Justice
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WBV	West Bank and Vicinity

1 INTRODUCTION

1.1 Hurricane Katrina

Hurricane Katrina made landfall on 29 August 2005, near the town of Buras, Louisiana, with sustained winds of more than 125 miles per hour. The accompanying storm surge damaged levees and entered the City of New Orleans (CNO) from various coastal waterways, resulting in flooding throughout much of the city. The storm's high winds, heavy rains, and flooding caused considerable damage to recreational parks in the West Bank neighborhood of New Orleans, Louisiana. Hurricane Gustav, which occurred in 2008, intensified the damage caused by Hurricane Katrina.

1.2 Project Authority

President George W. Bush declared a major disaster for the State of Louisiana (FEMA-1603-DR-LA) on 29 August 2005, authorizing the U.S. Department of Homeland Security's (DHS) Federal Emergency Management Agency (FEMA) to provide federal assistance in designated areas of Louisiana. This assistance is pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), Public Law (P.L.) 93-288, as amended. Section 406 of the Stafford Act authorizes FEMA's Public Assistance (PA) Program to assist with funding the repair, restoration, reconstruction, or replacement of public facilities damaged as a result of the declared disaster.

In accordance with FEMA Instruction 108-1-1, a Draft Environmental Assessment (DEA) has been prepared pursuant to Section 102 of the National Environmental Policy Act (NEPA) of 1969, as implemented by the regulations promulgated by the President's Council on Environmental Quality (CEQ; 40 CFR Parts 1500-1508). (Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act 2005).

The purpose of this DEA is to analyze potential environmental impacts of the proposed project. FEMA will use the findings in this DEA to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

1.3 Background

The CNO (Sub-Recipient) has requested, through the State of Louisiana Governor's Office of Homeland Security and Emergency Preparedness (LA GOHSEP) (Recipient), that FEMA provide disaster assistance consisting of federal grant funds in accordance with the provisions of the Stafford Act. FEMA has determined that the CNO is eligible for federal disaster Public Assistance and that the CNO recreational parks qualify for site improvements as a facilities serving the needs of the general public.

Fox Playground, which is located on Socrates Street in the Algiers neighborhood, was damaged as a result of wind and wind driven rain associated with the events of August 29, 2005. At the time of the event, the Fox Playground functioned as a recreational facility for the citizens of the West Bank of New Orleans. The storm damaged facility included a pool and pool building, although the pool was not in use at the time of the disaster, and there is no FEMA Public Assistance funding associated with the pool structure. Due to post-disaster recovery efforts, restructuring and reconstruction of the City's public school system resulted in the CNO's ownership and responsibility transfer of Fox Playground to the Algiers Charter School Association. This charter school entity administers the L. B. Landry/O.P. Walker High School campus, and the site of Fox Playground was incorporated into the reconstruction/reconfiguration of the new school campus. Ultimately, the Algiers Charter School Association developed the Fox Playground site as an athletic training field for softball and baseball programs administered by the school.

Skelly Rupp Stadium, located at 2200 Vespasian Street, also within the Algiers neighborhood, was also damaged as a result of wind and wind driven rains associated with the events of August 29, 2005. At the time of the event, this facility functioned as a recreational facility consisting of a baseball stadium, dugouts, restroom building, ticket booth and coaches office, and served the community of the West Bank of New

Orleans. The FEMA eligible scope of work at the Skelly Rupp has not been executed. The support buildings at Skelly Rupp are safe and secure at this time, and the City will repair these support buildings at a later date with non-Federal funds. The City has determined the public is best served by utilizing the available Public Assistance funds associated with Fox Playground and Skelly Rupp towards the design and construction of a new natatorium and splash park which will serve the West Bank community of New Orleans.

Consequently, in accordance with 44 C.F.R. § 206.203(d)(1), CNO has requested an Improved Project for the proposed action, which will allow funds to restore the pre-disaster function of a damaged facility. The Sub-Recipient proposes to construct a new natatorium and splash park and associated parking area. The pre-disaster recreational functions once performed by Fox Playground and Skelly Rupp Stadium for the Algiers neighborhood will be re-established in the new location and will be maintained without expansion of the existing site footprint. This EA will evaluate two (2) locations within the West Bank neighborhood as potential construction sites for the new natatorium and Splash Park (*Figure 1*) and a “No Action” alternative.

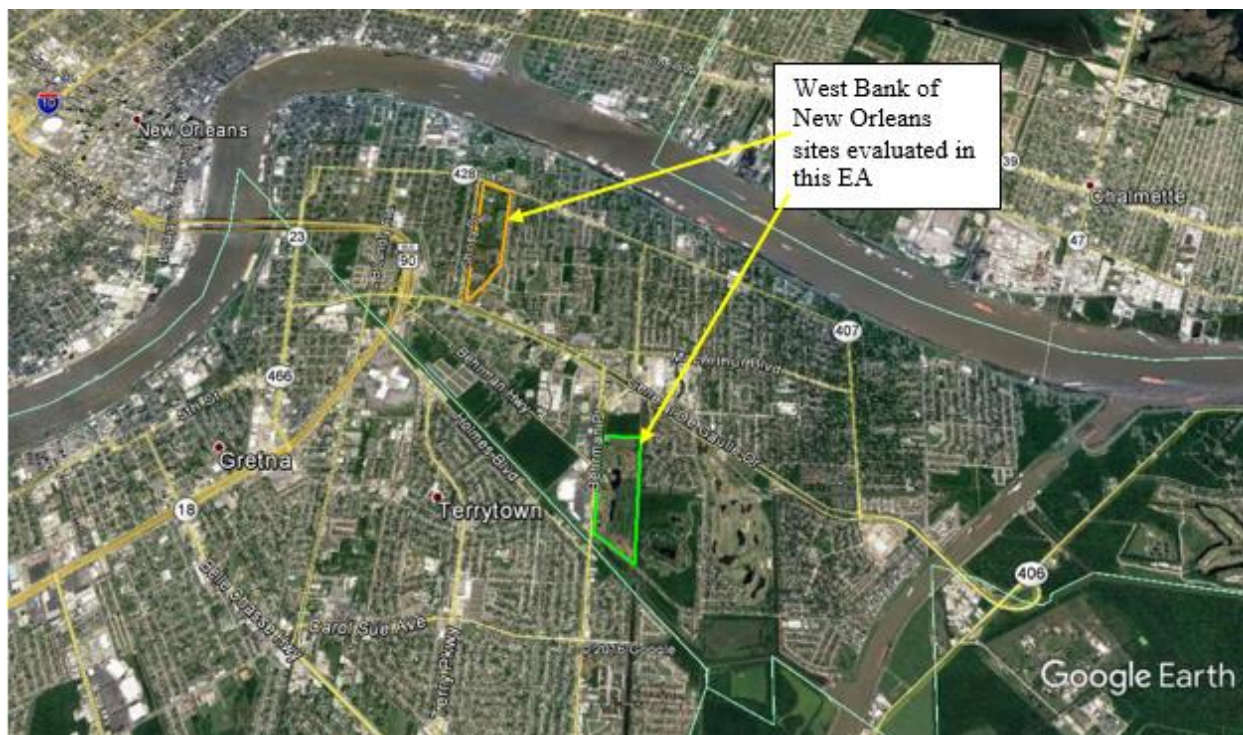


Figure 1 – Aerial view of the West Bank neighborhood of New Orleans, LA, depicting the locations of the sites evaluated in this EA. (Image Source – Google Earth 2016)

1.4 General Site Description

The City of New Orleans is located entirely within the parish of Orleans. Orleans Parish is primarily urban, with the exception of some areas of coastal marsh in the eastern part and woodlands on the west bank of the Mississippi River (the Lower Coast). The parish is entirely within the Mississippi River Delta, with a subtropical, humid climate typical of coastal regions along the Gulf of Mexico. The average winter temperature is 54°F and the average summer temperature is 81°F. Orleans Parish typically receives 59 inches of rainfall annually (Trahan 1989).

Although the corporate boundary of the City of New Orleans has been unchanged since the 1800s, the City’s urban footprint has expanded significantly since then. Before 1900, urbanization was confined primarily to natural levees and ridges along the Mississippi River and elsewhere (the Esplanade Ridge, for

example). In 1913, construction of a levee and pump system began, which allowed for the development of lower-lying areas and wetlands. Between 1913 and 2000, the city's urbanized footprint almost doubled to approximately 71 square miles. The extent of urbanization has been relatively unchanged since the mid-1980s, however, when development slowed considerably due to a lack of large remaining developable tracts within the city, the general economic downturn resulting from the "oil bust", and ongoing concerns about quality of life issues related to crime and public education (CNO 2010).

New development stalled in the 1980s - but by the 1990s, the city began to witness small-scale reinvestment within established neighborhoods and larger adaptive re-use and limited infill development projects within and around the Central Business District (CBD), or "downtown" area. The CBD is located northwest of the project site addressed by this DEA.

2 PURPOSE AND NEED

The objective of FEMA’s PA Grant Program is to provide assistance to state, tribal, and local governments, as well as certain types of private, non-profit organizations such that communities can quickly respond to, recover from, and mitigate major disasters and emergencies. The massive flooding associated with Hurricane Katrina severely impaired the operation of the recreational facilities in the West Bank neighborhood of New Orleans. Damage from Hurricane Gustav caused further deterioration of the parks, causing damage to park equipment and amenities.

The damage to these recreational facilities caused by Hurricane Katrina greatly reduced the Sub-Recipient’s ability to provide needed recreational services to the West Bank community. Restoration of these services is necessary for the community to fully recover from the impact of the storm. The purpose of this project is to restore and improve community access to quality community and recreational services. The need for the project is defined by the Sub-Recipient’s current lack of optimally functioning facilities.

3 ALTERNATIVES

3.1 Overview of Alternatives

The NEPA process consists of an evaluation of the environmental impacts of a federal undertaking, including its alternatives. Three alternatives have been considered and reviewed including 1) the “No Action” alternative, 2) Construct the Behrman Memorial Park Natatorium and Splash Park (Preferred Alternative), 3) Construct a splash park at the Former Brechtel Golf Course.

3.2 Alternative 1 – No Action

Under the “No Action” alternative, there would be no construction of the proposed recreational structures. Consequently, the West Bank area would continue to have few viable recreational facilities to serve the area. “No Action” would forego the opportunity to improve recreational opportunities for the West Bank neighborhood. This alternative does not meet the purpose and need, but will continue to be evaluated throughout this DEA and serve as a baseline comparison of impacts from other action alternatives.

3.3 Alternative 2 – Construct the Behrman Memorial Park Natatorium and Splash Park (Preferred Alternative)

Behrman Memorial Park, located at 2529 General Meyer Avenue in New Orleans, formerly known as Martin Behrman Memorial, is named for Martin Behrman, the longest serving mayor of New Orleans, who served as mayor in the early 1900s and passed away in 1926. The land for the park was dedicated in 1927; however, the site was not developed into a park until 1937. Behrman Memorial Park is currently an approximately 85 acre recreational park managed and operated by the New Orleans Recreation Development Commission (NORDC). Recreational facilities currently in the park include a recreation center, arts and crafts room, indoor basketball courts, all-purpose athletic fields, a baseball diamond, a running track, playground equipment, an outdoor summer pool, a stadium, and tennis courts.

Behrman Memorial Park is bounded to the north by General Meyer Avenue (LA State Highway 428) and the Naval Support Area New Orleans facility, to the east by Pace Boulevard and Wall Boulevard and residential structures, to the south by General de Gaulle Drive, and to the west by residential structures and Shirley Drive. The footprint of Behrman Memorial Park is depicted in *Figure 2*.



Figure 2 - Aerial overview of the Behrman Memorial Park footprint, outlined in orange. (Google Earth 2016)

The proposed natatorium construction site is located at the northwest corner of Behrman Memorial Park, west of the main park entrance off General Meyer Avenue. The pre-disaster recreational functions of the park would be maintained and enhanced for the West Bank community without expansion of the Behrman Memorial Park footprint (*Figure 3*).

The proposed site for the new structure and associated parking area is located in the northwest corner of Behrman Memorial Park, bordered to the north by General Meyer Avenue (LA State Highway 428), to the east by a buffer of trees along Florence Avenue, to the south by DeArmas Street, and to the west by residential structures and Shirley Drive (Latitude 29.943039, Longitude -90.030425). The proposed lot is an undeveloped, maintained area approximately 1.45 acres in size.



Figure 3 – Aerial view of the proposed natatorium and splash park site location in the northwest corner of Behrman Memorial Park, outlined in yellow. (Image provided by the Sub-Recipient)

The CNO proposes the construction of a three lane Olympic size swimming pool, with additional water sport areas for water volleyball, water basketball, and a splash pad. The design and construction of this new recreational facility would replace the public swimming pool which had previously been offered at Fox Playground. This project would serve the same general population as was serviced by the Fox Playground and Skelly Rupp Stadium. However, the proposed Behrman natatorium and splash park would represent a significant improvement in recreation and water related activities for the West Bank of New Orleans. In addition, a roughly triangular shaped retention pond, measuring approximately 160 linear feet (lf) x 25 lf x 150 lf x 90 lf, would be constructed immediately north of the proposed natatorium structure, along the northern boundary of Behrman Park. The retention pond would have a gradual slope having four “steps” from the ground surface to the bottom of the pond.

According to the City of New Orleans Property Viewer, the CNO is owner of the proposed property site. According to the CNO, the Alternative 2 site was approved by NORDC based on good access from several locations around the park, including from a major highway, visibility from the highway, and a familiar and convenient location for the patrons. Site photographs for this Alternative are attached in Appendix A (Photographs 1 through 8). Construction Plans for this Alternative are attached to this EA in Appendix B.

Figure 4 depicts the location of the proposed natatorium, which is defined as a building having an indoor swimming pool, and an associated parking area within the site location and the location and configuration of the proposed retention pond. *Figure 5* depicts the interior design of the proposed natatorium and shows the location of the proposed rectangular splash pad area. *Figure 6* depicts the north and south elevations of the proposed natatorium. *Figure 7* depicts the east and west elevations of the proposed natatorium structure.

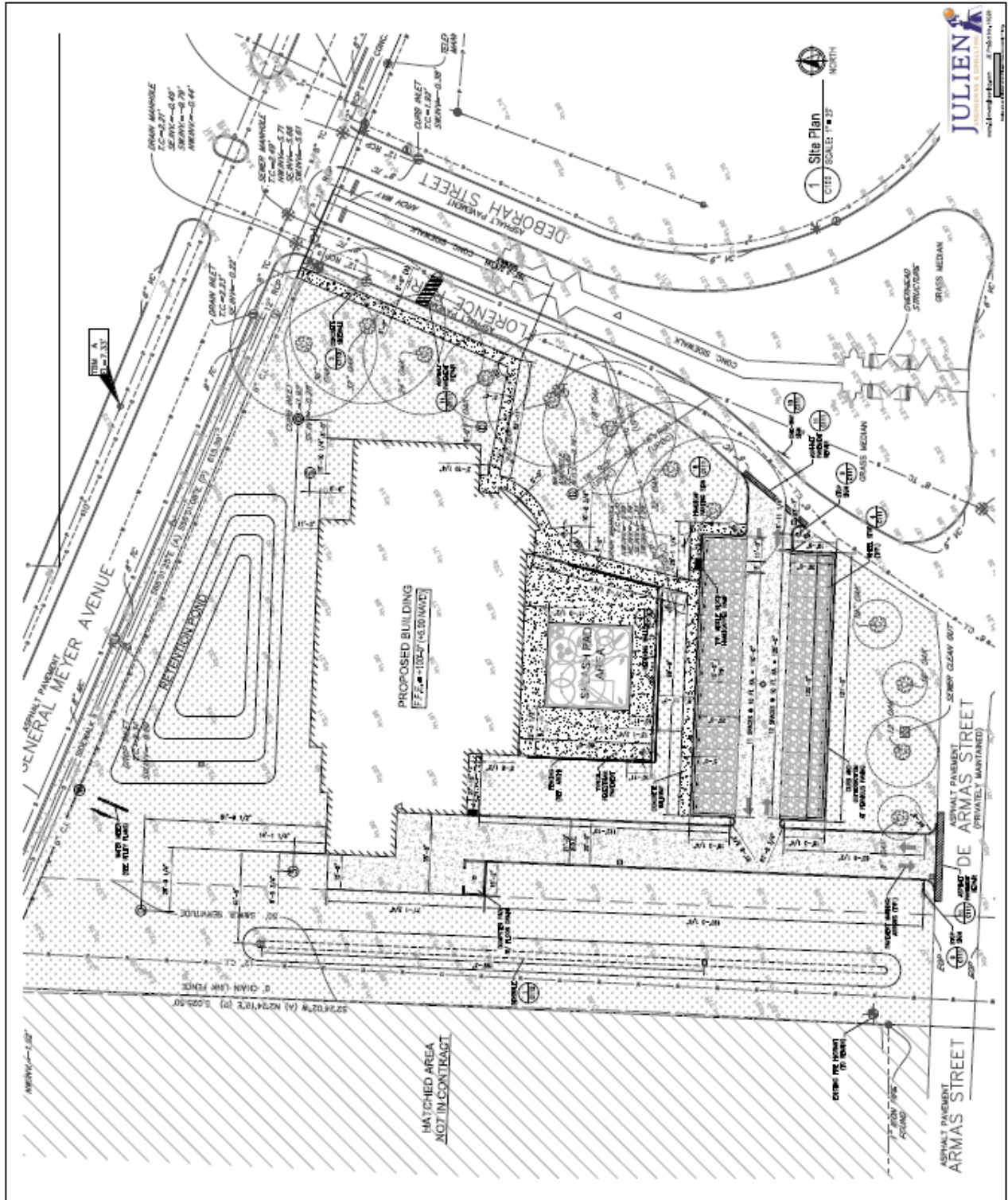


Figure 4 – Image depicting the proposed footprint of the natatorium and splash pad and associated parking area and retention pond. (Image provided by the Sub-Recipient)

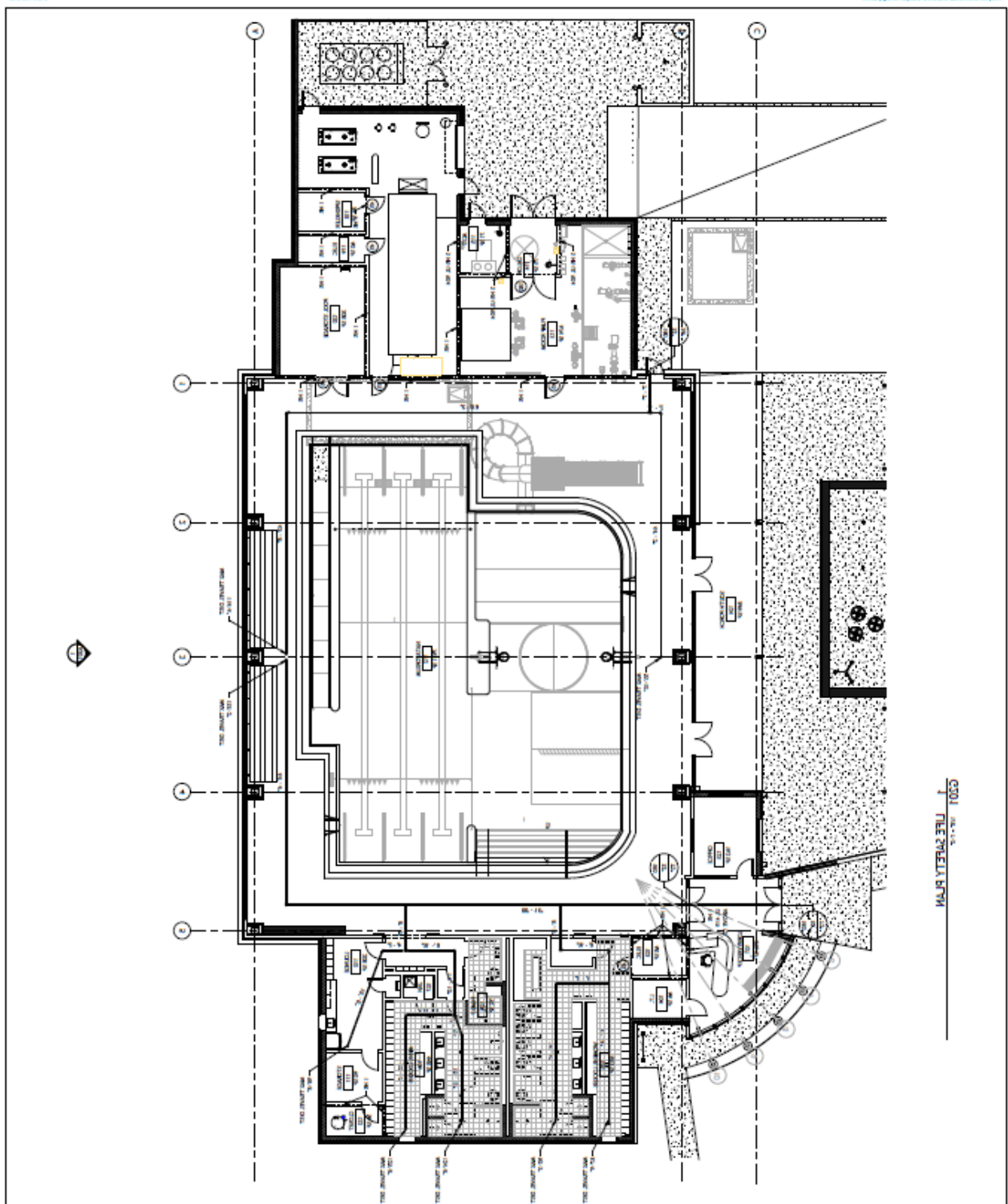


Figure 5 – Image depicting the interior of the proposed natatorium and the proposed sprayground (Image provided by the Sub-Recipient)

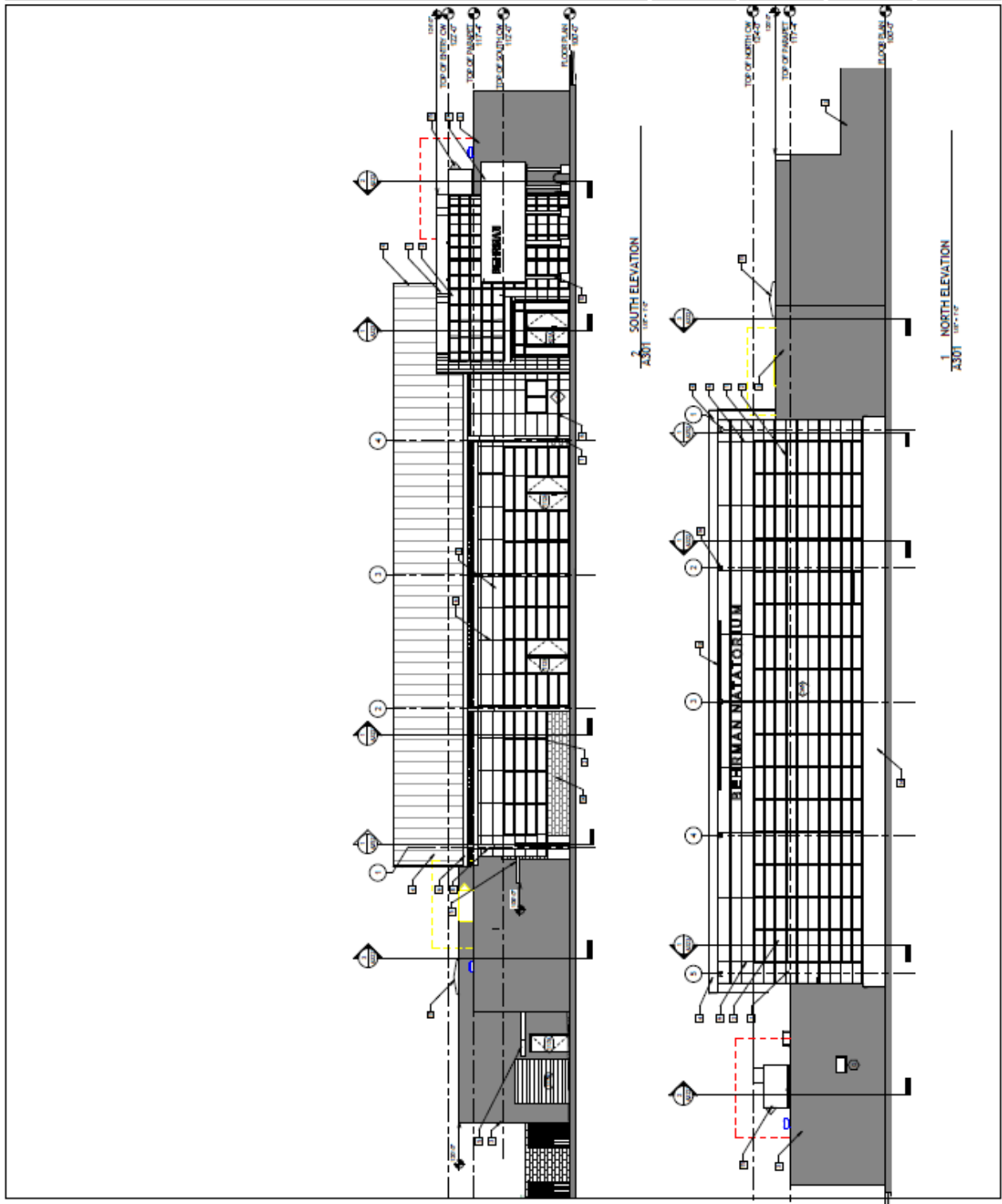


Figure 6 – Image depicting the North and South elevations of the proposed natatorium (Image provided by the Sub-Recipient)

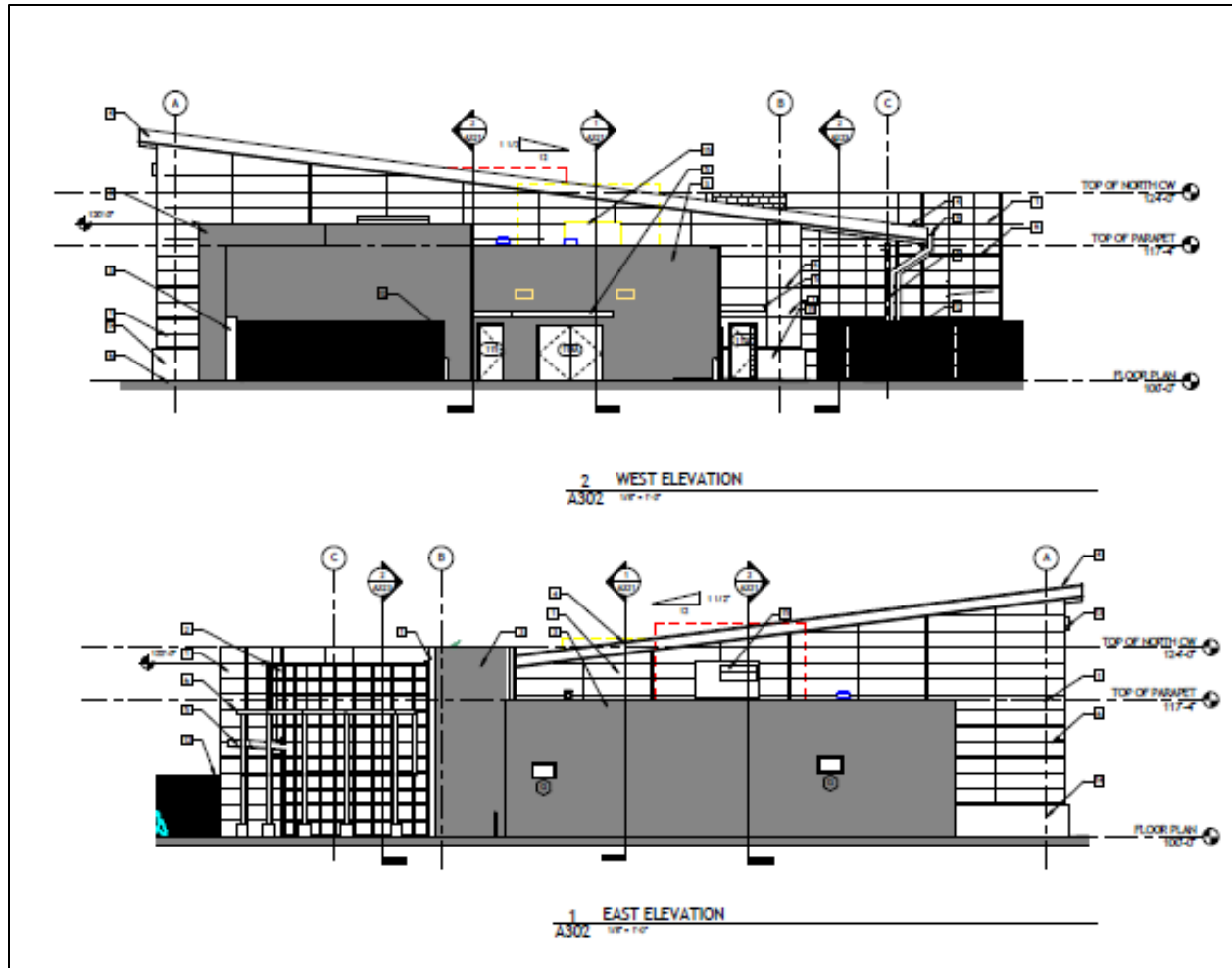


Figure 7 – Image depicting the East and West elevations of the proposed natatorium (Image provided by the Sub-Recipient)

3.4 Alternative 3 – Construct a splash park at the Former Brechtel Golf Course

Alternative 3 considers of the construction of a Splash Park of similar size and configuration as that described under Alternative 2 at the former Brechtel Golf Course, (officially named the Brechtel Memorial Park Municipal Golf Course). The former Brechtel Golf Course was constructed as an 18-hole public golf course, which opened in 1965. The golf course was closed in 2011, and remains closed to this day (Golf Course Ranking).

This site is bounded to the north by Memorial Park Drive, to the east by the Algiers Outfall Canal, residential structures, and Brechtel Park, to the south by Tullis Drive, and to the west by Behrman Place (LA State Highway 428) and a commercial structure (*Figure 8*). There are residential and commercial structures on the west and northeast side Golf Course. The remaining site borders are with open, undeveloped land, including Brechtel Park to the southeast. The CNO also provided a photo of the selected general construction location, which appears to be in the cleared area in the northwestern portion of the site near the entrance along Memorial Park Drive (*Figure 9*). The address of this site is 3800 LA State Highway 428 (Behrman Place), New Orleans, LA. The Latitude and Longitude of the entrance to this site from Memorial Park Drive is 29.916154, -90.016582. According to the City of New Orleans Property Viewer, the CNO owns the Alternative 3 property. According to the CNO, due to inferior public access, (see Section 4.9.3 for further discussion on the site access), poor visibility from major highways, and an inconvenient

location for the patrons, Alternative 3 is a less suitable alternative than Alternative 2; however, this does not necessarily render this action alternative unreasonable. This alternative nevertheless meets the purpose and need of the action, and therefore, will continue to be evaluated throughout this EA. Site photographs for this Alternative are attached in Appendix A (Photographs 9 through 20).

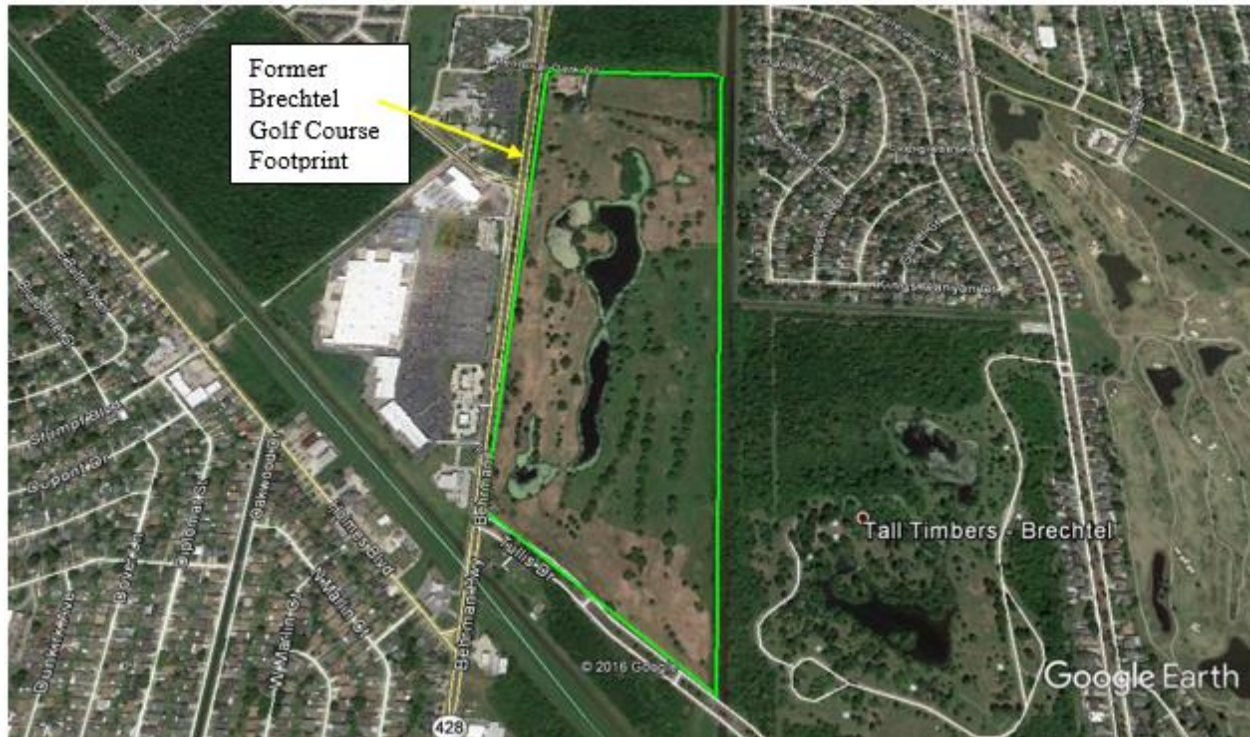


Figure 8 – Image depicting the Alternative 3 site at the Former Brechtel Golf Course (Google Earth 2017)



Figure 9 – Image depicting the proposed Alternative 3 site location at the northwest portion of the Former Brechtel Golf Course (Image provided by the Sub-Recipient)

4 AFFECTED ENVIRONMENT AND ALTERNATIVES ANALYSIS

4.1 Geology, Soils, and Topography

4.1.1 Regulatory Setting

The Farmland Protection Policy Act (FPPA) (P.L. 97-98, §§ 1539-1549; 7 U.S.C. 4201, et seq.) was enacted in 1981 and is intended to minimize the impact federal actions have on the unnecessary and irreversible conversion of farmland to non-agricultural uses. This law assures that, to the extent possible, federal programs and policies are administered in a way that is compatible with state and local farmland protection policies and programs. In order to implement the FPPA, federal agencies are required to develop and review their policies and procedures every two (2) years. The FPPA does not authorize the federal government to regulate the use of private or non-federal land or, in any way, affect the property rights of owners.

The Natural Resources Conservation Service is responsible for protecting significant agricultural lands from irreversible conversions that result in the loss of essential food or environmental resources. For purposes of the FPPA, farmland includes prime farmland, unique farmland, and farmland of statewide or local importance. Prime farmland is characterized as land with the best physical and chemical characteristics for production of food, feed, forage, fiber, and oilseed crops (USDA 2013). Farmland subject to FPPA requirements does not currently have to be used for cropland; it also can be forest land, pastureland, or other land, but not water or built-up land.

4.1.2 Existing Conditions

Within Orleans Parish, approximate surface elevations range from 12 feet above sea level on Mississippi River berms to 5 feet below sea level within the drained wetlands inside the city levees. Undrained marshes and swamps typically range from sea level to about one foot above sea level in elevation (Trahan 1989). According to the Louisiana Geological Survey, the geology in the vicinity of the project site is predominantly Holocene Alluvium, which also covers about 55% of the state. The Holocene Epoch began approximately 11,700 years ago and continues to the present day. These alluvial soils consist of sandy and gravelly river channel material overlain by sandy to muddy natural levee deposits, often with an organic-rich muddy backswamp layer in between (Louisiana Geological Survey 2010). During the Holocene Epoch, there has been no known active faulting in the New Orleans area. The city is “seismically quiescent” (Seed et al. 2006).

4.1.3 Environmental Consequences

Alternative 1 – No Action

The “No Action” alternative would have no significant impacts on prime farmland, unique farmland, farmland of statewide or local importance, or other important geologic resources. Because no new construction would take place.

Alternative 2 – Construct the Behrman Memorial Park Natatorium and Splash Park (Preferred Alternative)

The soils of Orleans Parish vary in their potential for land use and urban development. According to the Natural Resources Conservation Service Web Soil Survey, soils in and surrounding the project location consist primarily of Schriever clay (0 to 1 percent slopes). The soil landform is backswamps, the landform position is talf, the down slope shape and the across slope shape are both linear. The soil parent material is clayey alluvium. Schriever clay is classified as prime farmland. Schriever clay is poorly drained and the depth to water is about 0 inches below the ground surface, according to the Soil Survey site. The soil is chemically non-saline. This soil is rated as 98 percent hydric, which is one of the indicators for wetland soils, although other criteria must be met for a particular area to be classified as a wetland. The slopes are less than 1 percent with a slight erosion hazard.

Schriever is poorly suited to surface mechanical site preparation due to its stickiness and high plasticity index. The main disadvantages of this type of soil are flooding, depth to saturation zone, low strength, and shrink/swell.

The proposed construction area is in an urban area and therefore is exempt from the rules and regulations of the Farmland Protection Policy Act (FPPA)-Subtitle I of Title XV, Section 1539-1549. In addition, there would be no significant impact other geologic resources.

Alternative 3 – Construct a splash park at the Former Brechtel Golf Course

According to the Natural Resources Conservation Service Web Soil Survey, soils in and surrounding the project location consist primarily of Westwego clay (0 to 0.5 percent slopes) and a relatively small percent classified as open water. The landform for Westwego clay is backswamps, the landform position is dips. The down slope shape and across slope shape are both linear and the parent material is semi-fluid clayey alluvium over herbaceous organic material. Westwego clay ranges in color from dark gray near the surface and dark gray to gray to about 30 inches below the surface. Between 30 inches and 70 inches, this soil has a gray to greenish color. Westwego clay is not classified as prime farmland. Westwego clay is poorly drained and the depth to water is general between 19 inches and 26 inches below the ground surface. The soil is chemically non-saline to slightly saline. This soil is rated as 100 percent hydric, which is one of the indicators for wetland soils, although other criteria must be met for a particular area to be classified as a wetland. The slopes are less than 1 percent with a slight erosion hazard.

Westwego clay is poorly suited to surface mechanical site preparation due to its stickiness and high plasticity index. It also has a low potential for seedling mortality. This soil type has very limited potential for water management of pond reservoir areas due to seepage. The main disadvantages of this type of soil are wetness, low permeability, and shrink/swell. Sandy or loamy soil material may be added at the surface to reduce wetness. The typical soil profile for Westwego clay is clay from 0 inches to 20 inches below the surface; muck from 21 inches to 35 inches below ground surface; and clay from 35 inches to 80 inches below the surface. This soil is poorly suited to intensive recreational uses; however, it is one of the best soils available in the project area for these uses, and is the primary native soil type in the former Brechtel Golf Course. Rare flooding is a hazard.

The proposed construction area is in an urban area and therefore is exempt from the rules and regulations of the Farmland Protection Policy Act (FPPA)-Subtitle I of Title XV, Section 1539-1549. In addition, there would be no significant impact other geologic resources.

4.2 Wetlands and Waters of the United States

4.2.1 Regulatory Setting

Wetlands have important ecological functions and are biologically diverse. They assimilate nutrients in surrounding surface waters, remove suspended solids and pollutants from stormwater, and protect shorelines from wind and wave action and storm-generated forces. Actions that would impact wetlands would require review under several regulatory programs.

The United States Army Corps Engineers (USACE) regulates the discharge of dredged or fill material into waters of the U.S., including wetlands, pursuant to Sections 401 and 404 of the Clean Water Act (CWA). Wetlands are identified as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, or that under normal hydrologic conditions do or would support, a prevalence of vegetation typically adapted for life in saturated soil conditions. The USACE also regulates the building of structures in waters of the U.S. pursuant to Section 10 of the Rivers and Harbors Act (RHA). Executive Order (E.O.) 11990, Protection of Wetlands, directs federal agencies to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the values of wetlands for federally funded projects. FEMA regulations for complying with E.O. 11990 are codified at 44 C.F.R. Part 9, Floodplain Management and Protection of Wetlands.

The U.S. Environmental Protection Agency (USEPA) regulates discharges to waters of the United States through permits issued under Section 402 of the CWA, entitled the National Pollutant Discharge Elimination System (NPDES), which authorizes and sets forth standards for state administered permitting programs regulating the discharge of pollutants into navigable waters within each state's jurisdiction. On August 27, 1996, USEPA Region VI delegated the authority to administer the NPDES program for matters within the jurisdiction of the State of Louisiana. Having assumed NPDES responsibilities, Louisiana directly issues NPDES permits and has primary enforcement responsibility for facilities located within the State, with certain exceptions such as Indian Country Lands. Louisiana administers the NPDES Program and surface water discharge permitting system under the Louisiana Pollutant Discharge Elimination System (LPDES) program.

The LPDES requires permits for the discharge of pollutants/wastewater from any point source into waters of the State. Per the CWA, the term "point source" is defined as "any discernible, confined, and discrete conveyance such as a pipe or a ditch." Prior to assumption of the program, permittees were required to hold both a valid state and federal permit. Today, all point source discharges of pollutants to waters in the state of Louisiana are subject to a LPDES permit issued by the Louisiana Department of Environmental Quality (LDEQ). Additionally, the LDEQ requires a Stormwater Pollution Prevention Plan (SWPPP) for land disturbing activities greater than 1 acre. For land disturbing activities greater than 5 acres the LDEQ requires: 1) a SWPPP 2) a Notice of Intent and 3) a Notice of Completion.

Section 303(d) of the CWA requires states to develop a list of impaired waters. Water is considered impaired if the current quality does not meet the numeric or narrative criteria in a water quality standard, or the designated use described by that state is not achieved. Section 303(d)(2) requires that states submit and USEPA approve or disapprove lists of waters for which existing technology-based pollution controls are not stringent enough to attain or maintain state water quality standards, and for which total maximum daily loads (TMDLs) must be prepared (40 C.F.R. §130.7). Total maximum daily loads are pollution budgets designed to identify necessary reductions of pollutant loads to the impaired waters so that the appropriate water quality standards are met, including designated uses like fishing or swimming and water quality criteria for parameters such as dissolved oxygen and water clarity. The regulations require states to identify water quality limited waters still requiring TMDLs every two years. The lists of waters still needing TMDLs must also include priority rankings and must identify the waters targeted for TMDL development during the next two years (40 C.F.R. § 130.7). Types of impairments may include, for example, impaired primary contact use (e.g., swimming, water skiing), mercury and polychlorinated biphenyls (PCBs) in fish tissue, impaired fish consumption use, low dissolved oxygen, copper, phosphorus, manganese, excessive siltation, physical-habitat alterations, and total suspended solids which impair aquatic life use.

FEMA's implementation of E.O. 11990 is described in 44 C.F.R. Part 9. Under this regulation, FEMA is required to engage in the 8-step decision-making process to ensure that proposed activities are consistent with EO 11990 and to evaluate the potential impacts of an action on wetlands. The 8-step process includes using minimization measures when a project affecting a wetland is the only practicable alternative. The 8-step process for this project is located in Appendix C. Minimization measures include avoidance techniques such as establishing wetland buffer zones to avoid converting or filling wetlands and obtaining and complying with NPDES permits. Recipients and sub-Recipients are responsible for obtaining any applicable NPDES permits and meeting permit conditions. In addition to complying with 44 C.F.R. Part 9, the Recipient or Sub-Recipient must obtain the applicable CWA Section 404 permit prior to the initiation of the project if it will affect jurisdictional wetlands. The Recipient or Sub-Recipient must coordinate with USACE to determine whether any of the NWP's or a Regional General Permit apply or whether an Individual Permit is required. Proposed projects that require an Individual Permit will require close coordination between the Recipient or Sub-Recipient, FEMA and USACE. The Recipient or Sub-Recipient is required to comply with all conditions of the 404 general or individual permit, which may include compensation measures, such as wetlands banking, for any loss of wetlands.

4.2.2 Existing Conditions

Past human interventions have significantly modified the natural hydrologic regime within Orleans Parish. Levees along the Mississippi River now prevent the annual overbank flooding that previously occurred. Water from precipitation is instead discharged into the wetlands that remain via pumping stations and floodgates which are part of the channelized drainage network within the city's leveed areas. As mentioned earlier, a significant reduction in wetland acreage occurred in the early to mid-20th Century due to this drainage network. Elsewhere in the parish, deep canals have been excavated for logging, drainage, improved navigation and, in later years, oil and gas development. These and other similar modifications to the local landscape allowed freshwater to enter the estuary more quickly from point sources. The sidecast excavated material along the canals caused segmentation of the wetlands and interfered with natural circulation. The deeper water within the canals allowed tidal fluctuation to extend farther inland, increasing saltwater intrusion during drier periods. Although major saltwater intrusions into the Mississippi River usually do not extend as far upstream as Orleans Parish, intrusions through various canals and channels do reach other surface waters in most areas of the parish. Because of these human-created conditions, hydrologic circulation now reflects an unnatural competition between local runoff, discharges from diked areas, and daily tides. As a result, a stable hydrologic regime has been altered relatively rapidly into one with greater fluctuations in water levels, salinity values, and sediment transfer/deposition (Templett 1982).

Stormwater runoff is created when gravity and topographical features cause rain water to flow into a nearby water body. Stormwater runoff collects any contaminants, including metals and chemical pollutants and objects light enough to be carried by the water, as it flows to the water body. These contaminants then enter the water body, negatively impacting its water quality.

4.2.3 Environmental Consequences

Alternative 1 – No Action

The “No Action” alternative would have no impact on wetlands or other waters of the U.S. and would not require permits under § 404 of the CWA or § 10 of the RHA.

Alternative 2 – Construct the Behrman Memorial Park Natatorium and Splash Park (Preferred Alternative)

Aerial photography from Google Earth indicates that proposed site is an undeveloped, cleared area with mowed grass and tree buffers on the east and west borders of the lot, with no evidence of any water bodies on the site. During a site visit on 14 November 2016, FEMA observed no wetland vegetation or other evidence of the presence wetlands on the proposed Alternative 2 site. According to the USFWS Wetland Mapper, there are no mapped wetlands or waters of the U.S. in or near the proposed project site. The nearest mapped wetland is the Magellan Canal, which bisects Behrman Memorial Park and is located approximately 2,200 feet south of the proposed natatorium and splash park site.

If the project results in a discharge to offsite waters of the state, an LPDES permit may be required in accordance with the CWA and Title 33 of the Louisiana Clean Water Code. For example, if the project results in a new discharge of wastewater to an existing wastewater treatment system, that wastewater treatment system may need to modify its LPDES permit before accepting the additional wastewater. In addition, proposed construction activities may require an LDPEs stormwater permit, but there is an existing general permit (LAR200000) for construction activities between one (1) and five (5) acres. In a response to FEMA's SOV request dated 30 May 2017, the LDEQ indicated that “After reviewing your request, the Department has no objections based on the information provided in the submittal. Please be advised that if you should encounter a problem during the implementation of this project, you should immediately notify LDEQ's Single-Point-of-contact (SPOC) at (225) 219-3640.” General comments were included, which are included in Section 6 of this EA, Conditions and Mitigation Measures.

In order to minimize indirect impacts (erosion, sedimentation, dust, and other construction-related disturbances) to waters of the state or well defined drainage areas surrounding the site, the contractor should implement Best Management Practices (BMPs) that meet LDEQ permitting specifications for stormwater and also include the following into the daily construction routine: silt screens, barriers (e.g., hay bales), berms/dikes, and or fences to be placed as and where needed. Fencing should be placed to mark staging areas for storage of construction equipment and supplies, as well as for sites where maintenance/repair operations occur.

Alternative 3 – Construct a splash park at the Former Brechtel Golf Course

Aerial photography from Google Earth indicates that the Alternative 3 site is a golf course with grassy areas and scattered water bodies. During a site visit on 29 March 2017, FEMA observed that the site was fenced along Behrman Place and Tullis Drive, with the only access to site being from Memorial Park Drive. The Alternative 3 site does not appear to have been recently maintained as the vegetation is overgrown and the buildings are abandoned and run down. There are several abandoned piles of concrete on the northern part of the site near the buildings. No apparent wetland vegetation or other evidence of the presence of wetlands was observed in the northern portion of the site. According to the USFWS Wetland Mapper, there are mapped open water bodies within the site, consisting of the water hazards on the former golf course.

If the project results in a discharge to offsite waters of the state, an LPDES permit may be required in accordance with the CWA and Title 33 of the Louisiana Clean Water Code. For example, if the project results in a new discharge of wastewater to an existing wastewater treatment system, that wastewater treatment system may need to modify its LPDES permit before accepting the additional wastewater. In addition, proposed construction activities may require an LPDES stormwater permit, but there is an existing general permit (LAR200000) for construction activities between one (1) and five (5) acres. In a response to FEMA’s SOV request dated 30 May 2017, the LDEQ indicated that “After reviewing your request, the Department has no objections based on the information provided in the submittal. Please be advised that if you should encounter a problem during the implementation of this project, you should immediately notify LDEQ’s Single-Point-of-contact (SPOC) at (225) 219-3640.” General comments were included, which are included in Section 6 of this EA, Conditions and Mitigation Measures.

In order to minimize indirect impacts (erosion, sedimentation, dust, and other construction-related disturbances) to waters of the state or well defined drainage areas surrounding the site, the contractor should implement Best Management Practices (BMPs) that meet LDEQ permitting specifications for stormwater and also include the following into the daily construction routine: silt screens, barriers (e.g., hay bales), berms/dikes, and or fences to be placed as and where needed. Fencing should be placed to mark staging areas for storage of construction equipment and supplies, as well as for sites where maintenance/repair operations occur.

4.3 Floodplains

4.3.1 Regulatory Setting

Executive Order 11988, Floodplain Management, requires federal agencies to avoid direct or indirect support or development within or affecting the 1% annual-chance special flood hazard area (SFHA) (i.e., 100-year floodplain) whenever there is a practicable alternative (for “Critical Actions”, within the 0.2% annual chance SFHA, i.e., the 500-year floodplain). FEMA uses the National Flood Insurance Program (NFIP) Flood Insurance Rate Maps (FIRM) to determine the flood hazard zone for the proposed project location. FEMA’s regulations for complying with E.O. 11988 are codified in 44 C.F.R. Part 9, Floodplain Management and Protection of Wetlands.

Section 9.6, 44 C.F.R., details an eight-step process that decision-makers must use when considering projects either located within the floodplain or with the potential to affect the floodplain. The 8-step process: assesses the action with regard to human susceptibility to flood harm and impacts to wetlands;

analyzes principle flood problems, risks from flooding, history of flood loss, and existing flood protection measures; and includes public notice and opportunity for the public to have early and meaningful participation in decision-making and alternative selection. If impacts cannot be avoided, the 8-step process includes requirements to incorporate measures to minimize and mitigate potential risks from flooding and impacts to wetlands as appropriate.

Under 44 C.F.R. Part 9, FEMA is required to avoid activities in a floodplain unless it is the only practicable alternative. If undertaking a proposed project in the floodplain is the only practicable alternative, then FEMA must minimize the impacts to the floodplain and the impacts from floods to the facility or structure. Minimization techniques apply to the location of structures, equipment and building contents in floodplain areas. This could include elevating facilities or structures above the base flood elevation. Minimization techniques may include flood-proofing structures or facilities. Some of these facilities may be considered “critical actions” under this analysis because the risk of flooding might be too great. In such cases, the base flood elevation or standard for flood-proofing is the 500-year flood event.

4.3.2 Existing Conditions

Orleans Parish is comprised of the City of New Orleans and is located in southeast Louisiana at the head of the Mississippi River Delta. It is approximately 350 square miles, of which approximately roughly 199 square miles (approximately 56.9 percent) is land; the remainder, 151 square miles, is open water and marsh. Only 51% of New Orleans is at or above sea level, with the more densely populated areas generally on higher ground along the natural levee adjacent to the Mississippi and other waterways. The average elevation of the city is currently between one and two feet below sea level, with some portions of the city as high as 20 feet at the base of the river levee in Uptown and others as low as 7 feet below sea level in the farthest reaches of Eastern New Orleans.

There are approximately 1,547 miles of City-owned streets within Orleans Parish, of which approximately 60% are asphalt-topped and 40% are concrete-topped. The City’s drainage system is divided into 10 drainage basins and consists of 1,287 miles of small drain lines (pipes less than 36 inches in diameter) and 65,000 drainage catch basins and inlets. The City’s water distribution system consists of over 2,000 miles of water lines and distributes approximately 144 million gallons of water each day. It also includes over 17,000 hydrants for fire protection. The City is divided into 10 sewerage service basins, with over 1,300 miles of sewer collection lines and 120 miles of sewer force mains.

New Orleans’ drainage infrastructure is owned and operated by SWBNO and includes 23 drainage pump stations, 13 underpass pumping stations, 260 miles of open and covered canals, and 1,515 miles of subsurface pipes, both gravity and pressurized. With a pumping capacity of over 30 billion gallons—more than the flow rate of the Ohio River—this is the biggest stormwater removal system in the country. All rainwater is pumped to Lake Pontchartrain, the Industrial Canal, the Intracoastal Waterway and Bayou Bienvenue. Dry weather flow goes to the River, the Lake and the Intracoastal Waterway. The system also serves about 2,250 acres in Jefferson Parish.

Urban flooding occurs when rain overwhelms drainage systems and waterways and makes its way into the basements, backyards, and streets of homes, businesses, and other properties. There are several ways in which stormwater can cause the flooding of a property: overflow from rivers and streams, ponding within levee polder areas, sewage pipe backup into buildings, seepage through building walls and floors, and the accumulation of stormwater on property and in public rights-of-way. As New Orleans has developed to accommodate increasing population, more impermeable surfaces (roads, roofs, parking lots, driveways, alleys, sidewalks, and patios) have led to reduced infiltration and increased stormwater runoff. Natural drainage systems have been replaced with man-made sewer and stormwater infrastructure. This infrastructure has fallen into disrepair in many places, and increasingly heavy rainfall events are putting additional strain on the deteriorated drainage systems.

New Orleans has always faced the risk of flooding from three sources: the Mississippi River, heavy rains, and hurricane storm surge through Lake Pontchartrain and Lake Borgne. Hurricane storm surge poses the greatest threat of catastrophic flooding in New Orleans. Risk of flood damage has been modulated by several factors: increased structural flood protection in the form of flood gates and levees; increased development in low-lying, vulnerable areas; soil subsidence; and coastal erosion. Global sea level rise and the risk of stronger, more frequent hurricanes as a result of global warming may also be contributing to increased risk.

Drainage of flood waters in Orleans Parish is accomplished by a system of structures and canals which flow to pumping stations. Orleans Parish is protected from the Mississippi River by man-made levees. On the east bank of Orleans Parish, the Lake Pontchartrain and Vicinity Hurricane Protection Levee was designed to prevent flooding from hurricane storm surges from Lake Pontchartrain and Lake Borgne. Post-Hurricane Katrina, the levees in Orleans Parish, with the exception of the Mississippi River levees, although physically still in place, were compromised to the point that they were not considered sound enough to adequately protect against the 1-percent annual chance storm event.

4.3.3 Environmental Consequences

Practicable alternatives to locating the proposed action in the floodplain were identified and evaluated. Various practicability factors were considered including feasibility, social concerns, hazard reduction, mitigation costs, and environmental impacts.

Alternative 1 – No Action

The “No Action” alternative would not entail any construction of a new recreational facility. This course would have no further adverse impacts to the floodplain.

Alternative 2 – Construct the Behrman Memorial Park Natatorium and Splash Park (Preferred Alternative)

Alternative 2 was reviewed for possible impacts associated with occupancy or modification to a floodplain. Due to the developed character of the general area, impacts to the nature of the floodplain itself have been determined to be negligible. Construction of the natatorium and associated parking lot would not affect the functions and values of the 100-year floodplain since these actions would not significantly impede or redirect flood flows.

Orleans Parish enrolled in the NFIP on 3 August 1970. This project is located within a levee-protected area of the 100-year floodplain. Effective DFIRM Panel 22071C0234F (*Figure 10*) dated 30 September 2016, indicate that the proposed project site is located in Flood Zone Shaded “X,” (light gray areas on the DFIRM) an area levee-protected from the base flood but subject to the 0.2% annual chance flood, i.e. the 500-year floodplain (based upon shallow ponding only).

According to an official copy of the Department of Safety & Permit, City of New Orleans, Part 1 Certificate of Construction Benchmark, surveyed ground elevations for the proposed project footprint range from 0.8 feet above the sea level (North American Vertical Datum [NAVD] of 1988) for the right rear and left rear corners to 2.5 feet above sea level for the right front corner to 2.7 feet above sea level at the left front corner. The elevation of construction benchmark for the building would be 5.7 feet above sea level, which is 3 feet above the highest existing adjacent grade (HEAG). A copy of this permit is attached in Appendix C. In compliance with E.O. 11988, an 8-step process was completed and documentation is attached in Appendix C.

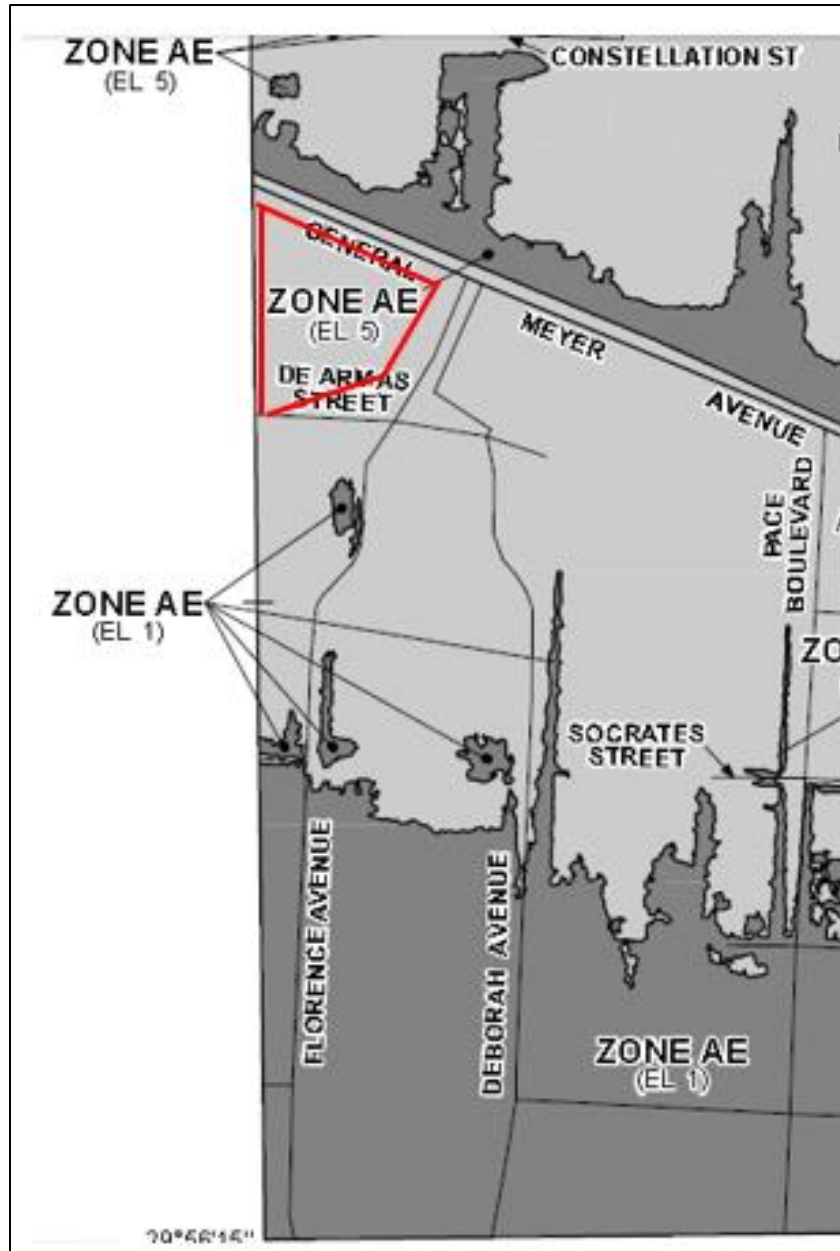


Figure 10 –Effective DFIRM Panel Number 22071C0234F (FEMA 2016). Figure depicts the flood zones for the northern part of Behrman Memorial Park (Alternative 2), including the proposed project site, which is outlined in red.

Adverse impacts would be minimized in accordance with FEMA’s minimization standards in 44 C.F.R. § 9.11. Treatment measures would be required to reduce adverse impacts below the level of significance. New construction must be compliant with current codes and standards. Per 44 C.F.R. § 9.11(d)(6), no project should be built to a floodplain management standard that is less protective than what the community has adopted in local ordinances through their participation in the NFIP. The Sub-Recipient is required to coordinate with the local floodplain administrator regarding floodplain permit(s) prior to the start of any activities. Coordination pertaining to these activities and Sub-Recipient compliance with any conditions should be documented and copies forwarded to the LA GOHSEP and FEMA for inclusion in the permanent project files.

Alternative 3 – Construct a splash park at the Former Brechtel Golf Course

Alternative 3 was reviewed for possible impacts associated with occupancy or modification to a floodplain. Due to the minimally developed character of the site, impacts to the nature of the floodplain itself have been determined to be negligible. This project alternative location is located within a levee-protected area of the 100-year floodplain. Effective DFIRM Panel 22071C0242F (*Figure 11*), dated 30 September 2016, indicates that the majority of northern portion of Alternative 3 project site, including the proposed construction location, is located in Flood Zone Shaded “X,” (light gray areas on the DFIRM) an area levee-protected from the base flood but subject to the 0.2% annual chance flood, i.e. the 500-year floodplain (based upon shallow ponding only). The majority of the remainder of the site is located in Flood Zone AE (EL -4), an area levee-protected from the base flood but subject to the 1% annual chance flood, i.e. the 100-year floodplain (dark gray areas on the DFIRM). According to the *Google Earth*, ground elevations within the area are approximately 0 feet above sea level (NAVD of 1988). In compliance with E.O. 11988, an 8-step process was completed and documentation is attached in Appendix C.



Figure 11 – Effective DFIRM Panel Number 22071C0242F (FEMA 2016). Figure depicts the flood zones for the northern part of Former Brechtel Golf Course (Alternative 3).

Adverse impacts would be minimized in accordance with FEMA's minimization standards in 44 C.F.R. 9.11. Treatment measures would be required to reduce adverse impacts below the level of significance. New construction must be compliant with current codes and standards. Per 44 C.F.R. § 9.11(d)(6), no project should be built to a floodplain management standard that is less protective than what the community has adopted in local ordinances through their participation in the NFIP. The Sub-Recipient is required to coordinate with the local floodplain administrator regarding floodplain permit(s) prior to the start of any activities. Coordination pertaining to these activities and Sub-Recipient compliance with any conditions should be documented and copies forwarded to the LA GOHSEP and FEMA for inclusion in the permanent project files.

4.4 Coastal Resources

4.4.1 Regulatory Setting

4.4.1.1 Coastal Zone Management Act of 1972

The Coastal Zone Management Act (CZMA) of 1972 (16 U.S.C. § 1451 et seq.) is administered by the Department of Commerce's Office of Ocean and Coastal Resource Management within the National Oceanic and Atmospheric Administration (NOAA). It applies to all coastal states and to all states that border the Great Lakes. The CZMA was established to help prevent any additional loss of living marine resources, wildlife, and nutrient-enriched areas; alterations in ecological systems; and decreases in undeveloped areas available for public use. The CZMA gives states the authority to determine whether activities of governmental agencies are consistent with federally-approved coastal zone management programs. Each state coastal zone management program must include provisions protecting coastal natural resources, fish, and wildlife; managing development along coastal shorelines; providing public access to the coast for recreational purposes; and incorporating public and local coordination for decision-making in coastal areas. This voluntary federal-state partnership addresses coastal development, water quality, shoreline erosion, public access, protection of natural resources, energy facility siting, and coastal hazards.

The Federal Consistency provision, contained in § 307 of the CZMA, allows affected states to review federal activities to ensure that they are consistent with the state's coastal zone management program. This provision also applies to non-federal programs and activities that use federal funding and that require federal authorization. Any activities that may have an effect on any land or water use or on any natural resources in the coastal zone must conform to the enforceable policies of the approved state coastal zone management program. NOAA's regulations in 15 C.F.R. Part 930 provide the procedures for arriving at or obtaining a consistency determination.

The CZMA requires that coastal states develop a State Coastal Zone Management Plan or program and that any federal agency conducting or supporting activities affecting the coastal zone conduct or support those activities in a manner consistent with the approved state plan or program. To comply with the CZMA, a federal agency must identify activities that would affect the coastal zone, including development projects, and review the state coastal zone management plan to determine whether a proposed activity would be consistent with the plan.

4.4.1.2 Louisiana State and Local Coastal Resources Management Act of 1978

Pursuant to the CZMA, the State and Local Coastal Resources Management Act of 1978 (R.S. 49:214.21 et seq. Act 1978, No. 361) is the state of Louisiana's legislation creating the Louisiana Coastal Resources Program (LCRP). The LCRP establishes policy for activities including construction in the coastal zone, defines and updates the coastal zone boundary, and creates regulatory processes. The LCRP is under the authority of the Louisiana Department of Natural Resource's (LDNR) Office of Coastal Management (OCM). If a proposed action is within the Coastal Zone boundary, OCM will review the eligibility of the project concurrently with its review by other federal agencies (U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and National Marine Fisheries Service). The mechanism employed to review these

projects is the Coastal Use Permit (CUP). Per the CZMA, all proposed federal projects within the coastal zone must undergo a Consistency Determination by OCM for that project's consistency with the state's Coastal Resources Program (i.e., LCRP) (LDNR 2016).

4.4.1.3 Coastal Barrier Resources Act of 1982

The Coastal Barrier Resources Act (CBRA) of 1982 (16 U.S.C. § 3501 et seq.), administered by the U.S. Fish and Wildlife Service (USFWS), was enacted to protect sensitive and vulnerable barrier islands found along the U.S. Atlantic, Gulf, and Great Lakes coastlines. The CBRA established the Coastal Barrier Resources System (CBRS), which is composed of undeveloped coastal barrier islands, including those in the Great Lakes. With limited exceptions, areas contained within a CBRS are ineligible for direct or indirect federal funds that might support or promote coastal development, thereby discouraging development in coastal areas.

4.4.2 Existing Conditions

The potential natatorium construction sites are both located within the coastal zone and the CNO may be required to obtain a CUP prior to construction (Appendix D). The project sites are not located within a regulated CBRS unit.

4.4.3 Environmental Consequences

Alternative 1 – No Action

The “No Action” alternative would entail no undertaking and therefore, would have no impact on a coastal zone or a CBRS unit.

Alternative 2 – Construct the Behrman Memorial Park Natatorium and Splash Park (Preferred Alternative)

Construction of the proposed natatorium and associated parking lot would involve construction in a designated coastal zone. Per letter from LDNR OCM dated 3 March 2013, the granting of federal financial assistance as defined in 15 C.F.R. § 930.91 is fully consistent with the LCRP. Consistency with the LCRP does not exempt Sub-Recipients from the need to obtain a CUP, if required. On 27 March 2017, the LDNR determined that a CUP may be required prior to initiation of project activities (Appendix D). The Sub-Recipient is responsible for coordinating with LDNR OCM to obtain the CUP required as a result of this project.

The LDNR recommends that every effort be made to minimize impacts to vegetated wetlands. Negotiations may be involved to reduce such disturbances to these habitats. In addition, the LDNR noted that following agency offices must be contacted by the Sub-Recipient. The proposed project falls within the boundaries of the following sensitive features. [The Sub-Recipient must] be aware that special coordination with these offices may be required. Additionally, the following sensitive features may require additional processing time by the appropriate resource agencies:

- Chitimacha Tribe of Louisiana.
- Coastal Protection and Resource Authority (CPRA) PO-057 [Southeast Louisiana Urban Flood Control Project] SELA project located within the Alternative 3 site buffer zone. This multi-site project reduces damage due to rainfall flooding in Orleans and Jefferson Parishes by increasing pump station capacity and improving sub-surface drainage features (Coastal 2015).

The project site is not located within a CBRS unit; therefore CBRA requirements do not apply.

Alternative 3 – Construct a splash park at the Former Brechtel Golf Course

Construction of the proposed natatorium and associated parking lot would involve construction in a designated coastal zone. Per letter from LDNR OCM dated 3 March 2013, the granting of federal financial

assistance as defined in 15 C.F.R. § 930.91 is fully consistent with the LCRP. Consistency with the LCRP does not exempt Sub-Recipients from the need to obtain a CUP, if required. On 27 March 2017, the LDNR determined that a CUP may be required prior to initiation of project activities (Appendix D). The Sub-Recipient is responsible for coordinating with LDNR OCM to obtain the CUP required as a result of this project.

The LDNR recommends that every effort be made to minimize impacts to vegetated wetlands. Negotiations may be involved to reduce such disturbances to these habitats. In addition, the LDNR noted that following agency offices must be contracted by the Sub-Recipient. The proposed project falls within the boundaries of the following sensitive features. [The Sub-Recipient must] be aware that special coordination with these offices may be required. Additionally, the following sensitive features may require additional processing time by the appropriate resource agencies:

- Chitimacha Tribe of Louisiana.
- CPRA Master Plan PO-057 SELA project located within the Alternative 3 site buffer zone. This multi-site project reduces damage due to rainfall flooding in Orleans and Jefferson Parishes by increasing pump station capacity and improving sub-surface drainage features (Coastal 2015).

The project site is not located within a CBRS unit; therefore CBRA requirements do not apply.

4.5 Federally Protected Species, Critical Habitats, and Other Biological Resources

4.5.1 Regulatory Setting

4.5.1.1 Endangered Species Act

The Endangered Species Act (ESA) of 1973 (16 U.S.C. 1531-1543) prohibits the taking of listed, threatened, and endangered species unless specifically authorized by permit from the USFWS or the NMFS. “Take” is defined in 16 U.S.C. 1532 (19) as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct.” “Harm” is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering (50 C.F.R. § 17.3) (Endangered and Threatened Wildlife and Plants 1975).

Section 7(a)(2) of the ESA requires the lead federal agency to consult with either the USFWS or the NMFS, depending which agency has jurisdiction over the federally listed species in question, when a federally funded project either may have the potential to adversely affect a federally listed species, or a federal action occurs within or may have the potential to impact designated critical habitat. The lead agency must consult with the USFWS, the NMFS, or both (Agencies) as appropriate and will determine if a biological assessment is necessary to identify potentially adverse effects to federally listed species, their critical habitat, or both. If a biological assessment is required, it will be followed by a biological opinion from the USFWS, the NMFS, or both depending on the jurisdiction of the federally listed species identified in the biological assessment. If the impacts of a proposed federal project are considered negligible to federally listed species, the lead agency may instead prepare a letter to the Agencies with a “May Affect, but Not Likely to Adversely Affect” determination requesting the relevant agency’s concurrence. This DEA serves to identify potential impacts and meet the ESA § 7 requirement by ascertaining the risks of the proposed action and alternatives to known federally listed species and their critical habitat, as well as providing a means for consultation with the Agencies.

4.5.1.2 Migratory Bird Treaty Act

Unless otherwise permitted by regulation, the Migratory Bird Treaty Act of 1918 (16 U.S.C. 703-712) prohibits pursuing; hunting; taking; capturing; killing; attempting to take, capture, or kill; possessing; offering for sale; selling; offering to purchase; purchasing; delivering for shipment; shipping; causing to be shipped; delivering for transportation; transporting; causing to be transported; carrying or causing to be

carried by any means whatever; receiving for shipment, transportation, or carriage; or exporting; at any time or in any manner, any migratory bird or any part, nest, or egg of any such bird, that is included on the list of protected bird species (General Provisions; Revised List of Migratory Birds 2013). The USFWS is responsible for enforcing the provisions of this Act.

4.5.2 Existing Conditions

One (1) mammal species, the West Indian manatee, two (2) fish species, the Atlantic Gulf Sturgeon (Gulf Subspecies) and the Pallid Sturgeon, and three (3) reptile species, the Loggerhead sea turtle, the Green sea turtle, and the Kemp’s ridley sea turtle are federally listed as threatened or endangered and are known to occur in select waterways of Orleans Parish (Table 1). Within the Alternative 2 and Alternative 3 project site boundaries, critical habitat does not exist for any of the federally listed endangered and threatened species that occur in Orleans Parish. The proposed project sites are located within the Mississippi Flyway (Mississippi Flyway Council n.d.).

Table 1. Federally Listed Species Known to Occur in Orleans Parish

Common Name	Scientific Name	Federal Status	Critical Habitat	Habitat Requirements	Impact* / Rationale
Atlantic Gulf sturgeon (Gulf Subspecies)	<i>Acipenser oxyrinchus desotoi</i>	Threatened	No ¹	Anadramous fish species that spends most of its life in freshwater habitats and spawns in estuarine bays. Found in a variety of substrate areas based on age class of species.	None / Project area is not located near critical habitat areas. Any potential stormwater runoff would not significantly impact this species.
Pallid sturgeon	<i>Scaphirhynchus albus</i>	Endangered	No ¹	Prefers large, free-flowing turbid rivers. No information exists on preferred spawning habitat.	None / Less than significant impacts would occur from stormwater runoff even without proper BMPs in place at storm drain locations.
West Indian manatee	<i>Trichechus manatus</i>	Endangered	No ¹	Found in marine, estuarine, and freshwater environments with a strong preference for warm and well-vegetated waters.	None / There is no suitable habitat associated with the proposed project that is close or hydrologically connected to potential habitat for this species.
Loggerhead sea turtle	<i>Caretta caretta</i>	Threatened	No ¹	These sea turtles are most likely enter Lake Pontchartrain most often during the summer when salinity is higher.	None / There is no suitable habitat associated with the proposed project that is close or hydrologically connected to potential habitat for this species.

Common Name	Scientific Name	Federal Status	Critical Habitat	Habitat Requirements	Impact* / Rationale
Green sea turtle	<i>Chelonia mydas</i>	Endangered	No ¹	In water temperatures greater than 20°C, though their distribution can be correlated to seagrass beds, nesting beaches, and associated ocean currents.	None / There is no suitable habitat associated with the proposed project that is close or hydrologically connected to potential habitat for this species.
Kemp's ridley sea turtle	<i>Lepidochelys kempii</i>	Threatened	No ¹	Found worldwide in water temperatures greater than 20°C, though their distribution can be correlated to seagrass beds, nesting beaches, and associated ocean currents. As adults they feed almost exclusively on sea grasses (i.e. turtle grass [<i>Thalassia testudinum</i>]) growing in shallow water flats.	None / There is no suitable habitat associated with the proposed project that is close or hydrologically connected to potential habitat for this species.

* Considers potential impacts of Alternatives 1 - 3.

¹ Species may occur in Orleans Parish, but not within the proposed project area.

Note: Data accessed October 2016 from USFWS IPaC Web Portal (<http://ecos.fws.gov/ipac/>) (USDOJ 2015c).

Within the City of New Orleans the setting is decidedly urban. Behrman Memorial Park was created for, and is being maintained as, a developed recreational park. The former Brechtel Golf Course, at least in the past, was maintained as a golf course, which most likely would have entailed strategic grass mowing and pesticide and herbicide use. The primary purpose of these parks is, or was, to provide areas for human recreational activities and not to provide natural habitat for wildlife.

The City is home to a number of animals adapted to urban conditions, including raccoons (*Procyon lotor*), opossums (*Didelphis marsupialis*), nine-banded armadillos (*Dasypus novemcinctus*), coyotes (*Canis latrans*), Norway rats (*Rattus norvegicus*) (Allman 2011), and various species of mice, as well as reptiles such as the green anole (*Anolis carolinensis*) and amphibians such as the green tree frog (*Hyla cinerea*, the State Amphibian of Louisiana) and the Gulf Coast toad (*Bufo valliceps*). A large number of common bird species are also present, including rock pigeons (*Columba livia*), mourning doves (*Zenaidura macroura*), boat-tailed grackles (*Quiscalus major*), ruby-throated hummingbirds (*Archilochus colubris*), and American robins (*Turdus migratorius*).

4.5.3 Environmental Consequences

Alternative 1 – No Action

The “No Action” alternative would entail no undertaking and, therefore, would have no impact on species federally listed as threatened or endangered, migratory birds, or federally listed critical habitats.

Alternative 2 – Construct the Behrman Memorial Park Natatorium and Splash Park (Preferred Alternative)

Inspection of the proposed project did not reveal the presence of any species federally listed as threatened or endangered. Based on a review of this alternative using the USFWS ESA Technical Assistance website (20167), “the proposed project is not an activity that would affect a federally listed threatened or endangered species; nor is there proposed or designated critical habitat present within” Orleans Parish. “Therefore, a ‘no effect’ determination is appropriate. No further ESA coordination with the Service is necessary for the proposed action, unless there are changes in the scope or location of the proposed project or the project has not been initiated one year from the date of this letter” (Appendix D).

According to a newspaper article from 10 November 2014, a copy of which is attached to the EA in Appendix D, and which may be viewed at <http://www.fox8live.com/story/27259764/bald-eagles-make-a-home-in-the-middle-of-proposed-algiers-development>, there is a bald eagle nesting area located within the Behrman Park footprint, approximately two blocks south of General DeGaulle Drive at the intersection of Wall Boulevard and Vespesian Street. This nesting area exists in one of four trees left standing in a large vacant lot that was cleared to make way for the new Behrman Park soccer stadium. This nest remains active and is demarcated as a bald eagle nesting area. Although bald eagles are no longer listed as a threatened or endangered species, bald eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). In order for anyone to remove the tree containing the bald eagle nest, a permit from the USFWS would be required prior to its removal. A USFWS proposed plan to keep the bald eagles safe includes saving the four trees and creating a buffer of approximately 300 feet between the trees and any new development. According to the Center for Conservation Biology, bald eagles begin nesting activities, (including required repairs to the nest, mating, and egg laying) in January or February. When they are approximately 12 weeks of age, the eaglets have usually fledged from the nest, and are fully independent by September (Center of Conservation Biology 2017). The proposed project, if constructed in the northwest corner of Behrman Park as indicated by the CNO, should have no effect on this bald eagle’s nest.

Construction of the proposed natatorium and associated parking lot would have no effect on species federally listed as threatened or endangered, migratory birds, or federally listed critical habitats. USFWS has interpreted § 7(p) of the ESA to mean that restoring any infrastructure damaged or lost due to Hurricane Katrina back to its original footprint does not require ESA consultation per USFWS letter of 15 September 2005, to FEMA.

Alternative 3 – Construct a splash park at the Former Brechtel Golf Course

Inspection of the proposed project did not reveal the presence of any species federally listed as threatened or endangered. Based on a review of this alternative using the USFWS ESA Technical Assistance website (2017), “the proposed project is not an activity that would affect a federally listed threatened or endangered species; nor is there proposed or designated critical habitat present within” Orleans Parish. “Therefore, a ‘no effect’ determination is appropriate. No further ESA coordination with the Service is necessary for the proposed action, unless there are changes in the scope or location of the proposed project or the project has not been initiated one year from the date of this letter” (Appendix D).

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4.6 Air Quality

4.6.1 Regulatory Setting

4.6.1.1 Clean Air Act of 1970 (Including 1977 and 1990 Amendments)

The Clean Air Act (CAA) (42 U.S.C. § 7401 et seq.) is the federal law that regulates air emissions from stationary and mobile sources. This law tasks the USEPA, among its other responsibilities, with establishing primary and secondary air quality standards. Primary air quality standards protect the public's health, including the health of "sensitive populations, such as people with asthma, children, and older adults." Secondary air quality standards protect the public's welfare by promoting ecosystem health, preventing decreased visibility, and reducing damage to crops and buildings. The USEPA also has set National Ambient Air Quality Standards (NAAQS) for the following six (6) criteria pollutants: carbon monoxide (CO), lead (Pb), nitrogen oxides (NO_x), ozone (O₃), particulate matter (less than 10 micrometers [PM₁₀] and less than 2.5 micrometers [PM_{2.5}]), and sulfur dioxide (SO₂).

Under the 1990 amendments to the CAA, the USEPA may delegate its regulatory authority to any state which has developed an approved State Implementation Plan (SIP) for carrying out the mandates of the CAA. The State of Louisiana's initial SIP was approved on 5 July 2011, and its CAA implementing regulations are codified in Title 33.III of the Louisiana Environmental Regulatory Code. The SIP has been revised several times since its original approval.

According to 40 C.F.R. § 93.150(a), "No department, agency or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or permit, or approve any activity which does not conform to an applicable implementation plan." In addition, 40 C.F.R. § 93.150(b) states, "A Federal agency must make a determination that a Federal action conforms to the applicable implementation plan in accordance with the requirements of this subpart before the action is taken." As a result, when FEMA provides financial assistance for a project, such as the one currently under review in this DEA, the CAA requires a General Conformity determination whenever the project site is located in a "non-attainment area" for any one (1) of the six (6) criteria pollutants (Revisions to the General Conformity Regulations 2010).

4.6.2 Existing Conditions

According to *The Green Book Nonattainment Areas for Criteria Pollutants* (USEPA 2014b), the Parish of Orleans is considered to be an "attainment area" for criteria pollutants. As a result, no General Conformity determination is required by FEMA for projects it funds within this parish.

4.6.3 Environmental Consequences

Alternative 1 – No Action

The "No Action" alternative would involve no undertaking and, therefore, would cause no short- or long-term impacts to air quality.

Alternative 2 – Construct the Behrman Memorial Park Natatorium and Splash Park (Preferred Alternative)

This alternative potentially includes short-term impacts to air quality resulting from lagoon rehabilitation activities and the relocation of dredged materials to other areas of the park. Particulate emissions from the generation of fugitive dust during project construction would likely be increased temporarily in the immediate project vicinity. Other emission sources on site could include internal combustion engines from work vehicles, air compressors, or other types of construction equipment. These impacts would be localized and of short duration.

To reduce potential short term impacts to air quality from construction-related activities, the contractor would be responsible for using BMPs to reduce fugitive dust generation and diesel emissions. For example,

the contractor would be required to water down construction areas when necessary to minimize particulate matter and dust. Emissions from the burning of fuel by internal combustion engines (e.g., heavy equipment and earthmoving machinery) could temporarily increase the levels of some of the criteria pollutants, including CO₂, NO_x, O₃, and PM₁₀, and non-criteria pollutants such as volatile organic compounds. To reduce emissions of criteria pollutants, running times for fuel-burning equipment should be kept to a minimum and engines should be properly maintained. Contractors are required to follow, at a minimum, these BMPs during site work:

- implement erosion and sediment controls
- stabilize soils
- manage dewatering activities
- implement pollution prevention measures
- provide and maintain buffers around surface waters
- prohibit certain discharges, such as motor fuel and concrete washout

Alternative 3 – Construct a splash park at the Former Brechtel Golf Course

This alternative potentially includes short-term impacts to air quality resulting from lagoon rehabilitation activities and the relocation of dredged materials to other areas of the park. Particulate emissions from the generation of fugitive dust during project construction would likely be increased temporarily in the immediate project vicinity. Other emission sources on site could include internal combustion engines from work vehicles, air compressors, or other types of construction equipment. These impacts would be localized and of short duration.

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- implement erosion and sediment controls
- stabilize soils
- manage dewatering activities
- implement pollution prevention measures
- provide and maintain buffers around surface waters
- prohibit certain discharges, such as motor fuel and concrete washout

4.7 Noise

4.7.1 Regulatory Setting

Noise is commonly defined as unwanted or unwelcome sound and most commonly measured in decibels (dBA) on the A-weighted scale (i.e., the scale most similar to the range of sounds that the human ear can hear). 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. Sound is federally regulated by the Noise Control Act of 1972, which charges the USEPA with preparing guidelines for acceptable ambient noise levels. USEPA guidelines, and those of many other federal agencies, state that outdoor sound levels in excess of 55 dBA DNL are “normally unacceptable” for noise-sensitive land uses including residences, schools, or hospitals (USEPA 1974). The Noise Control Act, however, only charges implementation of noise standards to those federal agencies that operate noise-producing facilities or equipment.

The City of New Orleans Noise Ordinance (§ 66) places restrictions on any source of sound exceeding the maximum permissible sound level based on the time of day and the zoning district within which the sound is emitted. A number of exemptions exist for certain types of activities, however. In accordance with the City’s Noise Ordinance § 66-138, “[n]oises from construction and demolition activities for which a building permit has been issued by the department of safety and permits are exempt from” maximum permissible sound level restrictions “between the hours of 7:00 a.m. and 11:00 p.m., except in those areas zoned as RS, RD, or RM residential districts. Construction and/or demolition activities shall not begin before 7:00 a.m. or continue after 6:00 p.m. in areas zoned as RS, RD, or RM residential districts, or within 300 feet of such residential districts. Mufflers on construction equipment shall be maintained” (CNO 2014b).

4.7.2 Existing Conditions

The existing conditions for each of the two potential sites are detailed in Section 4.7.3 under the discussion for the respective alternative.

4.7.3 Environmental Consequences

Alternative 1 – No Action

Under the “No Action” alternative there would be no short- or long-term impact to noise levels because no construction would occur.

Alternative 2 – Construct the Behrman Memorial Park Natatorium and Splash Park (Preferred Alternative)

Under Alternative 2, construction of the proposed natatorium and an associated parking facility would result in short-term increases in noise during the construction period. Equipment and machinery utilized on the project site would be expected to meet all local, state, and federal noise regulations; however, due to the zoning as an OS-N Zone and the adjacent residential structures to the east, in order to be exempt from the City’s Noise Ordinance, work would be restricted to between the hours of 7:00 a.m. and 6:00 p.m. unless statutory ambient noise restrictions are observed. Following completion of construction activities, operations at the renovated facility would not result in any significant permanent increases in noise levels.

Alternative 3 – Construct a splash park at the Former Brechtel Golf Course

Under this alternative, construction of the proposed natatorium and an associated parking facility would result in short-term increases in noise during the construction period. Equipment and machinery utilized on the project site would be expected to meet all local, state, and federal noise regulations; however, due to the zoning as an OS-N Zone and the adjacent residential structures to the east, in order to be exempt from the City’s Noise Ordinance, work would be restricted to between the hours of 7:00 a.m. and 6:00 p.m. unless statutory ambient noise restrictions are observed. Following completion of construction activities, operations at the renovated facility would not result in any significant permanent increases in noise levels.

4.8 Land Use

4.8.1 Regulatory Setting

Land use within New Orleans must be consistent with the “Land Use Plan” section of the City’s Master Plan, *Plan for the 21st Century*, which “sets forth the policy framework for the physical development of

the city” as adopted in the City charter. According to the Master Plan, regulated land use actions include 1) the Comprehensive Zoning Ordinance and all zoning amendments, 2) preliminary and final approval of subdivision plans and plats, 3) site plans, 4) approval of planned unit development or other site-specific development plans, and 5) variances. “*consistency*” means that the land use actions must further, or at a minimum not interfere with, the goals, policies and strategies in the Land Use Plan section of the Master Plan” (*emphasis original*). Among other guidelines, the Land Use Plan includes strategies to “identify commonalities and differences in the physical character of areas across the city, focusing on more than architectural style to include street organization and size, scale and massing, orientation to the street, and similar urban design features” (CNO 2010a, 2010b).

In Article 1 of the City of New Orleans’ new Comprehensive Zoning Ordinance (CZO) (2015), the ordinance’s stated purpose has multiple components, one of which is to “ensure that the policies set forth in City’s Master Plan are implemented by the land use regulations and are consistent with the goals set forth in the Master Plan.” Another is to “provide for functional public utilities and facilities, and for the convenience of traffic and circulation of people and goods.” A further purpose is to “provide for preservation, protection, development, and conservation of natural resources.”

The CZO established nine (9) zoning districts that regulate such matters as “the location and use of structures, signs, water and land areas for agriculture, trade, industry, and residential use” within their specific zoning category. “These zoning districts also regulate, limit, or determine the height, bulk, and access to light and air of structures, the area of yards and other open spaces, the density of use, and the standards for site organization and layout.” The nine (9) zoning types consist of 1) Open Space, 2) Rural Development, 3) Historic Core Neighborhoods, 4) Historic Urban Neighborhoods, 5) Suburban Neighborhoods, 6) Commercial Center and Institutional Campus, 7) Centers for Industry, 8) Central Business, and 9) Overlay Zoning Districts.

According to Article 6, however, the CZO “does not apply to structures located within the public right-of-way, such as utilities.” In addition, Article 6 provides exemptions for essential services, stating that “[t]he following essential services may be permitted erected, constructed, altered, or maintained in any zoning district, unless otherwise indicated within this Ordinance. Development plan and design review ([Article IV,] Section 4.5) by the Executive Director of the City Planning Commission may be required.” These exemptions apply to:

- A. Traffic signals, fire hydrants, and similar equipment and accessories.
- B. Gas, electric, communication, water supply, and transmission/distribution systems.
- C. Elevated or underground water storage tanks.
- D. Stormwater and sanitary sewer collection and disposal systems.
- E. Utility poles, wires, mains, drains, pipes, conduits and cables reasonably necessary for the furnishing of adequate service by public utilities, municipal or other governmental agencies for the public health, safety and welfare.
- F. Streets.

Finally, there are three (3) local levee districts with regulatory authority over work near the New Orleans levee system. Permits are required for certain types of work, such as excavation, within 1,500 feet of Mississippi River levees and within 300 feet of hurricane protection levees. The Orleans Levee District is the main body with regulatory jurisdiction over levees within Orleans Parish; however, work near the parish boundary could potentially require coordination with the East Jefferson Levee District to the west or the Lake Borgne Basin Levee District to the east.

4.8.2 Existing Conditions

The City of New Orleans is located entirely within the parish of Orleans, in southeastern Louisiana. New Orleans/Orleans Parish has approximately 343,829 residents according to 2010 census figures (U.S. Department of Commerce [USDOC] 2010). Orleans Parish is about 350 square miles in size, of which roughly 199 square miles (approximately 56.9 percent) is land; the remainder, 151 square miles, is open water (Trahan 1989). The parish is bordered on the east by Lake Borgne, St. Bernard Parish, and Plaquemines Parish; on the south by the Mississippi River, Plaquemines Parish, and Jefferson Parish; on the west by Jefferson Parish; and on the north by Lake Pontchartrain and St. Tammany Parish. Major transportation routes within Orleans Parish include Interstates 10 and 610 and U.S. Highways 11, 61, and 90.

Orleans Parish is primarily urban, with the exception of some areas of coastal marsh in the eastern part and woodlands on the west bank of the Mississippi River (the Lower Coast). The parish is within the Mississippi River delta, with a subtropical, humid climate typical of coastal regions along the Gulf of Mexico. The average winter temperature is 54°F and the average summer temperature is 81°F. Orleans Parish typically receives 59 inches of rainfall annually (Trahan 1989).

Although the corporate boundary of the City of New Orleans has been unchanged since the 1800s, the city's urban footprint has expanded significantly since then. Before 1900, urbanization was confined primarily to natural levees and ridges along the Mississippi River and elsewhere (the Esplanade Ridge, for example). In 1913, construction of a levee and pump system began, which allowed for the development of lower-lying areas and the back swamp. Between 1913 and 2000, the city's urbanized footprint almost doubled to approximately 71 square miles. The extent of urbanization has been relatively unchanged since the mid-1980s, however, when development slowed considerably due to a lack of large remaining developable tracts within the city, the general economic downturn resulting from the "oil bust," and ongoing concerns about quality of life issues related to crime and public education (CNO 2010c).

Land use differs from zoning in that it groups land distribution patterns into broad general categories. Zoning, on the other hand, regulates specific activities and functions within a particular land use category. Post-Hurricane Katrina, the general pattern of land use has not changed significantly; however, many properties are now vacant or abandoned. According to the latest available data presented in the city's 2010 Master Plan, land use within New Orleans consists approximately of: Residential – 25% of the total land area; Industrial (active or vacant) – 8%; Parkland/Recreation/Open Space and Non-Urban/Wetland/Undeveloped combined – 60%; Institutional/Public/Semi-Public – 3%; and Commercial/Mixed-Use – 4%. Within the Residential land use category, 57% is single family homes, 23% is two (2)- to four (4)-unit structures, and 29% percent is structures containing five (5) units or more. As a result of the hurricane, there are now about 59,000 vacant or blighted residential lots (CNO 2010c).

4.8.3 Environmental Consequences

Alternative 1 – No Action

Implementation of the "No Action" alternative would not adversely impact the current land use as no construction would occur.

Alternative 2 – Construct the Behrman Memorial Park Natatorium and Splash Park (Preferred Alternative)

Under this action alternative, the construction of the natatorium and associated parking lot would entail development of a currently undeveloped area; however, the purpose of the proposed facility would be for recreational uses in keeping with the recreational use of Behrman Memorial Park as a whole.

The entire site under consideration in Alternative 2 is within an area zoned as Neighborhood Open Space or "OS-N". The future land use is designated as Parkland and Open Space or "P" (City of New Orleans

Property Viewer). The property is owned by the CNO and property description is listed as “Plantation Property Balance Of Arpents 16/17 Or Pt 8 67.266 Acres 2529 Gen Meyer Ave To 2522 Gen Degaulle Dr (Exempt)” There are high density residential structures adjacent to Behrman Memorial Park to the east and west. *Figure 12* depicts the current zoning for the project site. The proposed project would have no impact on the current zoning of the property.

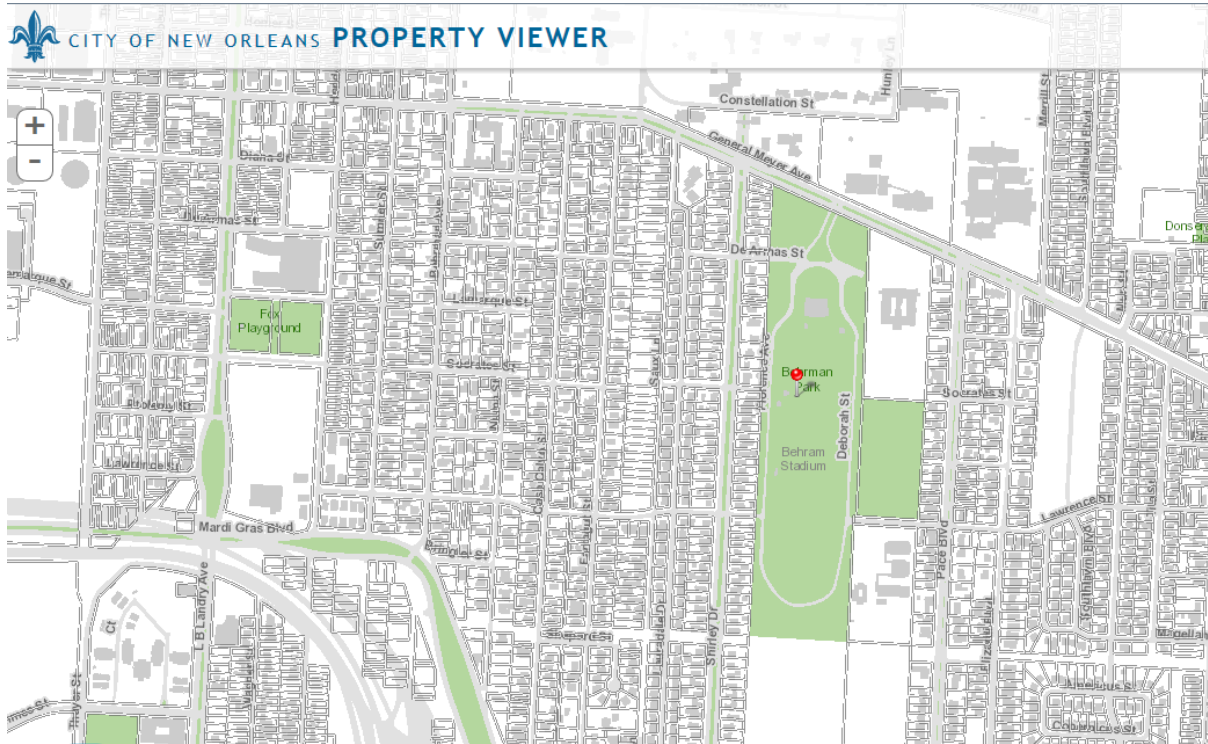


Figure 12 – Current zoning map for the Alternative 2 site (Source – City of New Orleans Property Viewer).

Alternative 3 – Construct a splash park at the Former Brechtel Golf Course

Under this action alternative, the construction of the natatorium and associated parking lot would entail development of a currently undeveloped area; however, the purpose of the proposed facility would be for recreational uses in keeping with the recreational use of Brechtel Park as a whole.

The entire site under consideration in Alternative 3 is within an area zoned as Neighborhood Open Space or “OS-N”. The future land use is designated as Parkland and Open Space or “P” (City of New Orleans Property Viewer). The property is owned by the CNO and the property description is listed as “Elwood Behrman Hwy – 3701 Behrman Place General deGaulle Dr. Memorial Pk Dr. S. and W. BD Dr. Approx. 116 (Exempt)”. *Figure 13* depicts the current zoning for the project site. The proposed project would have no impact on the current zoning of the property.

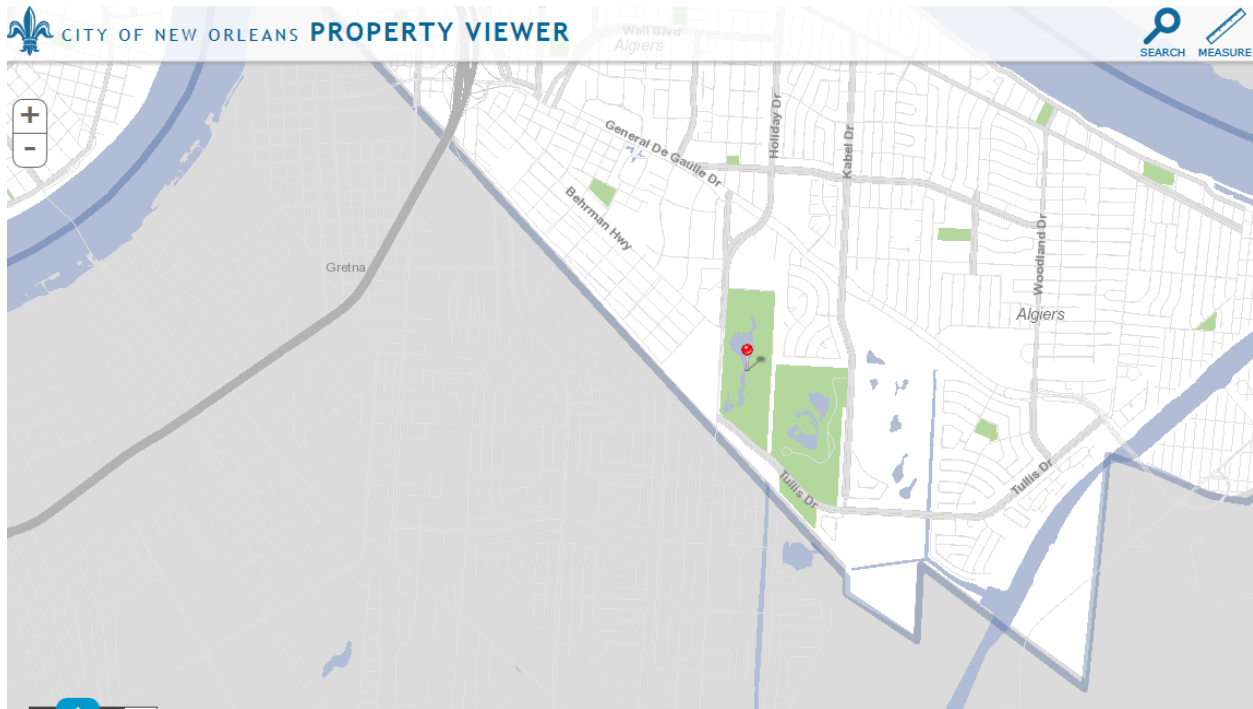


Figure 13 – Current zoning map for the Alternative 3 site (Source – City of New Orleans Property Viewer).

4.9 Traffic

4.9.1 Regulatory Setting

Roads play a major role in the management of traffic, particularly in densely-populated urban areas such as New Orleans. The Louisiana Department of Transportation and Development (LaDOTD) is responsible for maintaining public transportation, state highways, interstate highways under state jurisdiction, and bridges located within the state of Louisiana. These duties include the planning, design, and building of new highways in addition to the maintenance and upgrading of current highways. Roads not part of any highway system usually fall under the jurisdiction of and are maintained by applicable local government entities; however, the LaDOTD is responsible for assuring that all local agency federal-aid projects comply with all applicable federal and state requirements (LaDOTD 2016).

At the local level, the City of New Orleans’ ordinance regarding Streets, Sidewalks, and Other Public Places, Article II, § 146-36, established the Complete Streets program, which was approved on 22 December 2011 and arose from a recommendation in the Master Plan (CNO 2010). With a mandate to commence no later than 1 December 2012, the Department of Public Works, in consultation with the City Planning Commission, is responsible for overseeing and implementing the program. This ordinance requires that “all transportation improvements are planned, designed and constructed to encourage walking, bicycling and transit use, while also promoting the full use of, and safe operations for all users of the City’s transportation network.” The preamble to the ordinance acknowledges that “amenities, such as sidewalks, bike lanes, bike racks, crosswalks, traffic calming measures, street and sidewalk lighting; targeted pedestrian and bicycle safety improvements; access improvements in compliance with the Americans with Disabilities Act (ADA); public transit facilities accommodation including, but not limited, to pedestrian access improvement to transit stops and stations; street trees and landscaping; drainage and storm water management; and street furniture” make a positive contribution toward an effective Complete Streets program (CNO 2011). By providing and encouraging alternative pedestrian- and bicycle-friendly modes of transportation, as well as mass transit, traffic congestion potentially can be reduced.

In addition, Article IX, § 154-1561, requires that trucks exceeding five (5) tons, such as those transporting materials to and from project sites, utilize established truck routes or the shortest practical route between their point of origin or destination and the nearest designated truck route. Ordinance §§ 154-1522 and 154-1523 place further restrictions on truck sizes and weights.

Finally, with respect to the placement of traffic signals and markers, signs are subject to regulation pursuant to both City ordinance and the CZO. Ordinance Article IV, § 106-213, allows the placement of signals and signs under the authority of the federal, state, or city government. Article 24 of the CZO exempts municipal signs from permit requirements, but requires their approval by the City Council.

4.9.2 Existing Conditions

The existing traffic conditions for each of the two potential sites are detailed in Section 4.9.3 under the discussion for the respective alternative.

4.9.3 Environmental Consequences

Alternative 1 – No Action

Implementation of the “No Action” alternative would not adversely impact the site traffic patterns as no construction would occur.

Alternative 2 – Construct the Behrman Memorial Park Natatorium and Splash Park (Preferred Alternative)

Behrman Memorial Park is located along General Meyer Avenue to the north. The primary entrance to the park is from General Meyer Avenue onto Florence Park, which is located east of the proposed site. From Florence Park, an oval shaped, one-way, access road is situated within Behrman Park. Florence Park becomes Florence Avenue, which joins Lawrence Street, then becomes Deborah Drive, then Deborah Street. From Deborah Street, a park user exits the park onto General Meyer Avenue. In addition, Behrman Memorial Park may be accessed from the east and west via Lawrence Street. The two segments of Lawrence Street connect with the oval shaped access road. The park may also be accessed via DeArmas Street from the west. DeArmas Street would provide direct access to the proposed natatorium site. Finally, Behrman Memorial Park may be accessed via Vespasian Boulevard near the baseball diamond and a parking area associated with the diamond. Vespasian Boulevard only provides access to the baseball diamond area does not connect with the oval shaped access road. Vespasian Boulevard would not be used to gain access to the proposed natatorium site.

Under this alternative, a temporary increase in construction-related traffic during construction of the natatorium and associated parking lot would be anticipated. Once construction operations have been completed, traffic would be expected to return to normal. Only minimal long-term impacts, if any, on current traffic patterns would likely occur.

During construction the contractor would be expected to take all reasonable precautions to control site access. All activities would be conducted in a safe manner in accordance with Occupational Safety and Health Administration (OSHA) work zone traffic safety requirements. The contractor would post appropriate signage and fencing to minimize foreseeable potential public safety concerns. Proper signs and barriers would be in place prior to the initiation of construction activities in order to alert pedestrians and motorists of the upcoming work and traffic pattern changes (e.g., detours or lanes dedicated for construction equipment egress).

Alternative 3 – Construct a splash park at the Former Brechtel Golf Course

The former Brechtel Park Golf Course is located along Memorial Park Drive to the north, Behrman Place (LA State Highway 428) to the west, and Tullis Drive to the south. According to Google Earth, and confirmed by FEMA during a site visit, the only vehicular entrance to the former golf course is from

Memorial Park Drive. There is no vehicular access to the former golf course from either Behrman Place or Tullis Drive. Memorial Park Drive leads directly to a cleared, semi-developed area and several existing buildings, presumably the former golf club house and ancillary structures. Depending on the exact location and configuration chosen for the structure, demolition of the existing buildings may be required, and/or additional roadway construction or improvements may be required to access a newly constructed natatorium and splash park under this Alternative.

Under this alternative, a temporary increase in construction-related traffic during construction of the natatorium and associated parking lot would be anticipated. Because the former golf course is now closed, there are no structures in active use on either side of Memorial Park Drive east of Behrman Place; and therefore currently little, if any, traffic volume on Memorial Drive east of Behrman Place. Once construction operations have been completed, an increase in traffic volume would be expected as patrons utilize the new facility. It is also conceivable that one or more new entrances from Behrman Place or Tullis Drive to the former golf course site would be constructed to facilitate access to the natatorium. Moderate long-term impacts on current traffic patterns would likely occur.

During construction the contractor would be expected to take all reasonable precautions to control site access. All activities would be conducted in a safe manner in accordance with Occupational Safety and Health Administration (OSHA) work zone traffic safety requirements. The contractor would post appropriate signage and fencing to minimize foreseeable potential public safety concerns. Proper signs and barriers would be in place prior to the initiation of construction activities in order to alert pedestrians and motorists of the upcoming work and traffic pattern changes (e.g., detours or lanes dedicated for construction equipment egress).

4.10 Cultural Resources

4.10.1 Regulatory Setting

The consideration of impacts to historic and cultural resources is mandated under Section 101(b) 4 of the National Environmental Policy Act (NEPA) as implemented by 40 C.F.R. Part 1501-1508. Section 106 of the National Historic Preservation Act (NHPA) requires Federal agencies to take into account their effects on historic properties (i.e. historic and cultural resources) and allow the Advisory Council on Historic Preservation an opportunity to comment. FEMA has chosen to address potential impacts to historic properties through the “Section 106 consultation process” of NHPA as implemented through 36 C.F.R. Part 800.

In order to fulfill its Section 106 responsibilities, FEMA has initiated consultation on this project in accordance with the Statewide Programmatic Agreement (PA) dated 16 December, 2016, between the Louisiana State Historic Preservation Officer (SHPO), the Louisiana Governor’s Office of Homeland Security and Emergency Preparedness (LA GOHSEP), the Alabama-Coushatta Tribe of Texas, the Caddo Nation, the Chitimacha Tribe of Louisiana, the Choctaw Nation of Oklahoma, the Coushatta Tribe of Louisiana, the Jena Band of Choctaw Indians, the Mississippi Band of Choctaw Indians, the Quapaw Tribe of Oklahoma, the Seminole Nation of Oklahoma, the Seminole Tribe of Florida, the Tunica-Biloxi Tribe of Louisiana, and the Advisory Council on Historic Preservation. The 2016 Statewide Programmatic Agreement (PA) was created to streamline the § 106 review process, and may be reviewed at <https://www.fema.gov/media-library/assets/documents/128322>.

The “Section 106 process” outlined in the PA requires the identification of historic properties that may be affected by the proposed action or alternatives within the project’s area of potential effects (APE). Historic properties, defined in Section 101(a)(1)(A) of NHPA, include districts, sites (archaeological and religious/cultural), buildings, structures, and objects that are listed in or determined eligible for listing in the National Register of Historic Places (NRHP). Historic properties are identified by qualified agency representatives in consultation with interested parties. Below is a consideration of various alternatives and their effects on historic properties.

4.10.2 Existing Conditions – Identification and Evaluation of Historic Properties

On June 14, 2017, FEMA Historic Preservation Staff consulted the NRHP database, the Louisiana Cultural Resources Map, and project files and determined that the Undertaking is not located within a listed or eligible National Register Historic District. The standing structures APE includes one property aged fifty years or older, Behrman Memorial Park. FEMA examined Behrman Memorial Park’s potential for listing in the NRHP and determined that it is not eligible for listing in the NRHP due to lack of significance and integrity. Upon consultation of data provided by SHPO on May 25, 2017, there are there are two recorded archaeological sites within one mile of the archaeological APE: 16OR137 and 16OR427. 16OR137 is the LeBeuf Plantation House, a historic antebellum/Civil War site. This site is listed on the NRHP under Criteria C; it has not been assessed for inclusion in the NRHP as an archaeological site under Criteria D. 16OR427 is a historic residence that dates to late 19th early 20th century. It is unassessed for inclusion in the NRHP. Both of these sites are outside the archaeological APE and will not be affected by the current undertaking.

4.10.3 Environmental Consequences

Alternative 1 – No Action

This alternative does not include any FEMA undertaking; therefore FEMA has no further responsibilities under § 106 of the NHPA.

Alternative 2 – Construct the Behrman Memorial Park Natatorium and Splash Park (Preferred Alternative)

The proposed undertaking would utilize FEMA funding to construct a Natatorium and Splash Park at Behrman Memorial Park. Based on research using the NRHP database, the Louisiana Cultural Resources Map on the Louisiana Division of Historic Preservation’s website, and agency files, FEMA has determined that the Undertaking is not located within a listed or eligible National Register Historic District. The standing structures APE includes one property aged fifty years or older, Behrman Memorial Park. FEMA has determined that the Park is not eligible for listing in the NRHP due to lack of significance and integrity. No archaeological sites are within the APE.

FEMA has determined that there will be “No Effect” to historic properties. FEMA sent a consultation letter with that determination to SHPO and Tribes on August 25, 2017. Consultation with affected tribes (Alabama-Coushatta Tribe of Texas, Choctaw Nation of Oklahoma, Coushatta Tribe of Louisiana, Eastern Shawnee Tribe of Oklahoma, Jena Band of Choctaw Indians, Kialegee Tribal Town, Mississippi Band of Choctaw Indians, Muscogee Creek Nation, Seminole Tribe of Oklahoma, Seminole Tribe of Florida, and Tunica-Biloxi Tribe of Louisiana) was conducted per FEMA’s Programmatic Agreement dated December 21, 2016 (PA). The applicant must comply with the NHPA conditions set forth in this EA. (Louisiana Unmarked Human Burial Sites Preservation Act and Inadvertent Discovery Clause).

Alternative 3 – Construct a splash park at the Former Brechtel Golf Course

The proposed undertaking would utilize FEMA funding to construct a Natatorium and Splash Park at Former Brechtel Golf Course. In order to fulfill obligations under Section 106 of the NHPA, and in accordance with the PA, a cultural resources review would need to be conducted prior to construction in this location.

4.11 Hazardous Materials

4.11.1 Regulatory Setting

The management of hazardous materials is regulated under various federal and state environmental and transportation laws and regulations, including but not limited to the Resource Conservation and Recovery Act (RCRA); the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA);

the Toxic Substances Control Act (TSCA); the Emergency Planning and Community Right-to-Know provisions of the Superfund Amendments and Reauthorization Act (SARA); the Hazardous Materials Transportation Act; and the Louisiana Voluntary Investigation and Remedial Action statute. The purpose of the regulatory requirements set forth under these laws is to ensure the protection of human health and the environment through proper management (identification, use, storage, treatment, transport, and disposal) of these materials. Some of the laws provide for the investigation and cleanup of sites already contaminated by releases of hazardous materials, wastes, or substances.

The TSCA (codified at 15 U.S.C., Ch. 53), authorizes the USEPA to protect the public from “unreasonable risk of injury to health or the environment” by regulating the introduction, manufacture, importation, sale, use, and disposal of specific new or already existing chemicals. “New Chemicals” are defined as “any chemical substance which is not included in the chemical substance list compiled and published under [TSCA] § 8(b).” Existing chemicals include any chemical currently listed under § 8(b), including polychlorinated biphenyls (PCBs), asbestos, radon, lead-based paint, chlorofluorocarbons, dioxin, and hexavalent chromium.

TSCA Subchapter I, “Control of Toxic Substances” (§§ 2601-2629), regulates the disposal of PCB-containing products, sets limits for PCB levels present within the environment, and authorizes the remediation of sites contaminated with PCBs. Subchapter II, “Asbestos Hazard Emergency Response” (§§ 2641-2656), authorizes the USEPA to impose requirements for asbestos abatement in schools and requires accreditation of those who inspect asbestos-containing materials. Subchapter IV, “Lead Exposure Reduction” (§§ 2681-2692), requires the USEPA to identify sources of lead contamination in the environment, to regulate the amounts of lead allowed in products, and to establish state programs that monitor and reduce lead exposure.

4.11.2 Existing Conditions

The existing conditions with regard to existing nearby hazardous material sites for each of the two potential natatorium construction sites are detailed in Section 4.11.3 under the discussion for the respective alternatives.

4.11.3 Environmental Consequences

Alternative 1 – No Action

The “No Action” alternative would not disturb any hazardous materials or create any additional hazards to human health.

Alternative 2 – Construct the Behrman Memorial Park Natatorium and Splash Park (Preferred Alternative)

USEPA database searches for the proposed project area and vicinity reveal that the EPA has no records for proposed project location. Two nearby sites appeared in the EPA database. The first is the Behrman Soccer Stadium, which had a NPDES Permit (LAR10H234), which was originally issued on 21 June 2011 and expired on 30 September 2015. The type of permit was a General Permit Covered Facility. The second nearby facility is Delgado Community College West Bank, located at 2600 General Meyer Avenue. The facility is a Conditionally Exempt Small Quantity Generator of hazardous waste. Listed hazardous wastes include ignitable wastes, corrosive wastes, and reactive wastes. Activities at these sites should have no adverse impact on the Alternative 2 project site.

The proposed project construction site did not appear during a review of LDEQ’s Electronic Document Management System (EDMS) database for other hazardous waste management and disposal, solid waste disposal, leaking underground storage tank, enforcement, and similar databases. However, the LEDQ does have records for the Behrman Gym (Area of Interest [AI] 130759). This facility has an Asbestos Management Plan, as required by the Asbestos Hazard Emergency Response Act (AHERA) for

management of asbestos containing materials within the structure. The Behrman Soccer Stadium (AI 176361) has a LPDES permit, which was originally issued in 2011 and was reauthorized in 2015. In addition, the LDEQ has records pertaining to an asbestos containing material (ACM) abatement project in the stadium which took place in 2012. Finally, the Touro Shakespeare Nursing Home (AI 165585), located at 2621 General Meyer Avenue, has records that pertain to an ACM abatement that was performed in 2009. There are no recorded oil or gas wells on or near the subject property (LDEQ 2015a, 2015b; USEPA 2015b, 2015c).

The EDMS database has numerous records for the neighboring Naval Air Station Joint Reserve Base located at 2300 General Meyer Avenue (AI 42614). These records pertain to waste tires, air quality, solid and hazardous waste, lead in soil, inactive and abandoned sites, underground storage tanks, asbestos, radiation, surface water, and groundwater. Activities at this facility would be expected to have no adverse impact on the proposed project site.

Under this action alternative, there is a possibility of encountering hazardous materials or suspected hazardous materials during construction activities. During construction the contractor would be expected to take all reasonable precautions to control unauthorized site access. All activities involving the use of hazardous materials would be conducted in a safe manner in accordance with Occupational Safety and Health Administration (OSHA) safety requirements. Should unanticipated hazardous materials or suspected hazardous materials (such as buried waste drums) be encountered, the construction contractor would stop work immediately and notify the LDEQ. Work would remain stopped until LDEQ personnel could access the site and if necessary, remove hazardous materials. The Sub-Recipient would notify the public of the discovery of the hazardous material through a public notice process. In addition, any hazardous materials would be disposed of properly at a landfill that is permitted to accept the type of materials discovered at the project site.

In a response to FEMA's SOV request dated 30 May 2017, the LDEQ indicated that "After reviewing your request, the Department has no objections based on the information provided in the submittal. Please be advised that if you should encounter a problem during the implementation of this project, you should immediately notify LDEQ's Single-Point-of-contact (SPOC) at (225) 219-3640." General comments were included, which are included in Section 6 of this EA, Conditions and Mitigation Measures.

Alternative 3 – Construct a splash park at the Former Brechtel Golf Course

USEPA database searches for the proposed project area and vicinity reveal that the EPA has no records for the former Brechtel Park Golf Course. Two nearby properties appeared in the EPA database. The first is the South Central Bell NWORLAAR site located at 3501 Tullis Drive, which is listed as "Inactive". Chemicals listed for this site are ignitable waste, corrosive waste, and mercury. There have been no violations reported in the last three (3) years for this property. The Lakewood Country Club Golf Course at 4801 General DeGaulle Drive, is located east of Brechtel Park on the along Lennox Boulevard. This site reportedly handles ignitable waste, cadmium, lead, benzene, methyl ethyl ketone, tetrachloroethylene, and trichloroethylene. This site is listed as "Active". There have been no violations reported for this site in the past three (3) years. In addition, the Lakewood Country Club Golf Course has had LPDES permits in the past. The most recent permit expired in September of 2015. According to the EPA, the site was conducting monthly surface water discharge monitoring under their LPDES permits. Activities at these sites should have no adverse impact on the Alternative 3 site.

The project site did not appear during a review of LDEQ's Electronic Document Management System (EDMS) database for other hazardous waste management and disposal, solid waste disposal, leaking underground storage tank, enforcement, and similar databases. There are no recorded oil or gas wells on or near the subject property (LDEQ 2015a, 2015b; USEPA 2015b, 2015c).

As with Alternative 2, there is a possibility of encountering hazardous materials or suspected hazardous materials during construction activities. During construction the contractor would be expected to take all

reasonable precautions to control unauthorized site access. All activities involving the use of hazardous materials would be conducted in a safe manner in accordance with Occupational Safety and Health Administration (OSHA) safety requirements. Should unanticipated hazardous materials or suspected hazardous materials (such as buried waste drums) be encountered, the construction contractor would stop work immediately and notify the LDEQ. Work would remain stopped until LDEQ personnel could access the site and if necessary, remove hazardous materials. The Sub-Recipient would notify the public of the discovery of the hazardous material through a public notice process. In addition, any hazardous materials would be disposed of properly at a landfill that is permitted to accept the type of materials discovered at the project site.

In a response to FEMA's SOV request dated 30 May 2017, the LDEQ indicated that "After reviewing your request, the Department has no objections based on the information provided in the submittal. Please be advised that if you should encounter a problem during the implementation of this project, you should immediately notify LDEQ's Single-Point-of-contact (SPOC) at (225) 219-3640." General comments were included, which are included in Section 6 of this EA, Conditions and Mitigation Measures.

4.12 Environmental Justice

4.12.1 Regulatory Setting

E.O. 12898, entitled "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," was signed on 11 February 1994 (U.S. President. 1994). The E.O. directs federal agencies to make achieving environmental justice part of their missions by identifying and addressing, as appropriate, disproportionately high adverse human health, environmental, economic, and social effects of their programs, policies, and activities on minority and/or low-income populations.

4.12.2 Existing Conditions

There are two zip codes that comprise the West Bank neighborhood of New Orleans, 70114 and 70131. Each of these zip codes has very different demographics within its boundaries. The specific demographic data sets for each zip code are defined in detail in Section 4.12.3 under the Alternative for each location.

4.12.3 Environmental Consequences

In compliance with E.O. 12898, the following key questions were addressed with regard to potential Environmental Justice concerns:

- Is there an impact caused by the proposed action?
- Is the impact adverse?
- Is the impact disproportionate?
- Has an action been undertaken without considerable input by the affected low-income and/or minority community?

Alternative 1 – No Action

The "No Action" alternative would not involve the implementation of a federal program, policy, or activity. As a result, there would be no disproportionately high adverse impacts on low-income or minority populations.

Alternative 2 – Construct the Behrman Memorial Park Natatorium and Splash Park (Preferred Alternative)

The Alternative 2 site is located within zip code 70114. Information obtained from the U.S. Census Bureau (USDOC 2010), compiled and extrapolated by the USEPA and presented on its Enforcement and Compliance History website, indicates that the population for the project site zip code of 70114 is composed

of 75.9% African-American, 20.6% White, and 3.5% other groups. Of these households, 45.1% have incomes less than \$25,000 per year, with approximately 38.5% of individuals existing below the poverty level. For the 5-year dataset 2008-2012, the U.S. Census Bureau's American Community Survey (USDOC 2012) estimated median household income over the preceding 12 months for New Orleans (Orleans Parish) at \$36,964 (in 2012 inflation-adjusted dollars).

The project involves new construction of a structure that will serve as a community recreational area. Although low income and minority populations are located near the project area, the proposed work should have a positive effect on all groups by improving recreational opportunities in the community and pre-disaster recreational opportunities in the New Orleans West Bank neighborhood would be restored. Regardless, input from the affected low-income and/or minority community will be solicited through a public notice process.

Alternative 3 – Construct a splash park at the Former Brechtel Golf Course

The Alternative 3 site is located within zip code 70131. Information obtained from the U.S. Census Bureau (USDOC 2010), compiled and extrapolated by the USEPA and presented on its Enforcement and Compliance History website, indicates that the population for the project site zip code of 70131 is composed of 60.4% African-American, 32.5% White, 3.7% Asian, and 3.4% other groups. Of these households, 23.1% have incomes less than \$25,000 per year, with approximately 13.6% of individuals existing below the poverty level. For the 5-year dataset 2008-2012, the U.S. Census Bureau's American Community Survey (USDOC 2012) estimated median household income over the preceding 12 months for New Orleans (Orleans Parish) at \$36,964 (in 2012 inflation-adjusted dollars).

As with Alternative 2, the project involves new construction of a structure that will serve as a community recreational area. Although low income and minority populations are located near the project area, the proposed work should have a positive effect on all groups by improving recreational opportunities in the community and pre-disaster recreational opportunities in the New Orleans West Bank neighborhood would be restored. Regardless, input from the affected low-income and/or minority community will be solicited through a public notice process.

5 CUMULATIVE IMPACTS

CEQ regulations state that the cumulative impact of a project represents 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 its comprehensive guidance on cumulative impacts analysis under NEPA, CEQ notes that “the range of actions that must be considered includes not only the project proposal, but all connected and similar actions that could contribute to cumulative effects” (Regulations for Implementing the Procedural Provisions of the NEPA 2005). The term, “similar actions,” may be defined as “reasonably foreseeable or proposed agency actions [having] similarities that provide a basis for evaluating the environmental consequences together, such as common timing or geography” (40 C.F.R. § 1508.25[a][3]).

Not all potential issues identified during cumulative effects scoping need be included in an EA. Because some effects may be irrelevant or inconsequential to decisions about the proposed action and alternatives, the focus of the cumulative effects analysis should be narrowed to important issues of national, regional, or local significance. To assist agencies in this narrowing process, CEQ (2007) provides a list of several basic questions to be considered, including: (1) Is the proposed action one of several similar past, present, or future actions in the same geographic area; (2) Do other activities (governmental or private) in the region have environmental effects similar to those of the proposed action?; (3) Have any recent or ongoing NEPA analyses of similar or nearby actions identified important adverse or beneficial cumulative effect issues?; and (4) Has the impact been historically significant, such that the importance of the resource is defined by past loss, past gain, or investments to restore resources?

It is normally insufficient when conducting a cumulative effects analysis to merely analyze effects within the immediate area of the proposed action. Geographic boundaries should be expanded for cumulative effects analysis and conducted on the scale of human communities, landscapes, watersheds, or airsheds. Temporal frames should be extended to encompass additional effects on the resources, ecosystems, and human communities of concern. A useful concept in determining appropriate geographic boundaries for a cumulative effects analysis is the project impact zone, that is, the area (and resources within that area) that could be affected by the proposed action. The area appropriate for analysis of cumulative effects will, in most instances, be a larger geographic area occupied by resources outside of the project impact zone (CEQ 2007).

In Orleans Parish, over 8,000 FEMA program-funded emergency protective measures, repair projects and hazard mitigation projects that have occurred, are occurring, or are reasonably foreseen to occur to buildings, recreational and educational facilities, public utilities, and waterways from August 2005 through August 2017. The proposed sites for Alternative 2 and Alternative 3 are located within zip code 70114. FEMA has determined that a one mile radius buffer constitutes an appropriate boundary for a cumulative impact analysis. The buffer for Figure 14 depicts FEMA-funded undertakings categorized as large projects that fall within the buffers for Alternatives 2 and 3.

Alternative 2

The buffer for Alternative 2 is centered at Latitude 29.943039, Longitude -90.030425 and includes zip codes 70114 and 70117. As detailed in Figure 14, 63 project sites fall within this buffer for three FEMA disasters. Sixty projects sites (95%) in the radius buffer were Public Assistance grants and three sites (5%) are 404 Hazard Mitigation grants. For PA projects, the predominant program type is Public Buildings (Category E, 37 sites). Hazard Mitigation grants totaled over \$11 million and consisted of two Flood

Control projects and a multi-faceted Warning Systems project. By disaster, DR-1603 has the majority of projects, with 55 sites (92%), followed by DR-4080 (7%), and DR-1786 (1%). Temporal frames trend toward the majority of PA projects completed prior to 2013, with 32 sites (53%) associated with projects completed between 2007 and 2012. The remaining 28 sites (47%) have completion dates from 2013 to the present.

Four undertakings associated with EAs have sites that fall within the radius buffer. Of these, three EAs were completed between 2011 and 2016, and one is in progress. FEMA-funded undertakings associated with these EA sites are detailed in Table 2 and locations within the buffer depicted on Figure 14. All EAs are for Hurricane Katrina (DR-1603) projects. FEMA-funded actions are subjected to various levels of environmental review as a requirement for the receipt of federal funding. A Subgrantee's failure to comply with any required environmental permitting or other condition is a grant violation, which can result in the loss of federal assistance, including funding.

Alternative 3

The buffer for Alternative 3 is centered at Latitude 29.916154, Longitude -90.016582 and includes zip codes 70114, 70131, and 70056. As detailed in Figure 14, 38 project sites fall within this buffer for two FEMA disasters. Thirty-seven projects sites (X%) in the radius buffer are Public Assistance grants, representing approximately \$950,000 in obligated funds, and one site is a 404 Hazard Mitigation grant. For PA projects, the predominant program types are Protective Measures (Category B, 20 sites) and Public Buildings (Category E, 14 sites). The Hazard Mitigation grant totaled over \$8 million and was part of a multi-faceted statewide Warning Systems project. By disaster, DR-1603 had 31 sites (84%) and DR-4080 had 6 sites (16%). Temporal frames trend toward the majority of PA projects completed prior to 2013, with 23 sites (62%) associated with projects completed between 2007 and 2012. The remaining 14 sites (38%) have completion dates from 2013 to the present.

One undertaking associated with an EA has project sites that fall within the radius buffer. This FEMA-funded undertaking is detailed in Table 2 and is depicted on Figure 14. This EA was completed in 2012 for a Hurricane Katrina (DR-1603) HMGP project. FEMA-funded actions are subjected to various levels of environmental review as a requirement for the receipt of federal funding. A Subgrantee's failure to comply with any required environmental permitting or other condition is a grant violation, which can result in the loss of federal assistance, including funding.

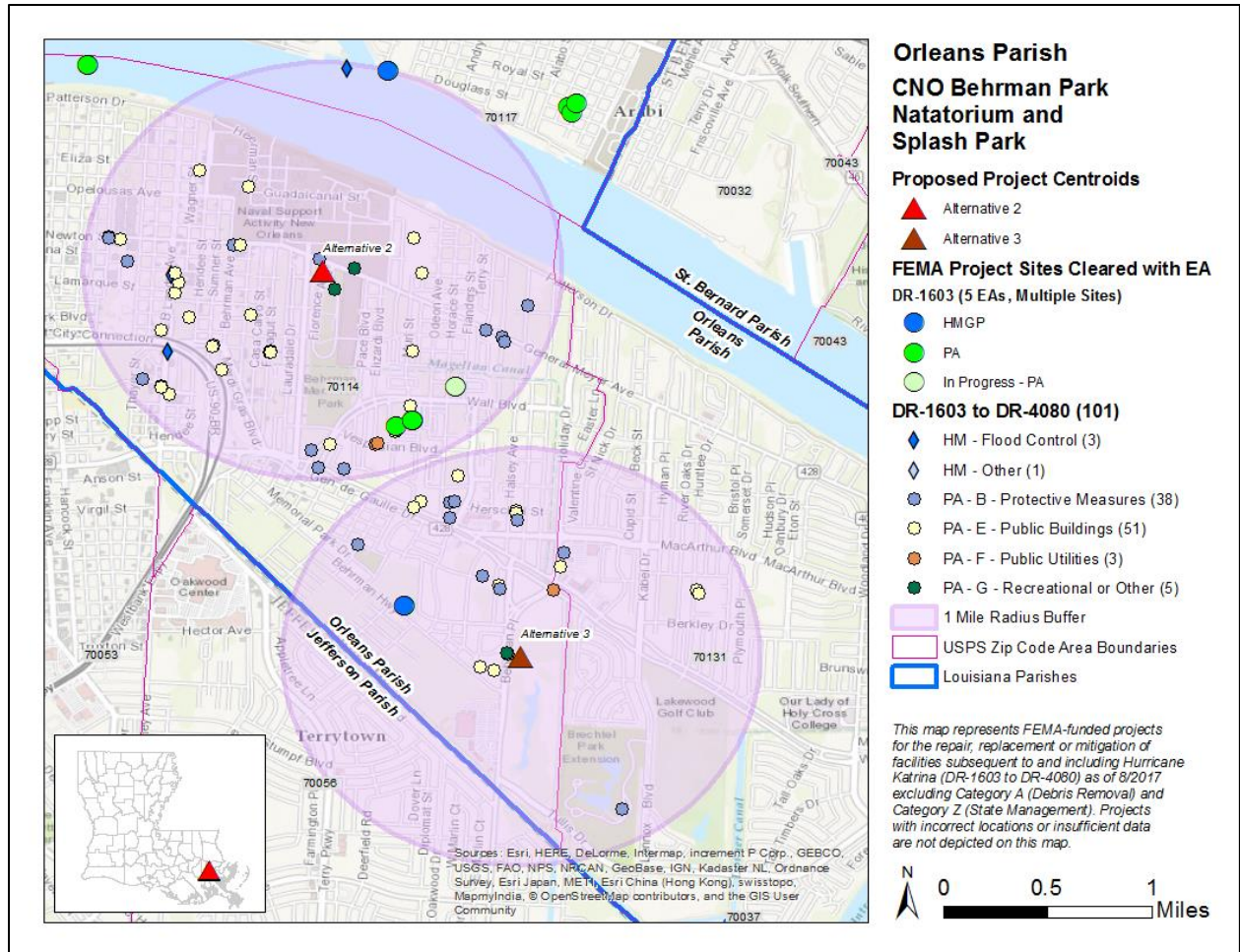


Figure 14 - Map Depicting FEMA-Funded Project Sites within the Study Area (FEMA, 2017)

After the devastation of the 2005 hurricane season, the USACE, Mississippi Valley Division, New Orleans District was tasked with the planning, design, and construction of a 350-mile system of levees, floodwalls, surge barriers, and pump stations to “increase public safety and enable the physical and economic recovery of the area to occur through the reduction of storm damage risk to residences, businesses, and other infrastructure from hurricanes (100-year storm events) and other high-water events within the Greater New Orleans Metropolitan Area.” Referred to as the Greater New Orleans Hurricane and Storm Damage Risk Reduction System (HSDRRS), it is one of the largest civil works projects ever undertaken, at an estimated cost of \$14 billion (DoA 2013a). Major drainage features associated with this infrastructure project within Orleans Parish include the Mississippi River (Waterbody ID# LA070301) and the Industrial Canal (Waterbody ID# LA041501). Except during major river flooding events, these watercourses serve to remove excess water from the local area more efficiently, providing a positive cumulative benefit to residents and businesses.

Table 2 below lists and briefly describes known present, past, and reasonably foreseeable infrastructure and recovery improvement projects, including activities identified by FEMA that may have the potential for cumulative impacts when combined with the effects of the present proposed action. The table also identifies the potential for cumulative impacts when combined with the effects of the proposed action and the rationale for that assessment.

Table 2. Projects that May Have the Potential to Contribute to Cumulative Impacts

Project Name/Status	Lead Agency or Firm	Location	Description	Cumulative Impact	Rationale
City of New Orleans City-Wide Road Repairs	City of New Orleans Department of Public Works	New Orleans City-Wide	Repairs, replacements, and improvements to roads and components damaged as a result of Hurricane Katrina. Elements include upgrades to current codes and standards including mitigation measures to reduce the risk of future damages in the next flood.	Less than significant	Effects of this project when combined with those of the proposed action will not result in significant cumulative impacts.
Comprehensive Environmental Document, Phase I Study for HSDRRS	USACE	217 miles of post-Katrina HSDRRS work located within the Greater New Orleans Metropolitan Area; the area within Lake Pontchartrain and Vicinity (LPV) and West Bank and Vicinity (WBV).	Evaluates the cumulative impacts associated with the implementation of the HSDRRS; describes cumulative impacts of HSDRRS construction completed as of July 2011; and incorporates information from Individual Environmental Reports (IERs) and supplemental IERs completed as of 15 November 2010	Less than significant	Adversely affected resources for the HSDRRS project (regional soils, habitat supporting wildlife, wetlands and jurisdictional bottomland hardwood resources) are significantly different from those in the currently proposed action. Through mitigation and compensation measures, the overall socioeconomic benefits are expected to outweigh the unavoidable natural resources impacts and, thus, would not impact the proposed action.

Project Name/Status	Lead Agency or Firm	Location	Description	Cumulative Impact	Rationale
Hurricane Storm Damage Risk Reduction System	USACE	New Orleans Regional Metropolitan Area	Complete re-engineering the levee system in New Orleans and surrounding areas in order to withstand effects from a “100 year storm,” or a storm that has a one percent chance of occurring each year.	Less than significant impacts	Effects from this project reduce overall impacts in the areas levee protected from the base flood including the site of the proposed action.
New Orleans East Streetscape	HUD	Eastern New Orleans	Addition of sidewalks, street lights, trees, a bike lane, and trash receptacles	Less than significant impacts	Restoration and improvement to existing infrastructure
New Orleans Rail Gateway	Federal Railroad Administration	Rail corridors citywide	Environmental Impact Statement currently in preparation for upgrades to the city’s rail system (LaDOTD 2014)	Less than significant	Although the New Orleans Public Belt Railroad (NOPBR) is adjacent to the proposed cruise terminal, close coordination will occur with the railroad to minimize traffic disruption
New Orleans Sewer and Water Board Water Supply and Sanitary Sewer System-Wide Repairs	Sewer and Water Board of New Orleans	New Orleans City-Wide	Repairs and improvements to water and sanitary sewer system components damaged as a result of Hurricane Katrina. Elements include upgrades to current codes and standards including mitigation measures to reduce the risk of future damages in the next flood.	Less than significant impacts	Project is conditioned to comply with minimum NFIP floodplain development regulations as adopted by the local community and will thereby reduce risk and increase protection from future damage.

Project Name/Status	Lead Agency or Firm	Location	Description	Cumulative Impact	Rationale
Recovery School District Single Settlement Request	Recovery School District	New Orleans City Wide	Refurbishment, repair, reconstruction, and new construction for restoration of the school system.	Less than significant impacts	Project is conditioned to comply with minimum NFIP floodplain development regulations as adopted by the local community and will thereby reduce risk and increase protection from future damage.
Response to Hurricanes Katrina and Rita	USACE	Orleans, St. Bernard, Jefferson, Plaquemines, St. Mary's, Terrebonne, and Lafourche Parishes	Evaluates emergency actions to unwater New Orleans Metropolitan Area; rehabilitate federally authorized levees, and restore non-federal levees and pump stations (Orleans, St. Bernard, Jefferson and Plaquemines Parishes); and flood flight operations (St. Mary's, Terrebonne, and Lafourche Parishes)	No effect	Adverse impacts to resources (wetlands) required compensatory mitigation and are significantly different from those in the currently proposed action; no similar resources associated with proposed action; no impact on proposed action
SWBNO Pump Stations	USACE	Throughout Orleans Parish	Pump station elevation	Negligible	Restoration and improvements to existing infrastructure; no impact on proposed action

As identified in Table 2, the cumulative effect of these present, past, and reasonably foreseeable future actions is not anticipated to result in a significant impact to any resource. Each of the projects either aims to restore or improve the function of pre-existing infrastructure within an urban setting or proposes redevelopment consistent with current zoning requirements, with minimal impacts to the natural and human environment.

6 CONDITIONS AND MITIGATION MEASURES

Based upon the studies, reviews, and consultations undertaken in this DEA, several conditions must be met and mitigation measures taken by the Sub-Recipient prior to and during project implementation:

- The Sub-Recipient must follow all applicable local, state, and federal laws, regulations, and requirements and obtain and comply with all required permits and approvals prior to initiating work.
- If the preferred construction site is selected for the new natatorium, the Sub-Recipient's contractor must follow and adhere to all notes and instructions found in the set of construction drawings entitled "*Behrman Park Natatorium*" provided by Sizeler Thompson Brown Architects Regional Design.
- If human bone or unmarked grave(s) are present within the project area, compliance with the Louisiana Unmarked Human Burial Sites Preservation Act (R.S. 8:671 et seq.) is required. The Sub-Recipient shall notify the law enforcement agency of the jurisdiction where the remains are located within twenty-four hours of the discovery. The Sub-Recipient shall also notify FEMA and the Louisiana Division of Archaeology at 225-342-8170 within seventy-two hours of the discovery.
- If during the course of work, archaeological artifacts (prehistoric or historic) are discovered, the Sub-Recipient shall stop work in the vicinity of the discovery and take all reasonable measures to avoid or minimize harm to the finds. The Sub-Recipient shall inform their Public Assistance (PA) contacts at FEMA, who will in turn contact FEMA Historic Preservation (HP) staff. The Sub-Recipient will not proceed with work until FEMA HP completes consultation with the SHPO, and others as appropriate.
- Project construction would involve the use of potentially hazardous materials (e.g., petroleum products, including but not limited to gasoline, diesel, brake and hydraulic fluid, cement, caustics, acids, solvents, paint, electronic components, pesticides, herbicides, fertilizers, and/or treated timber) and may result in the generation of small volumes of hazardous wastes. Appropriate measures to prevent, minimize, and control spills of hazardous materials must be taken and generated hazardous or non-hazardous wastes are required to be disposed in accordance with applicable federal, state, and local regulations.
- LDNR requires that a complete CUP Application package (Joint Application Form, location maps, project illustration plats with plan and cross section views, etc.) along with the appropriate application fee, be submitted to their office prior to construction. The Sub-Recipient is responsible for coordinating with and obtaining any required CUPs or other authorizations from the LDNR OCM's Permits and Mitigation Division prior to initiating work. The Sub-Recipient must comply with all conditions of the required permits. All documentation pertaining to these activities and Sub-Recipient compliance with any conditions should be forwarded to the state and FEMA for inclusion in the permanent project files.
- Sub-Recipient must comply with all local, state, and federal requirements related to sediment control, disposal of solid waste, control and containment of spills, and discharge of surface runoff and/or stormwater from the site.
- Care should be taken in equipment and materials storage and construction activities (including equipment and materials staging) to ensure that nearby wetlands are not adversely affected per the CWA and Executive Order 11990.
- If the project results in a discharge to waters of the State, an LPDES permit may be required in accordance with the Clean Water Act and the Louisiana Clean Water Code. If the project results in a discharge of wastewater to an existing wastewater treatment system, that wastewater treatment system may need to modify its LPDES permit before accepting the additional wastewater. In order to minimize indirect impacts (erosion, sedimentation, dust, and other construction-related disturbances) to nearby waters of the U.S. and surrounding drainage areas, the contractor must ensure compliance with all local, state, and federal requirements related to sediment control, disposal of solid waste, control and

containment of spills, and discharge of surface runoff and stormwater from the site. All documentation pertaining to these activities and Sub-Recipient compliance with any conditions should be forwarded to LA GOHSEP and FEMA for inclusion in the permanent project files.

- Per 44 CFR 9.11(d)(6), no project should be built to a floodplain management standard that is less protective than what the community has adopted in local ordinances through their participation in the National Flood Insurance Program. The Sub-Recipient is required to coordinate with the local floodplain administrator regarding floodplain permit(s) prior to the start of any activities. All coordination pertaining to these activities and Sub-Recipient compliance with any conditions should be documented and copies forwarded to the LA GOHSEP and FEMA for inclusion in the permanent project files. Per 44 CFR 9.11(d)(9), for the replacement of building contents, materials, and equipment, where possible, disaster-proofing of the building and/or elimination of such future losses should occur by relocation of those building contents, materials, and equipment outside or above the base floodplain.
- All activities involving the remediation of known hazardous substances present in on-site soils must be conducted in accordance with LDEQ requirements and as specified in the approved Corrective Action Plan. Activities involving the remediation of as yet undiscovered hazardous substances in on-site soil and groundwater must be conducted in accordance with relevant LDEQ requirements. Remediation activities for such undiscovered contaminants may not begin until LDEQ approval has been received by the Sub-Recipient.
- All waste is to be transported by an entity maintaining a current "waste hauler permit" specifically for the waste being transported, as required by LaDOTD and other regulations.
- Unusable equipment, debris, and material shall be disposed of in an approved manner and location. The Sub-Recipient shall handle, manage, and dispose of petroleum products, hazardous materials, and/or toxic waste in accordance with all local, state, and federal agency requirements. All coordination pertaining to these activities should be documented and copies forwarded to the state and FEMA as part of the permanent project files.
- Contractor and/or Subcontractors must properly handle, package, transport and dispose of hazardous materials and/or waste in accordance with all local, state, and federal regulations, laws, and ordinances, including all OSHA worker exposure regulations covered within 29 C.F.R. § 1910 and 1926.
- Contractors are required to follow, at a minimum, these BMPs during site work:
 - implement erosion and sediment controls
 - stabilize soils
 - manage dewatering activities
 - implement pollution prevention measures
 - provide and maintain buffers around surface waters
 - prohibit certain discharges, such as motor fuel and concrete washout

7 PUBLIC INVOLVEMENT

The public is invited to comment on the proposed action. A legal notice was published on September 27; September 29, 2017; October 1, 2017 in the *Times-Picayune*, the journal of record for Orleans Parish. Additionally, the Draft Environmental Assessment was made available for review at the Norman Mayer Library at 3001 Gentilly Blvd, New Orleans, Louisiana 70122; and the East New Orleans Regional Library at 5641 Read Boulevard, New Orleans, LA 70127 (hours of operation are 10:00 a.m. to 8:00 p.m., Monday -Thursday; 10:00 a.m. to 5:00 p.m. Friday and Saturday; and 1:00 p.m. to 5:00 p.m. Sunday). In addition, there will be a thirty (30) day comment period, beginning on September 27, 2017, concluding on October 27, 2017 at 4 pm. The document also was published on FEMA's websites. A copy of the public notice is attached in Appendix E.

8 AGENCY COORDINATION

Louisiana Department of Environmental Quality

Louisiana State Historic Preservation Office

Tribal Historic Preservation Office and/or cultural offices

U.S. Environmental Protection Agency

U.S. Fish and Wildlife Service

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