Draft Environmental Assessment

Housing Authority of New Orleans, New Construction of the Mazant Royal Housing Complex

FEMA-1603-DR-LA

New Orleans, Orleans Parish, Louisiana

October 2022



U.S. Department of Homeland Security Federal Emergency Management Agency, Region VI Louisiana Integration and Recovery Office 1500 Main Street Baton Rouge, Louisiana 70802

TABLE OF CONTENTS

SECTION TABLE OF CONTENTS......i 1 1.1 Hurricane Katrina......1 1.2 Project Authority......1 1.3 Background......1 1.4 2 3 Overview of Alternatives7 3.1 3.2 Alternative 1 - No Action......7 Alternative 2 - 136 Units New Construction at the Mazant Royal Site (Preferred 3.3 3.4 Alternative 3 - Construction of the New Housing Development at an Alternate Site. 12 4 4.1 Geology, Soils, and Topography12 4.1.1 4.1.2 4.1.3 4.2 Wetlands and Waters of the United States16 4.2.1 4.2.2 4.2.3 4.3 4.3.1 4.3.2 4.3.3 4.4 4.4.1 4.4.2 4.4.3 Federally Protected Species, Critical Habitats, and Other Biological Resources .. 24 4.5 4.5.1 4.5.2 4.5.3 4.6

Construction of HANO's Mazant Royal Housing - Draft Environmental Assessment (October 2022) i

PAGE

4.6.1	Regulatory Setting	
4.6.2	Existing Conditions	
4.6.3	Environmental Consequences	27
4.7 N	Voise	
4.7.1	Regulatory Setting	27
4.7.2	Existing Conditions	
4.7.3	Environmental Consequences	29
4.8 T	raffic	
4.8.1	Regulatory Setting	29
4.8.2	Existing Conditions	
4.8.3	Environmental Consequences	
4.9 C	Cultural Resources	
4.9.1	Regulatory Setting	
4.9.2	Existing Conditions – Identification and Evaluation of Historic Properties	
4.9.3	Environmental Consequences	
4.10 H	Iazardous Materials	
4.10.1	Regulatory Setting	47
4.10.2	Existing Conditions	
4.10.3	Environmental Consequences	49
4.11 E	Environmental Justice	
4.11.1	Regulatory Setting	50
4.11.2	Existing Conditions	
4.11.3	Environmental Consequences	rk not defined.
4.12 Ho	using Urban Development Regulatory Requirements	
4.12 Ho	using Urban Development Regulatory Requirements	53
4.12 Hov 4.12 A	using Urban Development Regulatory Requirements Airport Hazards	
4.12 Ho 4.12 A 4.12.1 4.12.2	using Urban Development Regulatory Requirements Airport Hazards Regulatory Setting Existing Conditions	52 52
4.12 Hot 4.12 A 4.12.1 4.12.2 4.12.3	using Urban Development Regulatory Requirements Airport Hazards Regulatory Setting Existing Conditions Environmental Consequences	
4.12 Hot 4.12 A 4.12.1 4.12.2 4.12.3 4.13 (using Urban Development Regulatory Requirements Airport Hazards Regulatory Setting Existing Conditions Environmental Consequences Coastal Barrier Resource	
4.12 Hot 4.12 A 4.12.1 4.12.2 4.12.3 4.13 C 4.13 L	using Urban Development Regulatory Requirements Airport Hazards Regulatory Setting Existing Conditions Environmental Consequences Coastal Barrier Resource Regulatory Setting	
4.12 Hot 4.12 A 4.12.1 4.12.2 4.12.3 4.13 C 4.13.1 4.13.2	using Urban Development Regulatory Requirements Airport Hazards Regulatory Setting Existing Conditions Environmental Consequences Regulatory Setting Regulatory Setting Existing Conditions.	
4.12 Hove 4.12 A 4.12.1 4.12.2 4.12.3 4.13 C 4.13.1 4.13.2 4.13.3	using Urban Development Regulatory Requirements Airport Hazards Regulatory Setting Existing Conditions Environmental Consequences Regulatory Setting Regulatory Setting Existing Conditions Environmental Consequences Regulatory Setting Existing Conditions Environmental Consequences Environmental Consequences	
4.12 How 4.12 A 4.12.1 4.12.2 4.12.3 4.13 C 4.13.1 4.13.2 4.13.3 4.14 F	using Urban Development Regulatory Requirements Airport Hazards Regulatory Setting Existing Conditions. Environmental Consequences Regulatory Setting Regulatory Setting Existing Conditions. Environmental Consequences Regulatory Setting Existing Conditions. Environmental Consequences Regulatory Setting Environmental Consequences Environmental Consequences	
4.12 Hor 4.12 A 4.12.1 4.12.2 4.12.3 4.13 C 4.13.1 4.13.2 4.13.3 4.14 F 4.14 F	using Urban Development Regulatory Requirements Airport Hazards Regulatory Setting Existing Conditions Environmental Consequences Regulatory Setting Existing Conditions Environmental Consequences Regulatory Setting Environmental Consequences Regulatory Setting Environmental Consequences Barrier Resource Regulatory Setting Environmental Consequences Flood Insurance Regulatory Setting	
4.12 Hove 4.12 A 4.12.1 4.12.2 4.12.3 4.13 C 4.13 C 4.13.1 4.13.2 4.13.3 4.14 F 4.14.1 4.14.2	using Urban Development Regulatory Requirements Airport Hazards Regulatory Setting Existing Conditions Environmental Consequences Coastal Barrier Resource Regulatory Setting Existing Conditions Environmental Consequences Flood Insurance Regulatory Setting Environmental Consequences	
4.12 Hove 4.12 A 4.12.1 4.12.2 4.12.3 4.13 C 4.13 C 4.13.1 4.13.2 4.13.3 4.14 F 4.14.1 4.14.2 4.14.3	using Urban Development Regulatory Requirements Airport Hazards Regulatory Setting Existing Conditions Environmental Consequences Coastal Barrier Resource Regulatory Setting Existing Conditions. Environmental Consequences Flood Insurance Regulatory Setting Existing Conditions. Environmental Consequences	
4.12 Hor 4.12 A 4.12.1 4.12.2 4.12.3 4.13 C 4.13.1 4.13.2 4.13.3 4.14 F 4.14.1 4.14.2 4.14.3 4.15 C	using Urban Development Regulatory Requirements Airport Hazards Regulatory Setting Existing Conditions Environmental Consequences Existing Conditions Existing Conditions Environmental Consequences Regulatory Setting Existing Conditions Environmental Consequences Regulatory Setting Existing Conditions Environmental Consequences Flood Insurance Regulatory Setting Existing Conditions Environmental Consequences	
4.12 Hove 4.12 Hove 4.12 A 4.12.2 4.12.3 4.13 C 4.13 C 4.13.1 4.13.2 4.13.3 4.14 Hove 4.14.1 4.14.2 4.14.3 4.14.1 4.14.2 4.14.3 4.15 C 4.15 C	using Urban Development Regulatory Requirements Airport Hazards Regulatory Setting Existing Conditions. Environmental Consequences Coastal Barrier Resource Regulatory Setting Existing Conditions. Environmental Consequences Regulatory Setting Existing Conditions. Environmental Consequences Flood Insurance Regulatory Setting Existing Conditions. Environmental Consequences Clood Insurance Regulatory Setting Existing Conditions. Environmental Consequences Contamination and Toxic Substances Regulatory Setting	
4.12 Hove 4.12 A 4.12.1 4.12.2 4.12.3 4.13 C 4.13.1 4.13.2 4.13.3 4.14 F 4.14.1 4.14.2 4.14.3 4.14.1 4.14.2 4.14.3 4.15 C 4.15.1 4.15.2	using Urban Development Regulatory Requirements Airport Hazards Regulatory Setting Existing Conditions Environmental Consequences Coastal Barrier Resource Regulatory Setting Existing Conditions Environmental Consequences Regulatory Setting Existing Conditions Environmental Consequences Flood Insurance Regulatory Setting Existing Conditions Environmental Consequences	
4.12 Hove 4.12 A 4.12.1 4.12.2 4.12.3 4.13 C 4.13.1 4.13.2 4.13.3 4.14 F 4.14.1 4.14.2 4.14.3 4.15 C 4.15.1 4.15.2 4.15.3	using Urban Development Regulatory Requirements Airport Hazards Regulatory Setting Existing Conditions. Environmental Consequences Flood Insurance Regulatory Setting Existing Conditions. Environmental Consequences Contamination and Toxic Substances Regulatory Setting Existing Conditions. Environmental Consequences	
 4.12 Hot 4.12 A 4.12.1 4.12.2 4.12.3 4.13 C 4.13 C 4.13 C 4.13 C 4.13 C 4.13 C 4.14 F 4.14.1 4.14.2 4.14.3 4.15 C 4.15.1 4.15.2 4.15.3 4.16 F 	using Urban Development Regulatory Requirements Airport Hazards Regulatory Setting Existing Conditions Environmental Consequences Regulatory Setting Regulatory Setting Existing Conditions Environmental Consequences Regulatory Setting Existing Conditions Environmental Consequences Flood Insurance Regulatory Setting Existing Conditions Environmental Consequences Contamination and Toxic Substances Regulatory Setting Existing Conditions Environmental Consequences	
 4.12 Hot 4.12 A 4.12.1 4.12.2 4.12.3 4.13 C 4.13 C 4.13.1 4.13.2 4.13 C 4.13.1 4.14 F 4.14.1 4.14.2 4.14.3 4.15 C 4.15.1 4.15.2 4.15.3 4.16 F 4.16.1 	using Urban Development Regulatory Requirements Airport Hazards Regulatory Setting Existing Conditions. Environmental Consequences Coastal Barrier Resource Regulatory Setting Existing Conditions. Environmental Consequences Regulatory Setting Existing Conditions. Environmental Consequences Flood Insurance Regulatory Setting Existing Conditions. Environmental Consequences Contamination and Toxic Substances Regulatory Setting Existing Conditions. Environmental Consequences Contamination and Toxic Substances Regulatory Setting Existing Conditions. Environmental Consequences Contamination and Toxic Substances Regulatory Setting Existing Conditions. Environmental Consequences Contamination and Toxic Substances Regulatory Setting Existing Conditions. Environmental Consequences Environmental Consequences Environmental Consequences Environmental Consequenc	
 4.12 Hot 4.12 A 4.12.1 4.12.2 4.12.3 4.13 C 4.13 C 4.13.1 4.13.2 4.13 C 4.14 F 4.14.1 4.14.2 4.14.3 4.15 C 4.15.1 4.15.2 4.15.3 4.16 F 4.16.1 4.16.2 	using Urban Development Regulatory Requirements Airport Hazards Regulatory Setting Existing Conditions Environmental Consequences Regulatory Setting Existing Conditions Environmental Consequences Regulatory Setting Existing Conditions Environmental Consequences Viood Insurance Regulatory Setting Existing Conditions Environmental Consequences Viood Insurance Regulatory Setting Existing Conditions Environmental Consequences Contamination and Toxic Substances Regulatory Setting Existing Conditions Environmental Consequences Contamination and Toxic Substances Regulatory Setting Existing Conditions Environmental Consequences Caplosives and Flammable Hazards Regulatory Setting Existing Conditions Environmental Consequences	
 4.12 Hotel 4.12 A 4.12.1 4.12.2 4.12.3 4.13 C 4.14 F 4.14.1 4.14.2 4.14.3 4.15 C 4.15.1 4.15.2 4.15.3 4.16 F 4.16.1 4.16.2 4.16.3 	using Urban Development Regulatory Requirements Airport Hazards Regulatory Setting Existing Conditions. Environmental Consequences Regulatory Setting Existing Conditions. Environmental Consequences. Regulatory Setting Existing Conditions. Environmental Consequences. Flood Insurance. Regulatory Setting Existing Conditions. Environmental Consequences. Clood Insurance. Regulatory Setting Existing Conditions. Environmental Consequences. Contamination and Toxic Substances Regulatory Setting Existing Conditions. Environmental Consequences Cataplatory Setting Existing Conditions. Environmental Consequences Cataplatory Setting Existing Conditions. Environmental Consequences Cataplatory Setting Existing Conditions. Environmental Consequences Environmental Consequences Environmental Consequences Environmental Consequences E	

Construction of HANO's Mazant Royal Housing - Draft Environmental Assessment (October 2022) ii

	4.17.1	Regulatory Setting	
	4.17.2	Existing Conditions	
	4.17.3	Environmental Consequences	61
4	.18 V	Vild and Scenic River	
	4.18.1	Regulatory Setting	61
	4.18.2	Existing Conditions	61
	4.18.3	Environmental Consequences	Error! Bookmark not defined.
5	CON	DITIONS AND MITIGATION MEASURES	
6	PUBL	IC INVOLVEMENT	
7	CON	CLUSIONS	
8	AGE	NCY COORDINATION	
9	LIS	T OF PREPARERS	
10	RE	FERENCES	

APPENDICES

Site Photographs	Appendix A
Construction Plans	Appendix B
Agency Correspondence	Appendix C
Reports and Assesments	Appendix D
Permits and Authorizations	Appendix E
8-Step Decision Making Process	Appendix F
Public Notice and FONSI	Appendix G

TABLES

not defined.	
Table 3 ACS 2014-2018 Summary Report (Source EPA EJSCREEN Tool). Error!	Bookmark
Table 2 Census 2018 Summary Report for proposed site (Source EPA EJSCREEN T	`ool) 51
Table 1. Federally Listed Species Known to Occur in Orleans Parish	

FIGURES

Figure 1 – General location of the project Site	3
Figure 2 – Proposed Construction Site	4
Figure 3 – Aerial view of the damaged Mazant Royal Site	9

Construction of HANO's Mazant Royal Housing - Draft Environmental Assessment (October 2022) iii

Figure 4 – Aerial view, demolished Scattered Housing Unit, 5335 St Claude Avenue 10
Figure 5 – Site Plan for the proposed new construction
Figure 6 Generalized Geologic Map of Louisiana indicating project area (Louisiana Geological Survey 2010)
Figure 7 – USDA NRCS Web Soil Survey for New Construction Site 15
Figure 8 – National Wetlands Inventory Map for New Construction Location
Figure 9 – National Flood Hazard Layer FIRMette for the Proposed HANO Mizant Royal site 21
Figure 10 – Existing Peak Hour Volumes, Traffic Impact Study, 2019
Figure 11 – Existing & Generated Peak Hour Volumes, Traffic Impact Study, 2019 32
Figure 12 - Local of the Mazant-Royal APE on the USGS 1992 New Orleans East 7.5" quadrangle map. The Bywater NRHD is shaded in yellow
Figure 13 - Cumulative Impacts Area of Potential Effects. Image created 1/17/2020
Figure 14 - View of project site from SW corner facing NNE looking toward 4100 block of Royal Street. (Photo credit: FEMA)
Figure 15 - 136 Units – H Shape - Preferred Action
Figure 16 - 3 Story H shape - 108 Units
Figure 17 - 3 Story H shape - 108 Units
Figure 18 - 3-Story L shape - 121 Units
Figure 19 - 3-Story L shape - 121 Units
Figure 20 - U-shaped, 112 Units
Figure 21 - U-shaped, 112 Units
Figure 22 - 106 Units - 3+4 story L Shape
Figure 23 - 106 Units - 3+4 story L Shape
Figure 24 - 106 Units - 3+4 story L Shape
Figure 25 - 132 Units – 3 Story Wrap
Figure 26 - 132 Units – 3 Story Wrap 46
Figure 27 - Map showing EPA regulated sites (NEPAssist, 2020)
Figure 28 – Airport Locator Map
Figure 29 – U.S Fish and Wildlife Service Coastal Barrier Resources System Map 55
Figure 30 – National Flood Hazard Layer FIRMette Map
Figure 31 – Sole Source Aquifers Map 60
Figure 32 – Wild and Scenic Rivers Map

Construction of HANO's Mazant Royal Housing – Draft Environmental Assessment (October 2022) iv

Construction of HANO's Mazant Royal Housing – Draft Environmental Assessment (October 2022) v

LIST OF ACRONYMS AND ABBREVIATIONS

ABFE	Advisory Base Flood Elevation
ACM	Asbestos-Containing Material
APE	Area of Potential Effects
ASTM	American Society for Testing and Materials International
BFE	Base Flood Elevation
BMP	Best Management Practices
CAA	Clean Air Act
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
CTR	In-House Contract Consultant
CUP	Coastal Use Permit
CWA	Clean Water Act
cy	cubic yards
CZMA	Coastal Zone Management Act
dBA	decibel, on the A-weighted Scale
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
EC	Elevation Certificate
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
GPO	U.S. Government Printing Office
HANO	Housing Authority of New Orleans
HDPE	High-Density Polyethylene
HEAG	Highest Existing Adjacent Grade
HUD	U.S. Department of Housing and Urban Development

Construction of HANO's Mazant Royal Housing – Draft Environmental Assessment (October 2022) vi

IER	Individual Environmental Report
LA GOHSEP	Louisiana Governor's Office of Homeland Security and Emergency Preparedness
LaDOTD	Louisiana Department of Transportation and Development
LCRP	Louisiana Coastal Resources Program
LFA	Local Floodplain Administrator
LDEQ	Louisiana Department of Environmental Quality
LDNR	Louisiana Department of Natural Resources
LHC	Louisiana Housing Corporation
LNHP	Louisiana Natural Heritage Program
LOC	Letter of Concurrence
LOS	Level of Service
LPDES	Louisiana Pollutant Discharge Elimination System
NAAQS	National Ambient Air Quality Standards
NAJ	No Alternative Justification
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOS	National Ocean Service
NOx	Nitrogen Oxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWP	Nation Wide Permit(s)
OCM	Office of Coastal Management
OSHA	Occupational Safety and Health Administration
O ₃	Ozone
PA	Public Assistance
PCB	Polychlorinated Biphenyl
PCC	Portland Concrete Cement
P.L.	Public Law
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Conditions
RHA	Rivers and Harbors Act
SARA	Superfund Amendments and Reauthorization Act
sf	square-foot, square feet
SFHA	Special Flood Hazard Area
SHPO	State Historic Preservation Office/Officer
SIP	State Implementation Plan

SOV	Solicitation of Views
STraCAT	Sound Transmission Classification Assessment Tool
TIS	Traffic Impact Study
TSCA	Toxic Substances Control Act
USACE	U.S. Army Corps of Engineers
U.S.C.	U.S. Code
USDOI	U.S. Department of the Interior
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VOC	Volatile Organic Compound
WQC	Water Quality Certification

1 INTRODUCTION

1.1 Hurricane Katrina

Hurricane Katrina, a Category 4 hurricane with a storm surge above normal high tide levels, moved across the Louisiana, Mississippi and Alabama gulf coasts on August 29, 2005. Maximum sustained winds at landfall were estimated at 140 miles per hour. The accompanying high winds, storm surge, and surge-driven debris caused extensive damage to the area levee systems and caused extensive flooding throughout Orleans Parish.

1.2 Project Authority

President Bush signed a disaster declaration (FEMA-1603-DR-LA) on August 29, 2005, authorizing the Department of Homeland Security's 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, an Environmental Assessment (EA) 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 EA is to analyze potential environmental and cultural resource impacts of the proposed project. FEMA will use the findings in this EA to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

1.3 Background

The Housing Authority of New Orleans (HANO or Sub-recipient) is the largest Housing Authority in the State of Louisiana and currently serves over 20,000 households in Orleans Parish. Much of HANO's portfolio including hundreds of smaller family units scattered throughout the city of New Orleans (Scattered Sites) was damaged by Hurricane Katrina wind and/or flooding. Restoring and providing affordable housing opportunities for low-income residents of the city of New Orleans is critical for the economic sustainability of the city. HANO submitted an application for FEMA funding under FEMA's Public Assistance Program being administered in response to FEMA-1603-DR-LA. HANO originally proposed to construct 18 new public housing units on the block bounded by Mazant, Royal, France, and Chartres Streets in New Orleans, Louisiana. The pre-Katrina Mazant Royal Housing Development had a total of 17,920 square feet. The proposed new Mazant Royal Housing Development would be 21,960 square feet, in one central location.

Construction of HANO's Mazant Royal Housing – Draft Environmental Assessment (October 2022) 1

According to HANO, the increase in overall square footage of their project is the result of applicable codes and standards, particularly for the necessary increase in the size of the bedrooms and the number of bathrooms.

In the relationship between Louisiana Housing Cooperation, U.S. Department of Housing and Urban Development, and FEMA, FEMA is the lead agency, and LHC is HUD's delegated entity and is a cooperating agency for this Environmental Assessment. The HUD prepared an Environmental Assessment for HUD-funded Proposals - Mazant Royal Site (HUD 2007), i.e., a housing project on this site, and issued a Finding of No significant Impact (FONSI) dated May 29, 2007 (2007a). Any federal agency may adopt another federal or state agency's EA, and is encouraged to do so when such adoption would save time and money (40 CFR §1500.4(n), §1500.5(h), and §1506.3), providing the original document satisfies the agency's National Environmental Policy Act (NEPA) requirements. The program and scope of work for HUD's original housing project has been modified, however, so rather than adopt HUD's EA, FEMA chose to prepare an independent draft Environmental Assessment for the scope of work HANO proposed in 2020-2021. HUD's Environmental Review Record (ERR) is included as Appendix A of this document for reference.

As plans for the new construction project were developed HANO has determined that the reconstruction of the damaged facility to its pre-Katrina specifications would not be in the best interest of the community. Consequently, in accordance with 44 C.F.R. § 206.203(d), HANO has requested an Improved Project. An Improved Project is any project where the Sub-Recipient chooses to make additional improvements to an existing facility in the course of making disaster repairs. An Improved Project restores the facility and maintains its function, either at the current site or in another existing or new facility/site. In addition to the damaged facility, HANO also owns numerous flood-damaged smaller scattered housing units that are located in census tracts with higher poverty rates than the current Mazant Royal site. HANO proposes to utilize the scattered site reconstruction funding toward the Mazant Royal Improved Project to construct a new multi-story affordable housing apartment building in the Bywater neighborhood of New Orleans. The FEMA funds would be leveraged with additional federal, state, local, and private funds to deliver more affordable apartments in an area of high opportunity than would have been possible with FEMA assistance alone.

HANO proposes to construct a new 136 housing units in a single four-story multi-family residential building. The site is approximately 1.79 acres and is comprised of 10 vacant land parcels with various addresses which have been re-platted into one single lot of record. The site is located within the area bounded by Royal Street to the north, France Street to the east, Chartres Street to the south, and Mazant Street to the west. Of the 136 housing units, 82 units will be rented as affordable housing and 54 would be market rate units. The building will contain a mix of 50 one-bedroom units, 68 two-bedroom units and 18 three-bedroom units. Other planned amenities include a fitness center, business center, community room with media lounge, playground, bicycle parking, on-site vehicle parking, and rooftop terraces. The project supports the city's overall goal of providing quality affordable housing to meet neighborhood needs and promote equity and access to opportunity. Further, the Mazant Royal site is one of the last opportunities to provide a



significant number of affordable housing apartments in a high opportunity area where the chance of flooding is reduced.

Figure 1 – General location of the project Site



Figure 2 – Proposed Construction Site

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 has a subtropical, humid climate typical of coastal regions along the Gulf of Mexico. The proposed project site is located within the Mississippi Alluvial Plain ecoregion of Louisiana, Deltaic Coastal Marshes and Barrier Islands sub-ecoregion, which is composed of a broad, mostly flat deltaic plain with river terraces, swales, and levees providing the main elements of relief. The typical physiography is freshwater and saline marshes, rivers, lakes, bayous, tidal channels, canals, and barrier islands. Few trees are present. 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, Daigle et al. 2006).

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, however, has been relatively unchanged since the mid-1980s, 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 (City of New Orleans, CNO 2010b).

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. Since Hurricane Katrina, due to the extent of flooding and numerous other impediments to recovery, many structures within the city remain unoccupied, while others have been demolished and left as vacant lots (CNO 2010b).

The construction site is about 1.79 acres and is comprised of 10 vacant land parcels owned by HANO. The site has been re-platted into a single parcel having the following GPS coordinates: NE corner (29.961020°, -90.034867°), NW corner (29.961201°, -90.035652°), SW corner (29.960356°, -90.035913°), and SE corner (29.960180°, -90.035129°). It is bounded by Royal Street to the north, France Street to the east, Chartres Street to the south, and Mazant Street to the west. The construction site is located within Bywater Historic District, a district listed in the National Register of Historic Places in 1986.

2 PURPOSE AND NEED

Purpose:

The objective of FEMA's Public Assistance (PA) Grant Program is to provide assistance to state, tribal, and local governments, as well as certain private non-profits so that communities can respond and recover from major disasters or emergencies declared by the President. As a result of Hurricane Katrina, much of the Housing Authority of New Orleans' (HANO) portfolio was damaged by wind and/or flooding. The mission of HANO is to provide affordable housing opportunities for low-income residents of the city of New Orleans, while laying the foundation for economic sustainability. HANO is the largest Housing Authority in the State of Louisiana and currently serves over 20,000 households in Orleans Parish. The purpose of this proposed action is to continue the recovery from Hurricane Katrina by rebuilding more resilient affordable housing stock in areas at lower risk for flooding and in areas of higher opportunity.

Need:

New Orleans is currently experiencing an affordable housing crisis. Sixty-seven percent (67%) of all renter households in Orleans Parish are making less than 80% of Area Median Income (AMI), thus qualifying them as low-income households. Of all of the low-income households, 74% are cost-burdened, paying more than 30% of their income on housing.

Further, in 2016, the City of New Orleans and HANO submitted the Assessment of Fair Housing (AFH) Plan to the Department of Housing and Urban Development (HUD) recognizing the lack of access to quality housing in areas of high opportunity by low-income New Orleanians. To address these barriers, the AFH Plan proposes to:

1. Lower barriers to expanded affordable housing in high opportunity areas through inclusive strategies.

2. Reduce housing segregation and discrimination by aggressively conducting fair housing education and enforcement activities, in coordination and with fair housing organizations.

3. Ensure that internal policies and practices advance access & mobility for groups with significant challenges in accessing safe and affordable housing including people with disabilities, people with limited English proficiency, and people with criminal records.

4. Prioritize public investments in transit, quality schools, housing, parks, and other amenities in underserved communities.

5. Expand efforts in creating equitable healthy housing that recognizes the direct connections between healthy housing and quality of life.

6. Stabilize neighborhoods vulnerable to gentrification by preserving existing ownership and affordable rental housing and developing affordable homeownership and rental housing.

7. Provide reliable, frequent, and affordable access to multiple transportation options to transit-dependent populations.

Although HANO currently serves over 20,000 low-income households, the waiting list for assistance from HANO's two main programs remains at over 20,000 additional households. The need to leverage a multitude of financial resources to expand quality affordable opportunities to the maximum amount of households is critical.

3 ALTERNATIVES

3.1 Overview of Alternatives

The NEPA process consists of an evaluation of the environmental effects of a federal undertaking, including its Alternatives. Three (3) Alternatives have been considered including 1) the "No Action" Alternative, 2) the "Preferred Action Alternative" involving the 136 Units New Construction at the Mazant Royal Site, and 3) a considered Alternative consisting of Construction of the New Housing Development at an Alternate Site.

3.2 Alternative 1 - No Action

NEPA requires consideration of a "No Action" Alternative to a proposed action receiving federal funding. Selection of the No Action Alternative would further delay the redevelopment of the HANO owned property and could potentially result in loss of HOME funds, Low Income Housing Tax Credits (LIHTC), and other sources of funding needed to provide affordable housing in an area of high opportunity. Under the No Action Alternative, future residents would lose the opportunity to choose better access to jobs, schools, transportation and other vital resources. As a result, if the No Action Alternative were to be selected, the best opportunity to support the mission of HANO to provide affordable housing opportunities for low-income residents, while laying the foundation for economic sustainability would be lost, and the future of the Bywater housing site would be in jeopardy. The vacant lot would not be developed, there would be no impacts to the environment from development on the lot, but the goal of providing housing would not be achieved.

3.3 Alternative 2 - 136 Units New Construction at the Mazant Royal Site (Preferred Action)

This Alternative (preferred action) meets the objectives of the Housing Authority and the City of New Orleans to address the overwhelming need for affordable housing in New Orleans by providing to its residents high quality, safe and decent affordable housing in areas that provide access to the necessary tools to achieve economic sustainability. The development of affordable housing is a complex balance of available resources on the federal, state, and local level. It is also a resource pool that changes each year. Affordable housing programs typically provide either construction funding or operating funding, but not both. This Alternative currently balances government sources with resources provided by the high-demand market to provide a mixed-income community. This Alternative provides 82 income-restricted apartments (60%) and 54 (40%) unrestricted apartment homes. The unrestricted units are an essential component to ensuring the long term viability of the affordable housing stock. Without an income mix, affordable unit income cannot support expenses, deferred maintenance and poor management

ensues, and the property could potentially become a blight on the neighborhood. Additionally, unrestricted units in the property allows upward mobility for low income residents to stay in the home and neighborhood by transitioning to the units. Additionally, locating all multifamily units at a single property allows every resident access to the property's amenities, management staff, and access to tenant supportive services that many low-to-moderate income residents depend on.

Following a period of public comment, which included numerous community based public stakeholder meetings, the proposed action Alternative was conceived in April 2019 as a 4-story building. The revised design results in a 10% reduction in scale, the reduction of one story from the building, and results in the loss of eight affordable units from previous iterations of the project. Although New Orleans' Historic District Landmarks Commission (HDLC) does not hold jurisdiction over this project, this new design was brought to the Architectural Review Committee of the HDLC in a good-faith gesture to the historic preservation community. With the input of the HDLC, the present design, which includes a 2-story setback on the more residential France and Royal Streets and a 4-story section along the more commercial Mazant and Chartres Streets, was agreed upon. Furthermore, HANO and the Developer voluntarily entered into a Planned Development Agreement with the City of New Orleans which further restricts the design of the building to meet agreed upon 23 provisos which were agreed upon by all parties during the public design comment period.



Figure 3 – Aerial view of the damaged Mazant Royal Site



Figure 4 – Aerial view, demolished Scattered Housing Unit, 5335 St Claude Avenue



Figure 5 – Site Plan for the proposed new construction

3.4 Alternative 3 - Construction of the New Housing Development at an Alternate Site.

The construction of the new housing development at a different location from the preferred action alternative. While HANO owns a multitude of property in New Orleans, none are situated to provide access to economic stability. HANO contains only just 3 assemblages of property not currently under development that are as large or larger than the acreage of the site proposed under the preferred alternative (1.7 acres). Two of the properties are located in New Orleans East and one of the properties is located in the Lower 9th Ward on the Orleans Parish line. All 3 are located in areas with significantly higher poverty rates, and all 3 sites are without convenient access to reliable public transportation, high-performing schools, and essential amenities like fresh food and medical care.

Further consideration was given to spreading out a similar number of units among several properties. Still HANO does not own enough scattered sites land in other high-opportunity areas of the city that are not already under development. Housing that is centralized in one location takes advantage of capital funding and operational efficiencies, providing an offset to the high cost of developing in high-demand areas. Finally, the purchase of a new parcel of land is infeasible due to high land cost in high-demand areas. Therefore, this alternative does not meet the purpose and need and is eliminated from further consideration.

4 AFFECTED ENVIRONMENT AND ALTERNATIVES ANALYSIS

4.1 Geology, Soils, and Topography

4.1.1 Regulatory Setting

The Farmland Protection Policy Act (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 (NRCS) 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 can also 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 (1) foot above 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 (Figure 14). 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 last 150 years, only two (2) seismic events have been recorded in New Orleans, the minor earthquakes of 1882 and 1958. These tremors occurred in the vicinity of the Thibodaux Fault, which runs in a roughly east-west direction in metro-New Orleans, between the Mississippi River and the south shore of Lake Pontchartrain. Based upon data from the periods 1938 to 1971 and 2009 to 2012, overall subsidence in the project vicinity is approximately 3 feet/century (including sea level rise) (van Beek et al. 1986, Gagliano et al. 2003, Gagliano 2005, Greicius 2016).



Figure 6 Generalized Geologic Map of Louisiana indicating project area (Louisiana Geological Survey 2010)

In Orleans Parish, all of the water used for public consumption and certain industrial applications is taken from the Mississippi River. Even though the quality of the water varies somewhat with the volume of flow in the river, it is considered suitable for public use (Trahan 1989). Groundwater below the study area is located in three (3) of the four (4) major aquifers present in Orleans Parish. These aquifers consist of the Gramercy (up to 400 feet below the soil surface), the Norco (up to 500 feet deep), and the Gonzales-New Orleans (up to 900 feet deep). The "1,200-foot" Sand, present in some parts of Orleans Parish, does not underlay the project area. The Gramercy and Norco aquifers are not used for municipal or industrial purposes due to their high mineral or salt content. The portion of the Gonzales-New Orleans aquifer north of the Mississippi River is freshwater; however, high levels of chloride make it unsuitable for public consumption. It is used, instead, for industrial purposes such as cooling. The "1,200 foot" Sand aquifer contains too much salt for most uses (Prakken 2009).

USDA Web Soil Survey (accessed May 2020) indicates that the majority of soil (71.2%) at the vicinity of the proposed construction site consists of the non-prime farmland urban Land (Ub). The remaining 28.8 6% of the site consists of and the non-prime farmland Cancienne silt loam, 0 to 1 percent slopes (Cm). These are somewhat poorly drained, rarely-flooded, non-ponding, Group C, non-hydric soils that form ridges on natural levees.

Construction of HANO's Mazant Royal Housing – Draft Environmental Assessment (October 2022) 14



Figure 7 – USDA NRCS Web Soil Survey for New Construction Site

Construction of HANO's Mazant Royal Housing – Draft Environmental Assessment (October 2022) 15

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.

Alternative 2 – 136 Unit New Construction at the Mazant Royal Site (Preferred Action)

None of the the soil at the construction site can be considered as prime farmland soil, as the site is located in an urban area that is not being used for the production of food, feed, forage, fiber, or oilseed crops. Urban areas are exempt from the rules and regulations of the Farmland.

Protection Policy Act (FPPA)-Subtitle I of Title XV, Section 1539-1549 [USDA, 2020]. In addition, the preferred Alternative of demolishing the sctttered site buildings would have no negative impacts on farmlands. No other significant impacts to geologic resources resulting from Alternative 2 are anticipated.

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 technologybased 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 codified 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 effects 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 F. 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-receipients 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 Nation Wide Permits (NWPs) 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

According to the current U.S. Fish and Wildlife Service's (USFWS) National Wetlands Inventory (NWI) Map (see Figure 8 and 10), there are no existing wetlands within the new construction site. In addition most of Orleans Parsh is urbanized and include no wetlands (USFWS, 2020). The nearest waterbody to the construction site is the Mississippi River which is protected from any potential site impacts by a levee.

U.S. Fish and Wildlife Service National Wetlands Inventory	4100 Royal street, New Orleans,	LA
<complex-block></complex-block>		
May 26, 2020	This map is for general reference only. The US Fish Service is not responsible for the accuracy or current based at a choice on the second of	and Wildlife tness of the
Wetlands Freshwater Emergent Wetland	Lake be used in accordance with the layer metadata found Wetlands Mapper web site.	d on the
Estuarine and Marine Deepwater Freshwater Forested/Shrub Wetland	Other	
Estuarine and Marine Wetland Freshwater Pond	Riverine National Wetlands In This page was produced by the	iventory (NWI) e NWI mapper

Figure 8 – National Wetlands Inventory Map for New Construction Location

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 – 136 Unit New Construction at the Mazant Royal Site (Preferred Action)

Construction of HANO's Mazant Royal Housing – Draft Environmental Assessment (October 2022) 18

NWI Map indicates that there are no wetlands at the new construction. The site is approximately 1.79 acres and would require a SWPP per LDEQ requirements. The construction site is within 450 ft from the Mississippi River and 150 ft from the Mississippi River Levee. Construction within close proximity to the levee requires coordination and approval from the USACE and Orleans Levee District. FEMA initated Joint LDNR/USACE solicitation of views P20201133 dated 01/04/2021, states this project requires a full application packet to be submitted by the Applicant for further review. This full application packet and additional coordination between the Applicant and LDNR/USACE/Orleans levee District is likely to occur after the draft EA enters the public notice period.

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 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's 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.

Construction of HANO's Mazant Royal Housing – Draft Environmental Assessment (October 2022) 19

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. See 44 CFR 9.4.

4.3.2 Existing Conditions

In July 2005, prior to Hurricane Katrina, FEMA initiated a series of flood insurance studies for many of Louisiana's coastal parishes as part of the Flood Map Modernization Effort through FEMA's National Flood Insurance Fund. These studies were necessary because the flood hazard and risk information shown on the effective Flood Insurance Rate Maps (FIRMs) was developed during the 1970s. Since that time, the physical terrain had changed considerably, including the significant loss of wetland areas. After Hurricanes Katrina and Rita, FEMA expanded the scope of work to include all of coastal Louisiana. The magnitude of impacts caused by the two (2) hurricanes reinforced the urgency to obtain additional flood recovery data for the coastal zones of Louisiana. More detailed analysis was possible because new data obtained after the hurricanes included information on levees and levee systems, new high-water marks, and new hurricane parameters.

During an initial post-hurricane analysis, FEMA determined the 100-year or 1% annual chance storm flood elevations on FIRMs for many Louisiana communities, referred to as Base Flood Elevations (BFEs), were too low. FEMA created recovery maps showing the extent and magnitude of the surges from Hurricanes Katrina and Rita, as well as information on other storms over the past 25 years. The 2006 advisory flood data shown on the recovery maps for the Louisiana-declared disaster areas indicated high-water marks surveyed after the storm, flood limits developed from these surveyed points, and Advisory Base Flood Elevations, or ABFEs. These recovery maps and other advisory data were developed to assist parish officials, homeowners, business owners, and other affected citizens with their recovery and rebuilding efforts. Orleans Parish ABFE Maps (DHS 2006) were used by the Orleans Parish National Flood Insurance Program (NFIP) community for floodplain management purposes.

Updated preliminary flood hazard maps from an intensive five-year mapping project guided by FEMA subsequently were provided to all Louisiana coastal parishes. These maps, released in early 2008, known as Preliminary Digital Flood Insurance Rate Maps (DFIRMs), were based on the most technically advanced flood insurance studies ever performed for Louisiana, followed by multiple levels of review. The DFIRMs provided communities with a more scientific approach to economic development, hazard mitigation planning, emergency response, and post-flood recovery.

The USACE has completed and certified the new Hurricane and Storm Damage Risk Reduction System (HSDRRS) for the Greater New Orleans area. This 350-mile system of levees, floodwalls, surge barriers, and pump stations reduce the flood risk associated with future storm events. In September 2011, the USACE provided FEMA with assurances that the HSDRRS is capable of defending against a storm surge with a 1% annual chance of occurrence (DHS 2011). The areas protected include portions of St. Bernard, St. Charles, Jefferson, Orleans, and Plaquemines Parishes.

In November 2012, FEMA revised the 2008 preliminary DFIRMs within the HSDRRS to incorporate the reduced flood risk associated with the system improvements. The preliminary DFIRMs were subsequently revised in 2013 and 2014. On September 30, 2016, the 2014 Revised Preliminary DFIRMs for Orleans Parish became effective.

The 2016 Effective DFIRMs are currently viewed as the best available flood risk data for Orleans Parish. In many areas, the flood risk has been significantly reduced due to heightened protection. For traditional construction projects, no project should be built to a floodplain management standard that is less protective than what the community has adopted in local ordinances through its participation in the NFIP (DHS 2011). Orleans Parish enrolled in the NFIP on August 3, 1970. Per Effective DFIRM Panel Number 22071C0233F dated 30 September 2016, the proposed construction site is located within Flood Zone X, an area with reduced flood risk due to levee.

The Flood Insurance Rate Map (Firmette) of the site prepared from the FEMA Flood Map Service Center is presented in Figure 9 below.



Figure 9 – National Flood Hazard Layer FIRMette for the Proposed HANO Mazant Royal site

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 demolition or construction activities. This course would have no further adverse impacts to the floodplain.

Alternative 2 – 136 Unit New Construction at the Mazant Royal Site (Preferred Action)

Alternative 2 was reviewed for possible impacts associated with occupancy or modification to a floodplain. The site is located outside the SFHA. The Sub-recipient is required to coordinate with the local floodplain administrator (LFA) regarding any floodplain permit(s)/requirements prior to the start of any activities.

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 LDNR 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 project site is located entirely within the Louisiana Coastal Zone but outside any regulated CBRA unit. None of the evaluated Alternatives involves relocation outside of the coastal zone or to a CBRS unit. The new construction site is subject to permit requirements under the LCRP. Per FEMA initated Joint LDNR/USACE solicitation of views P20201133 dated 01/04/2021, this project requires a full application packet to be submitted for further review.

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 – 136 Unit New Construction at the Mazant Royal Site (Preferred Action)

Alternative 2 would involve construction in a designated coastal zone. In accordance with a 2013 LDNR OCM Special Public Notice, the granting of federal financial assistance as defined in 15 C.F.R. § 930.91 is fully consistent with the LCRP; however, consistency with the LCRP does not excuse Sub-Recipients from the need to obtain a CUP, if necessary. Because this alternative does not appear to qualify for any of the exemptions found at Title 43.I Part 723 of the Louisiana Natural Resources Regulatory Code, a complete CUP Application packet would be required in order to properly evaluate work under Alternative 2 but 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 on 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 EA 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

As of the latest updated USFWS threatened and endangered list for the State of Louisiana, dated 08 April 2020, one (1) mammal species, the West Indian manatee, are federally listed as threatened or endangered and are known to occur in select waterways within Orleans Parish (see Table 1). The proposed project site is located within the Mississippi Flyway (Mississippi Flyway Council).

Common Name	Scientific Name	Federal Status	Habitat Requirements	Critical Habitat	Impact* / Rationale
West Indian manatee	Trichechus manatus	Threatened	Found in marine, estuarine, and freshwater	Alternative 1 – No	None/There is no suitable habitat at the Alternative 1 sites.
			environments with a strong preference for warm and well- vegetated waters.	Alternative 2 - No	None/There is no suitable habitat at the Alternative 2 site.

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

Note: Data accessed April 08, 2020 from the Endangered Species Act (ESA) Project Review and Guidance for Other Federal Trust Resources Online Application hosted by the Louisiana Ecological Services Field Office of the USFWS (https://www.fws.gov/southeast/lafayette/project-review/).

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 – 136 Unit New Construction at the Mazant Royal Site (Preferred Action)

Implementing the Proposed Action would result in no significant impacts to biological resources. The Alternative 2 site is an urban areas that has been previously disturbed. None of the existing vegetation is considered critical habitat and none provides suitable habitat for rare, threatened, or endangered species found in Orleans Parish. Consultation conducted with the LDWF and USFWS on April 08, 2020 confirmed that this action would have no impacts to rare, threatened, or endangered species or critical habitat at both project locations (LDWF 2020, USFWS 2020).

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), ground-level ozone (O₃), particulate matter (less than 10 micrometers [PM₁₀] and less than 2.5 micrometers [PM_{2.5}]), and sulfur dioxide (SO₂).

In addition, the USEPA regulates hazardous air pollutants, such as asbestos, under the "air toxics" provisions of the CAA. Section 112 of the CAA established the National Emission Standards for Hazardous Air Pollutants (NESHAP) and required the USEPA to develop and enforce regulations to protect the public from exposure to airborne contaminants that are known to be hazardous to human health. Major health effects associated with asbestos include lung cancer, mesothelioma, and asbestosis (USEPA 2016a).

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 July 5, 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 EA, 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* (USEPA 2020), Orleans Parish is considered to be an "attainment area" for criteria pollutants. Pursuant to 40 C.F.R. § 93.157, "If an action's

emissions are below the *de minimis* levels or the action is not located in a nonattainment or maintenance area, a conformity determination is not required" (Revisions to the General Conformity Regulations 2010). As a result, no General Conformity determination is required by FEMA for projects funded within Orleans parish.

4.6.3 Environmental Consequences

Alternative 1 – No Action

The "No Action" Alternative would involve no undertaking and, therefore, would cause no shortor long- term impacts to air quality and no general conformity applicability determination would be required.

Alternative 2 – 136 Unit New Construction at the Mazant Royal Site (Preferred Action)

LDEQ provided comments to FEMA EHP's SOV on April 30, 2020. As containined in SOV response #200402/0175, the LDEQ Business and Community Outreach Division has no objections to the proposed project. Orleans Parish is currently classified as attainment with the NAAQS. Therefore, the site is not located in a nonattainment or maintenance area, and a general conformity applicability determination is not required.

This Alternative potentially includes short-term impacts to air quality resulting from demolition and construction activities. 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 effects would be localized and of short duration.

To reduce potential short term effects to air quality from construction-related activities, the contractor would be responsible for using BMPs to reduce fugitive dust generation and diesel emissions. Emissions from the burning of fuel by internal combustion engines could temporarily increase the levels of some of the criteria pollutants, including CO_2 , NO_x , O_3 , and PM_{10} , and non-criteria pollutants such as volatile organic compounds. To reduce these emissions, running times for fuel-burning equipment should be kept to a minimum and engines should be properly maintained.

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 over a 24-hour period. 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 (42 U.S.C. 4901 et seq.), 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, places of worship, 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.

Average acceptable day-night sound pressure levels fall in a range between 50 dB in quiet suburban areas to 70 dB in very noisy urban areas (USEPA 1974). The day-night sound level is a cumulative metric that accounts for the total sound energy occurring over a 24-hour period, with nighttime noise (occurring from 10 pm to 7 am) more heavily weighted to reflect community sensitivity during nighttime hours. Seventy-five (75) dB is generally considered unacceptable in urban areas with 85 dB being unacceptable in industrial areas (Housing and Urban Development [HUD]).

The City of New Orleans Noise Ordinance (§ 66-202) 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 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 2015b). "RS," "RD," and "RM" are considered to be types of residential districts.

4.7.2 Existing Conditions

The project is not located within 1,000 feet of a freeway or major highway. However, the project is located within 3,000 feet of a railroad, within five miles of a civil airport, and within 15 miles of a military airport. There are sensitive receptors, other residences and a closed school, within 500 feet of Alternative 2, the proposed construction location. The railroad, New Orleans Public Belt Railroad, is located approximately 50 feet south and southeast of the project. New Orleans Lakefront Airport is located approximately 5.0 miles north-northeast of the Project. New Orleans Naval Air Station JRB/Alvin Callender Field is located approximately 7.4 miles southeast of the Project. Based on proximity of the noise sources, Bureau Veritas conducted a noise study for the project. The noise study was conducted using methodology prescribed in the HUD Noise Guidebook and the On-Line HUD Site DNL Calculator. Based on the results of the noise study, the exterior noise level at the project was calculated to be 80 decibels (dB) at the residences beyond the parking area, 85 dB at the residences on the second floor proximal to the railroad (Chartres Street and France Street), and 88 dB at the leasing office. The projected 10-year exterior noise levels at the project are projected to be 81 dB to 89 dB. These levels are defined by HUD as Unacceptable. Based on the Unacceptable noise levels at the Project, per HUD Guidelines, the

project architect conducted an evaluation of the interior noise level using the HUD Sound Transmission Classification Assessment Tool (STraCAT). The interior noise level at the project was calculated to be 40.01 decibels (dB) at the residences beyond the parking area, 43.4 dB at the residences on the second floor proximal to the railroad (Chartres Street and France Street), and 46.31 dB at the leasing office. The evaluation determined that the wall design components for the proposed project meets the required noise attenuation. The City of New Orleans passed a Resolution dated August 5, 2021 (R-21-309) to "initiate or continue with due speed its efforts to create quiet zones in neighborhoods along the Mississippi River, from Audubon in District A to Bywater in District C, that are adjacent to the Public Belt". The creation of this Quiet Zone with the Federal Railroad Administration will provide additional reduction of noise levels by 10 dB at the Project."

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 or demolition would occur.

Alternative 2 – 136 Unit New Construction at the Mazant Royal Site (Preferred Action)

Under this Alternative, construction and demolition activities 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. Following completion of construction activities, operations at the site would not result in any significant permanent increases in noise levels.

4.8 Traffic

4.8.1 Regulatory Setting

Roads play a major role in the management of traffic, particularly in densely-populated urban areas such as New Orleans. The 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).

4.8.2 Existing Conditions

The housing site is surrounded by residential properties and commercial development. The Traffic Impact Study (TIS) and Estimated Annual Average Daily Traffic Routine Traffic Counts were conducted by Neel-Shaffer Inc to evaluate the impact of the proposed development on the surrounding transportation network (Traffic Impact Study, September 2019). The TIS showed that Chartes Street has an average daily traffic count of approximately 3,232 vehicles per day, adjacent to the proposed housing site. The study also showed that Mazant, France, and Royal Street each have less than 420 vehicles per day, adjacent to the site. (TIS, September 2019). (Figure 10; Neel-Shaffer Inc., TIS 2019).



Figure 10 – Existing Peak Hour Volumes, Traffic Impact Study, 2019



Figure 11 – Existing & Generated Peak Hour Volumes, Traffic Impact Study, 2019

4.8.3 Environmental Consequences

Alternative 1 – No Action

Construction of HANO's Mazant Royal Housing – Draft Environmental Assessment (October 2022) 32

Implementation of the "No Action" Alternative would not adversely affect the site traffic patterns as no construction would occur.

Alternative 2 – 136 Unit New Construction at the Mazant Royal Site (Preferred Action)

The proposed location of Mazant Royal Housing would be along the north side of Chartres Street on the site of the old Oliver Plantation in the By-Water neighborhood of New Orleans, Louisiana. The 136 unit development would be bordered by Royal Street to the north, France Street to the east and Mazant Street to the west. The development would have two (2) points of vehicular ingress, one along Mazant Street and the other along Chartres Street. The Chartres Street access drive will also serve as the only point of vehicular egress from the development. Under this Alternative, a temporary increase in construction-related traffic during construction of the housing would be anticipated. Based on the analyses performed as part of the TIS, it was determined that the proposed housing development would not have an impact on the flow of traffic along Chartres Street nor on the surrounding intersections (Neel-Shaffer Inc., TIS 2019). For this reason, there are no improvements recommended along any of the intersections within the study area (Neel-Shaffer Inc., TIS 2019).

The study found that the existing sight distance from France and Chartres Street was limited due to overhanging limbs from the existing oak trees on the site. These oak trees are recommended for pruning in a manner to improve driver sight distance. Additional future effects on current traffic patterns are addressed in the study and would be alleviated by mitigation measures dicussed in the TIS. The sub-recipient design for the housing site would incorporate recommendations from the TIS.

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).

4.9 Cultural Resources

4.9.1 Regulatory Setting

The consideration of impacts to historic and cultural resources is mandated under Section 101(b)4 of the NEPA as implemented by 40 CFR 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 resources) and allow the Advisory Council on Historic Preservation (ACHP) 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 CFR Part 800.

The consideration of effects to historic properties listed in or eligible for the National Register of Historic Places (NRHP) is mandated under Section 106 of the National Historic Preservation Act

(NHPA) as implemented by 36 CFR Part 800. Requirements include the identification of significant or historic properties that may be affected by the proposed action or alternatives within the project's area of potential effects. Historic properties are defined as archaeological sites, standing structures, historic districts, or other historic resources listed in or determined eligible for listing in the NRHP. If adverse effects on historic properties are identified, Federal agencies must consider effects of their activities and attempt to avoid, minimize, or mitigate the effects to these historic properties.

In order to fulfill its Section 106 responsibilities, FEMA has initiated consultation on this project in accordance with the Statewide Programmatic Agreement dated December 21, 2016, and amended on August 13, 2018, among FEMA, the Louisiana State Historic Preservation Officer (SHPO), the Louisiana Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP), and Participating Tribes (hereafter referred to as the Statewide PA). The Statewide PA was developed to streamline the Section 106 review process. The proposed action is subject to the standard project review stipulation of the Statewide PA

4.9.2 Existing Conditions – Identification and Evaluation of Historic Properties

The Area of Potential Effects (APE) includes the project site; areas where ground disturbance will take place; areas that FEMA determined are within the view shed of the proposed construction; areas that FEMA determined, following a traffic study, may be affected by reasonably foreseeable traffic patterns; the cumulative effects of FEMA-funded and consulting party-identified new construction near the project area; and areas that may experience temporary vibratory effects of construction (Figure X). The project site constitutes New Orleans City Square 131 and encompasses approximately 1.79 acres. The entire APE, addressing both direct and indirect effects, encompasses approximately 24.23 acres (9.81 hectares).

The APE lies within the deltaic plain of the Mississippi River, on Holocene natural levee deposits (Saucier 1994). These are topographically high and located at approximately 3 ft (0.9 m) above mean sea level. The deltaic plain consists of six major Holocene delta complexes, with the older complexes and lobes eroded, buried, and/or replaced by the younger ones. Four of these complexes (the Maringouin, Teche, St. Bernard, and Lafourche) are deteriorating, while two (the Atchafalaya and Plaquemines-Balize/Modern) are actively prograding. Near-surface deposits in the project area are associated with the Plaquemines-Balize/Modern complex, which began to form approximately 950 years ago (Frazier 1967; Mossa 1991). Natural near-surface soils in the project area have been classified as Commerce silt loam. These are somewhat poorly drained, slightly acid, loamy soils, which tend to occur on the high to intermediate parts of the Mississippi River levee and associated distributaries at an elevation of 15 ft above sea level and higher.



Figure 12 - Location of the Mazant-Royal APE on the USGS 1992 New Orleans East 7.5" quadrangle map. The Bywater NRHD is shaded in yellow.

In order to better understand the potential cumulative effects of the undertaking, FEMA prepared a map showing recent and new construction within the Bywater NRHD and extensions that is FEMA-funded or identified by the Section 106 consulting parties. Larger major projects nearby

Construction of HANO's Mazant Royal Housing – Draft Environmental Assessment (October 2022) 35

include: Poshtel, Saxony Apts., proposed Hotel, Stalling Center, and additional development on the north side of St Claude Avenue. All FEMA-funded projects were findings of No Adverse Effect with the exception of the CCYAD Treatment facilities, which involved the demolition of houses that contributed to the Bywater NHRP District, and the demolition and replacement of the Stalling Center for its effects to archaeological resources on that project site. The Navy/NSA facility was not initially included in the APE because the project does not currently have funding and it is not a new construction project. FEMA subsequently expanded the APE boundary, through the consultation process, to include one of the National Register-listed NSA buildings that fronts Poland Avenue and the Bywater NRHD since it is possible the proposed project may be visible from that building.



Figure 13 - Cumulative Impacts Area of Potential Effects. Image created 1/17/2020

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 determined that the project area is located within the listed Bywater National Register Historic District (NRHD). The APE includes archaeological resources associated with a plantation that was owned by Antoine David Olivier. The main home for the plantation was constructed ca. 1820 and demolished in 1949. The project site also served as the St. Mary's Boys Asylum, an orphanage established in

Construction of HANO's Mazant Royal Housing – Draft Environmental Assessment (October 2022) 36

1835. The main orphanage buildings were designed by Henry Howard and completed in 1854. They were also demolished in 1949. By 1998, ten apartment buildings had been constructed on the block. Eight of the apartment buildings were demolished by 2003, and the remaining two structures have since been demolished. The project site is currently undeveloped.



Figure 14 - View of project site from SW corner facing NNE looking toward 4100 block of Royal Street. (Photo credit: FEMA)

In order to fulfill obligations under Section 106 of the NHPA, and in accordance with the Statewide PA, FEMA contracted a Cultural Resource Investigation for the initial APE to include standing structures and Phase I/II archaeological surveys. The Cultural Resource Investigation resulted in the identification of 97 structures that contribute to the Bywater NRHD, 20 non-contributing structures, 5 buildings categorized as other and the NRHP eligible archaeological site 16OR735. FEMA conducted an additional standing structure survey within the expanded APE developed in consultation with SHPO and in response to comments by consulting parties during the 1st – 4th Section 106 consultation meetings. This survey identified 51 contributing and 11 non-contributing buildings located within the Bywater NRHD.

The Bywater NRHD is listed on the NRHP under Criterion C at the State level of significance for its unusually fine collection of shotgun residences, a noted regional house type. The NRHP nomination describes the district as "an urban area of approximately 120 blocks with a mixed commercial-residential character." The district is made up of mostly one- and two-story buildings and is densely developed with most of the buildings set directly on the street, very close together. Bywater's shotgun houses are distinguished by its collection of Greek Revival, Eastlake, and Italianate styles. Its period of significance is 1807 – 1935. The undertaking will directly affect site 16OR735 on the project site which has been determined to be eligible for listing on the NRHP under Criterion D. The NRHP eligibility of the remainder of site 16OR735 located outside project site is undetermined.

4.9.3 Environmental Consequences

Alternative 1 – No Action

This alternative does not include a FEMA or LHC funded undertaking; therefore, FEMA has no further responsibilities under Section 106 of the NHPA.

Alternative 2 - 136 Units New Construction at the Mazant Royal Site (Preferred Action)

The H-shaped, single building with 82 affordable and 54 market rate units for a total of 136 units was developed following 19 community meetings and the local rezoning process.



Figure 15 - 136 Units - H Shape - Preferred Action

As part of the Section 106 consultation FEMA requested HANO consider additional design alternatives to minimize adverse effects to the Bywater NHRP district. As a result, HANO considered additional design alternatives for the site. These design alternatives explored the reduction in units and massing and were evaluated by the consulting parties as part of the Section 106 consultation.

150 Units - Initial FEMA/LHC undertaking

HANO submitted design plans for a 150-unit, five-story housing complex to FEMA in 2018. The plans were for an O-shaped, wrapped three-story building. It had substantial design flaws as it encompassed the entire site, removed all trees, and eliminated permeable or green space.

3 Story H shape - 108 Units

The 108-unit alternative maintains the 82 affordable units. FEMA requested that HANO compare the 108-unit alternative to the 136-unit alternative at the 7th Section 106 consultation meeting. The 108-unit design reduces HOME funding and will require an additional \$250,000 of owner equity and results in a \$1.9 million funding gap. The 108-unit alternative would offer the most reduction in size and scale, retain 82 affordable units, reduce the 4-story height to 3-stories, thus minimizing some viewshed issues, and incorporate much of the feedback regarding setbacks and greenspace from the City planning meetings. The 26 market rate units in the 108-unit alternative would not generate enough income to service the debt to construct the building but would not generate enough to fund operations and as a result this is not a viable alternative.



Figure 16 - 3 Story H shape - 108 Units





3-Story L shape - 121 Units

This alternative would be a 3-story building along France and Royal Streets that breaks up building mass into two buildings. This design would contain 9 fewer affordable units. It would require the removal of the majority of the trees and provide limited or no green space. This design does not take into account setback and massing and is not responsive to the scoring model for the HOME grant. The Section 106 consulting parties did not support this alternative.



Figure 18 - 3-Story L shape - 121 Units



Figure 19 - 3-Story L shape - 121 Units

U-shaped, 112 Units

Design not fully supported in earlier stakeholder reviews. Further reduced leveraging score for HOME grant.







Construction of HANO's Mazant Royal Housing – Draft Environmental Assessment (October 2022) 42

106 Units - 3+4 story L Shape

Reduces the height by 1 story in most places but provides no set back on France and Royal Streets. Does not meet the price per unit and results in the loss of 29 affordable units.



Figure 22 - 106 Units - 3+4 story L Shape



Figure 23 - 106 Units - 3+4 story L Shape



Figure 24 - 106 Units - 3+4 story L Shape

132 Units – 3 Story Wrap

Reduces the height by one story but removes all trees. It does not meet open area requirements and creates stormwater drainage issues.



Figure 25 - 132 Units - 3 Story Wrap



Figure 26 - 132 Units - 3 Story Wrap

In accordance with Stipulation II.C.5.b of the Statewide PA, FEMA determined that the scale and height of the proposed Mazant-Royal housing development may change the character of the district's historic use as a multi-family working and middle-class residential neighborhood, introduce visual, atmospheric or audible elements that diminish the integrity of the Bywater NRHD's significant historic features, and may result in the physical destruction or damage to all or part of NRHP eligible archaeological resources that were likely to be located on the project site. FEMA made a finding that historic properties may be Adversely Affected and initiated Section 106 consultation as described in Stipulation II.C.6, in letters dated June 6, 2019, with the Louisiana State Historic Preservation Officer (SHPO), Alabama Coushatta Tribe of Texas, Choctaw Nation of Oklahoma (CNO), Chitimacha Tribe of Louisiana, Coushatta Tribe of Louisiana, Eastern Shawnee Tribe of Oklahoma, Jena Band of Choctaw Indians, Kialegee Tribal Town, Mississippi Band of Choctaw Indians (MBCI), Muscogee (Creek) Nation, Seminole Tribe of Florida, Seminole Nation of Oklahoma, and Tunica Biloxi Tribe of Louisiana the opportunity to review and comment. MBCI notified FEMA on June 7, 2019, that it wished to consult until the archaeological survey was complete and would determine further participation at that time. Following the completion of the Phase I/II Cultural Investigations Report, which did not identify pre-1830 artifacts, MBCI determined that it will not participate in this consultation. CNO responded on June 16, 2019, stating they do not feel they are associated with the historic properties in the APE, and respectfully deferred to other Tribes. CNO requested that work be stopped, and its office contacted immediately in the event that Native American artifacts or human remains are encountered. No other Tribes have expressed an interest in the Undertaking, therefore, in accordance with 36 CFR §800.2(c)2, FEMA may proceed with funding the undertaking assuming concurrence.

FEMA provided information to GOHSEP; Preservation Resource Center of New Orleans (PRC); Louisiana Landmarks Society (LLS); Bywater Neighborhood Association (BNA); Faubourg

Marigny Neighborhood Association, Neighbors First for Bywater (NFB); Parks for All; Historic District Landmark Commission; Louisiana Fair Housing Action Center (LFHAC), HousingNOLA, Riverfront Alliance, National Trust for Historic Preservation (NTHP), and Greater New Orleans Housing Alliance about the Undertaking, and notified these organizations regarding the opportunity to participate in the Section 106 consultation to develop a Memorandum of Agreement (MOA) to document how the adverse effects will be resolved. GOHSEP, BNA, PRC, LLS, NFB, HousingNOLA, and LFHAC, have been recognized by FEMA as the Consulting Parties, participated in the consultation, and were invited by FEMA to sign this MOA as a Concurring Party as defined in 36 CFR §800.6(c)(3). FEMA and SHPO are signatories to the MOA. LHC and HANO are invited signatories to the MOA. FEMA notified the ACHP of the Adverse Effect to Historic Properties. The ACHP declined to participate in the Section 106 consultation process on July 18, 2019 (Appendix X).

FEMA posted a public notice to the Louisiana Department of Culture, Recreation and Tourism (CRT) website (http://www.crt.state.la.us/culturalassets/fema106/), for a 30-day comment period between September 26, 2019 and October 28, 2019, and a revised notice for a 15-day comment period between November 4, 2019 and November 20, 2019, and invited the public to post electronic comments to the CRT website or mail/email comments directly to FEMA. FEMA received nearly 100 comments, letters, and emails from organizations and private citizens. The comments were wide ranging and included both support for the current design, as well as requests for changes to the project because of a concern regarding scale and size, reduction in greenspace, flooding and parking.

The first Section 106 consultation meeting to develop an MOA was held on July 29, 2019 and included participants from FEMA, HUD, LHC, SHPO, ACHP, HANO, ITEX (housing developer), DNA (architectural designer), Webre Consulting (developer's consultant), Heritage Consulting (developer's consultant), GOHSEP, University of New Orleans, LFHAC, HousingNOLA, Preservation Resource Center, NTHP, BNA, NFB, and LLS. Additional meetings were held on August 19, 2019, September 9, 2019, October 28, 2019, February 13, 2020, June 4, 2020, July 21, 2020, September 1, 2020, and November 20, 2020 to discuss the APE, project alternatives, and measures to avoid, minimize, and or mitigate adverse effects to historic properties. The MOA was executed on November 15, 2021, the date the agreement was filed by FEMA with ACHP.

4.10 Hazardous Materials

4.10.1 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.

4.10.2 Existing Conditions

The new construction site is not listed in the USEPA database of toxic and hazardous waste sites. The USEPA NEPAssist is a tool that facilitates the environmental review process and project planning in relation to environmental considerations. The web-based application draws environmental data dynamically from USEPA Geographic Information System databases and web services and provides immediate screening of environmental assessment indicators for a user-defined area of interest. NEPAssist search for sites within 0.5 mile radius of property revealed that there are: (0) CERCLA Superfund Sites, (0) Toxic Release Inventory (TRI) Sites, (2) Water Disscharge (NDPES) Sites, (1) Stormwater Construction Site, (2) RCRA Small Quantity Generator Sites, (1) RCRA Large Quantity Generator Site, (0) Toxic Substance Control Act (TSCA) Sites, and (6) Brownfields Sites. (see Figure 16).



Figure 27 - Map showing EPA regulated sites (NEPAssist, 2020)

There are no recorded oil or gas wells on or near the construction site (LDEQ 2020; USEPA 2020b).

4.10.3 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 – 136 Unit New Construction at the Mazant Royal Site (Preferred Action)

Under this action Alternative, as with all demolition and construction activities, there is a possibility of encountering hazardous materials or suspected hazardous materials during construction activities.

A phase I environmental site assessment was performed by Bureau Veritas, summary report dated March 9, 2022, see Appendix D. The assessment revealed no evidence of Recognized Environmental Conditions (RECs), Historic RECs, or Controlled RECs in connection with the project. Visual observation for the use and/or storage of hazardous materials and petroleum products was also performed. The project area is currently undeveloped land and no hazaradous material or pertroleum products were observed at the project site.

During excavation and construction activities, 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 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 remained stopped until LDEQ personnel could access the site and if necessary, require removal of hazardous materials.

4.11 Environmental Justice

4.11.1 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.

4.11.2 Existing Conditions

According to the United States Census Bureau 2019 American Community Survey (ACS) 5-Year Estimate Data Profile the total population of zip code 70117, LA was 27,137. The 2019 demographic estimates for zip code 70117 were 66.0% Black or African American, 26.0% White, 5.1% Hispanic, 0.3% American Indian and Alaska Native, 0.5% Asian and 0.4% some other race. Of this population, 8,856 have incomes less than \$25,926 per year, which represents approximately 33.0% of individuals living below the poverty level. For 2019, ACS estimated the median household income at \$27,757.

Summary of ACS Estimates	2014 - 2018
Population	3,470
Population Density (per sq. mile)	5,649
People of Color Population	1,491
% People of Color Population	43%
Households	1,746
Housing Units	2,319
Housing Units Built Before 1950	1,671
Per Capita Income	27,366
Land Area (sq. miles) (Source: SF1)	0.61
% Land Area	64%
Water Area (sq. miles) (Source: SF1)	0.34
% Water Area	36%

	2014 – 2018	Porcont	MOE (+)
Population by Race	ACS Estimates	Percent	NOE (1)
Total	3,470	100%	334
Population Reporting One Race	3,423	99%	571
White	2,107	61%	147
Black	1,244	36%	320
American Indian	16	0%	21
Asian	23	1%	29
Pacific Islander	0	0%	12
Some Other Race	32	1%	42
Population Reporting Two or More Races	47	1%	28
Total Hispanic Population	157	5%	73
Total Non-Hispanic Population	3,313		
White Alone	1,979	57%	139
Black Alone	1,242	36%	320
American Indian Alone	16	0%	21
Non-Hispanic Asian Alone	18	1%	29
Pacific Islander Alone	0	0%	12
Other Race Alone	12	0%	42
Two or More Races Alone	47	1%	28
Population by Sex			
Male	1,696	49%	275
Female	1,774	51%	180
Population by Age			
Age 0-4	83	2%	124
Age 0-17	347	10%	144
Age 18+	3,123	90%	183
Age 65+	470	14%	112

 Table 2 Census 2018 Summary Report for proposed site (Source EPA EJSCREEN Tool).

	2014 – 2018		
	ACS Estimates	Percentage	MOE (±)
Population 25+ by Educational Attainment			
Total	3,029	100%	201
Less than 9th Grade	77	3%	64
9th - 12th Grade, No Diploma	165	5%	62
High School Graduate	677	22%	112
Some College, No Degree	916	30%	98
Associate Degree	219	7%	59
Bachelor's Degree or more	1,194	39%	80
Population Age 5+ Years by Ability to Speak English			
Total	3,387	100%	258
Speak only English	3,183	94%	215
Non-English at Home ¹⁺²⁺³⁺⁴	203	6%	61
¹ Speak English "very well"	176	5%	58
² Speak English "well"	12	0%	30
³ Speak English "not well"	15	0%	42
⁴ Speak English "not at all"	0	0%	12
³⁺⁴ Speak English "less than well"	15	0%	42
²⁺³⁺⁴ Speak English "less than very well"	27	1%	47
Linguistically Isolated Households*			
Total	17	100%	42
Speak Spanish	17	100%	40
Speak Other Indo-European Languages	0	0%	12
Speak Asian-Pacific Island Languages	0	0%	12
Speak Other Languages	0	0%	12
Households by Household Income			
Household Income Base	1,746	100%	87
< \$15,000	315	18%	54
\$15,000 - \$25,000	216	12%	45
\$25,000 - \$50,000	477	27%	58
\$50,000 - \$75,000	332	19%	64
\$75,000 +	408	23%	50
Occupied Housing Units by Tenure			
Total	1,746	100%	87
Owner Occupied	800	46%	60
Renter Occupied	946	54%	76
Employed Population Age 16+ Years			
Total	3,143	100%	225
In Labor Force	2,215	70%	139
Civilian Unemployed in Labor Force	194	6%	63
Not In Labor Force	928	30%	156

Table 3 ACS 2014-2018 Summary Report (Source EPA EJSCREEN Tool).

4.11.3 Environmental Consequesnces

Alternative 1 – No Action

The "No Action" Alternative would not involve the implementation of a federal program, policy, or activity. As a result, the community would be left without more resilient affordable housing stock in areas at lower risk for flooding and in areas of higher opportunity which potentially could result in impacts to low-income or minority populations.

Alternative 2 – 136 Unit New Construction at the Mazant Royal Site (Preferred Action)

Implementation of Alternative 2 would have no disproportionately high adverse human health, economic, or social effects on minority or low-income populations as specified in E.O. 12898. In addition, input from the affected community including low-income and/or minorities has been accomplished through community meetings sponsored by CNO/HANO/LHC and will be further solicited through the FEMA public notice process prior to finalization of this EA.

4.12 Housing Urban Development Regulatory Requirements

As the cooperating agency, LHC requested that FEMA include reference to certain HUD regulations and LHC's analysis of them pertaining to the preferred action. For that reason, this section, and sections 4.15, 4.16, 4.17, and 4.18 address HUD regulations; sections 4.13 and 4.14 present HUD's view on CBRS and flood insurance under the NFIP. FEMA defers to HUD's interpretation of its regulations, and neither agrees nor disagrees with it.

4.12 Airport Hazards

4.12.1 Regulatory Setting

Some types of development are incompatible for locations in the immediate vicinity of airports and airfields. Potential aircraft accident problems pose a hazard to end users of these development projects. If the proposed project is located near an airport or in the immediate area of the landing and approach zones, additional information is necessary to determine whether this issue is a concern and if so, how to mitigate it.

It is HUD's policy to apply standards to prevent incompatible development around civil airports and military airfields. See <u>24 CFR 51, Subpart D</u>.

4.12.2 Existing Conditions

According to the Phase I report prepared by the Bureau Veritas firm for ITEX, the Project is not located within 2,500 feet from the end of a civil airport runway or 15,000 feet from the end of a runway at a military airfield.

Review of the USEPA NEPAssist tool and available mapping resources indicated that the project site is not within 15,000 feet of a military airport or 2,500 feet of a civilian airport. The project is in compliance with Airport Hazards requirements.



Proposed Royal Street Development Airport Locator (15,000 foot radius)

Figure 28 – Proposed Royal Street Development Airport Locator

© 2022 Microsoft Corporation © 2022 TomTom, EPA OEI

4.12.3 Environmental Consequences

Alternative 1 – No Action

The "No Action" Alternative would have no effects on airports or airfields.

Alternative 2 – 136 Unit New Construction at the Mazant Royal Site (Preferred Action)

Implementation of Alternative 2 would have no effects on airports or airfields.

4.13 Coastal Barrier Resources

4.13.1 Regulatory Setting

The Coastal Barrier Resources Act (CBRA) of 1982 designated relatively undeveloped coastal barriers along the Atlantic and Gulf coasts as part of the John H. Chafee Coastal Barrier Resources System (CBRS) and made these areas ineligible for most new Federal expenditures and financial assistance. The Coastal Barrier Improvement Act (CBIA) of 1990 reauthorized the CBRA and expanded the CBRS to include undeveloped coastal barriers along the Florida Keys, Great Lakes, Puerto Rico, and U.S. Virgin Islands.

There are a total of 584 system units, encompassing approximately 1.3 million acres of land and associated aquatic habitat. The system units are generally comprised of private lands that were relatively undeveloped at the time of their designation within the CBRS. The boundaries of these units are generally intended to follow geomorphic, development, or cultural features.

The law encourages the conservation of hurricane-prone, biologically rich coastal barriers by restricting Federal expenditures that encourage development. HUD or FEMA financial assistance may not be used for most activities in CBRS units.

4.13.2 Existing Conditions

According to review of the U.S. Fish and Wildlife Service Coastal Barrier Resources System Mapper this project is not located in a CBRS Unit. Therefore, this project has no potential to impact a CBRS Unit and is in compliance with the Coastal Barrier Resources Act.



Figure 29 – U.S. Fish and Wildlife Service Coastal Barrier Resources System Map of Proposed Location

4.13.3 Environmental Consequences

Alternative 1 – No Action

The "No Action" Alternative would have no effect on this criteria as existing conditions would remain unchanged.

Alternative 2 – 136 Unit New Construction at the Mazant Royal Site (Preferred Action)

Implementation of Alternative 2 would have no effect on coastal barrier resources.

4.14 Flood Insurance

4.14.1 Regulatory Setting

The Flood Disaster Protection Act of 1973 (42 U.S.C. 4012a) requires that projects receiving federal assistance and located in an area identified by the Federal Emergency Management Agency (FEMA) as being within a Special Flood Hazard Areas (SFHA) be covered by flood insurance under the National Flood Insurance Program (NFIP). In order to be able to purchase flood

insurance, the community must be participating in the NFIP. If the community is not participating in the NFIP, federal assistance cannot be used in those areas.

4.14.2 Existing Conditions

Review of the Flood Insurance Rate Map (Community/Panel No. 22071C0233F), published by the Federal Emergency Management Agency (FEMA) and dated September 30, 2016, indicated that the proposed structure or insurable property is not located in a FEMA-designated Special Flood Hazard Area. No preliminary or pending FEMA maps were identified on file for the project location. The project is located in the City of New Orleans/Orleans Parish Unincorporated Areas, which is a participating community under the NFIP (Community ID: 225203A). HUD recommends that all insurable structures maintain flood insurance under the National Flood Insurance Program (NFIP). The project is in compliance with flood insurance requirements.



Figure 30 - National Flood Hazard Layer FIRMette Proposed Location

4.14.3 Environmental Consequences

Alternative 1 – No Action

The "No Action" Alternative would have no effect on this criteria as existing conditions would remain unchanged.

Alternative 2 – 136 Unit New Construction at the Mazant Royal Site (Preferred Action)

Implementation of Alternative 2 would have no effects on flood insurance requirements although while flood insurance may not be mandatory in this instance, HUD recommends that all insurable structures maintain flood insurance under the NFIP.

4.15 Contamination and Toxic Subtances

4.15.1 Regulatory Setting

As described in HUD's regulation at 24 CFR Part 50.3(i) and 24 CFR 58.5(i)(2):

- 1. All property proposed for use in HUD programs be free of hazardous materials, contamination, toxic chemicals and gasses, and radioactive substances, where a hazard could affect the health and safety of occupants or conflict with the intended utilization of the property.
- 2. Environmental review of multifamily and non-residential properties shall include evaluation of previous uses of the site and other evidence of contamination on or near the site, to assure that occupants of proposed sites are not adversely affected by the hazards.
- 3. Particular attention should be given to any proposed site on or in the general proximity of such areas as dumps, landfills, industrial sites, or other locations that contain, or may have contained, hazardous wastes.
- 4. The responsible entity shall use current techniques by qualified professionals to undertake investigations determined necessary

It is therefore essential that responsible entities, potential grant applicants, and other HUD program participants become familiar with the potential environmental issues involving property before leasing, optioning, and/or acquiring the property. Unknowing individuals or parties that acquire contaminated property with good intentions could face liability for clean-up costs under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), third party lawsuits, and costly delays in implementing the project.

4.15.2 Existing Conditions

Site contamination was evaluated as follows: ASTM Phase I ESA, ASTM Vapor Encroachment Screening. No Recognized Environmental Conditions or Vapor Encroachment Conditions were identified in connection with the project property. On-site or nearby toxic, hazardous, or radioactive substances that could affect the health and safety of project occupants or conflict with the intended use of the property were not found. The project is in compliance with contamination and toxic substances requirements. BV Phase I Environmental Site Assessment, dated March 2022, Section 1, Section 5, and Section 6.

4.15.3 Environmental Consequences

Alternative 1 – No Action

The "No Action" Alternative would have no effect on this criteria as existing conditions would remain unchanged.

Alternative 2 – 136 Unit New Construction at the Mazant Royal Site (Preferred Action)

Implementation of Alternative 2, as with all demolition and construction activities, there is a possibility of encountering hazardous materials or suspected hazardous materials during construction activities.

During excavation and construction activities, 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 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 remained stopped until LDEQ personnel could access the site and if necessary, require removal of hazardous materials.

4.16 Explosive and Flammable Hazards

4.16.1 Regulatory Setting

There are inherent potential dangers associated with locating HUD-assisted projects near hazardous facilities which store, handle, or process hazardous substances of a flammable or explosive nature. Project sites located too close to facilities handling, storing or processing conventional fuels, hazardous gases or chemicals of an explosive or flammable nature may expose occupants or end-users of a project to the risk of injury in the event of a fire or an explosion.

To address this risk, regulations at 24 CFR Part 51 Subpart C require HUD-assisted projects to be separated from these facilities by a distance that is based on the contents and volume of the aboveground storage tank, or to implement mitigation measures.

4.16.2 Existing Conditions

No explosive/flammable hazards were identified at the project site. There is no direct line of sight from any part of the project to any hazard. In addition, review of available aerial photographs and regulatory databases did not identify any aboveground storage tanks of more than 100 gallons on adjacent properties, nor is there an explosive or flammable hazard in the near vicinity that is not shielded from the project by topography, existing structures, or other barriers, natural or manmade. Furthermore, no documentation or information was available that would indicate that any new aboveground storage tanks or containers of more than 100 gallons are proposed to be installed at the project. The project is in compliance with explosive and flammable hazard requirements. BV Phase I Environmental Site Assessment, dated March 2022, Section 8.15.

4.16.3 Environmental Consequences

Alternative 1 – No Action

The "No Action" Alternative would have no effect on this criteria as existing conditions would remain unchanged.

Alternative 2 – 136 Unit New Construction at the Mazant Royal Site (Preferred Action)

Implementation of Alternative 2 would have no effects as all structures would be separated from facilities by a distance that is based on the contents and volume of the aboveground storage tank, or mitigation measures would be implemented.

4.17 Sole Source Aquifers

4.17.1 Regulatory Setting

Aquifers and surface water are drinking water systems that may be impacted by development. The Safe Drinking Water Act of 1974 requires protection of drinking water systems that are the sole or principal drinking water source for an area and which, if contaminated, would create a significant hazard to public health.

Sole Source Aquifer designations are one tool to protect drinking water supplies in areas where alternatives to the groundwater resource are few, cost-prohibitive, or nonexistent. The designation protects an area's ground water resource by requiring U.S Environmental Protection Agency (EPA) review of any proposed projects within the designated area that are receiving federal financial assistance. All proposed projects receiving federal funds are subject to review to ensure they do not endanger the water source.

Resources to contact for further information include the local water department or authority, Regional or State EPA Offices, and the local or state department of natural resources.

Only for new construction and conversion activities does the sole source aquifer (SSA) authority apply. SSA information is available from the local planning agency, but is also listed on the homepage of the EPA Office of Ground Water and Drinking Water.

4.17.2 Existing Conditions

Review of the USEPA Interactive Map of Sole Source Aquifers indicated that the project is not located on a Sole Source Aquifer. The project is in compliance with Sole Source Aquifer requirements.



Proposed Royal Street Development Sole Source Aquifers

Figure 31 – Proposed Royal Street Sole Source Aquifers

4.17.3 Environmental Consequences

Alternative 1 – No Action

The "No Action" Alternative would have no effect on this criteria as existing conditions would remain unchanged.

Alternative 2 – 136 Unit New Construction at the Mazant Royal Site (Preferred Action)

Implementation of Alternative 2 would have no effect on this criteria because the property is not located within a sole source aquifer area.

4.18 Wild and Scenic Rivers

4.18.1 Regulatory Setting

The Wild and Scenic Rivers Act (16 U.S.C. 1271-1287) provides federal protection for certain free-flowing, wild, scenic, and recreational rivers designated as components or potential components of the National Wild and Scenic Rivers System (NWSRS). The National Wild and Scenic Rivers System (NWSRS) was created by Congress in 1968 (Public Law 90-542; 16 U.S.C. 1271 et seq., as amended) to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations. The Act is notable for safeguarding the special character of these rivers, while also recognizing the potential for their appropriate use and development. It encourages river management that crosses political boundaries and promotes public participation in developing goals for river protection.

Each river or river segment in the National Wild and Scenic Rivers System is administered with the goal of protecting and enhancing the values that caused it to be eligible for inclusion in the system. Designated rivers need not include the entire river and may include tributaries.

Four primary federal agencies are charged with protection and managing our wild and scenic rivers: the National Park Service, Bureau of Land Management, U.S. Forest Service and U.S. Fish and Wildlife Service. Each river segment is administered by generally one of these federal agencies and/or a state agency and, in some cases, a tribe or in coordination with local government. Boundaries for protected rivers generally extend one-quarter mile from either bank in the lower 48 states and one-half mile on rivers outside national parks in Alaska in order to protect river-related values.

HUD-assisted activities are subject to the requirements of the Wild and Scenic Rivers Act (16 U.S.C. 1271 et seq.). The environmental review must evaluate the potential to impact any listed Wild and Scenic River when the assisted project is within proximity to a listed natural resource (24 CFR 58.5(f) or 24 CFR 50.4(f)).

4.18.2 Existing Conditions

Based on review of the National Wild & Scenic Rivers System maintained by the U.S. Bureau of Land Management, National Park Service, US Fish and Wildlife Service, and US Forest Service, as well as the NEPAssist tool, no Wild and Scenic Rivers are located in Orleans Parish. The project is in compliance with the Wild and Scenic Rivers Act.



Proposed Royal Street Development Wild and Scenic Rivers

Figure 32 – Proposed Royal Street Development Wild and Scenic Rivers
4.18.3 Environmental Consequences

Alternative 1 – No Action

The "No Action" Alternative would have no effect on this criteria as existing conditions would remain unchanged.

Alternative 2 – 136 Unit New Construction at the Mazant Royal Site (Preferred Action)

Implementation of Alternative 2 would have no effect on this criteria because the property is not located within proximity to any wild or scenic rivers.

5 CONDITIONS AND MITIGATION MEASURES

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

- 1. 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.
- 2. 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.
- 3. 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 EHP completes consultation with the SHPO, and others as appropriate.
- 4. 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.
- 5. 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.

- 6. All precautions should be observed to control nonpoint source pollution from construction activities. LDEQ has stormwater general permits for construction areas equal to or greater than one acre. It is recommended that the sub-recipient contact the LDEQ Water Permits Division at (225) 219-9371 to determine if your proposed project requires a permit.
- 7. 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. Per 44 C.F.R. § 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. 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 must be documented and copies forwarded to the LA GOHSEP and FEMA for inclusion in the permanent project files.
- 8. In order for to comply with FEMA floodplain requirements and to eligible for project funding, after construction of the proposed project and prior to FEMA project close-out, additional verification will be needed to ensure that proper coordination occurred regarding work within the floodplain. The following documentation will be required:
 - a. A copy of the Post-Construction Elevation Certificate (EC) signed/sealed by licensed surveyor, engineer, or architect as well as the local floodplain administrator (LFA); or
 - b. If the post-construction EC is not signed by the local Floodplain Administrator, then a Certificate of Occupancy signed by the LFA or a letter from the local Floodplain Administrator stating the structure was built in compliance with the local floodplain ordinance.
- 9. All precautions should be observed to protect the groundwater of the region.
- 10. If any solid or hazardous wastes, or soils and/or groundwater contaminated with hazardous constituents are encountered during the project, notification to LDEQ's Single-Point-of-Contact (SPOC) at (225) 219-3640 is required. Additionally, precautions should be taken to protect workers from these hazardous constituents.
- 11. Site Specific Environmental Assessment per LDEQ comments "Due to the location of the property in an older developed area of New Orleans and the proposed residential land use, a thorough and site-specific environmental assessment needs to be completed in orders to protect site workers as well as future residents. This assessment should consider both potential on-site and off-site sources, and include an evaluation of the enclosed space pathway for the proposed development."

6 PUBLIC INVOLVEMENT

The public is invited to comment on the proposed action. A display ad was published in the journal of record for Orleans Parish, on Thursday, October 2022; Thursday, October 2022; Thursday, October 2022; in The Advocate on Thursday, October 2022 ; Friday and on FEMA Region 6 Twitter account at https://twitter.com/FEMARegion6/status/1203050303077199872. The document was published on FEMA's website and website.

A copy of the public notice, public comments, and Sub-recipient's response to comments are attached in Appendix G.

7 CONCLUSIONS

The findings of this EA conclude that the proposed action at the proposed site would result in no significant adverse impacts to the natural and human environment, including geology, groundwater, floodplains, public health and safety, traffic, hazardous materials, socioeconomic and biological resources, environmental justice, or cultural resources.

During project construction, short-term impacts to soils, surface water, transportation, air quality, and noise are anticipated and conditions have been incorporated to mitigate and minimize the effects (see Section 6, Conditions and Mitigation Measures). No long-term adverse impacts are anticipated from the proposed project. Therefore, FEMA finds the proposed action meets the requirements for a FONSI under NEPA and the preparation of an EIS will not be required.

8 AGENCY COORDINATION

Louisiana Department of Environmental Quality Louisiana Department of Natural Resources Louisiana Department of Wildlife and Fisheries Louisiana State Historic Preservation Office Tribal Historic Preservation Office and/or cultural offices U.S. Environmental Protection Agency U.S. Fish and Wildlife Service U.S. Army Corps of Engineers National Marine Fisheries Service National Resources Conservation Service

9 LIST OF PREPARERS

Jerame Cramer - Environmental/Historic Presevation Program Lead, FEMA, Louisiana Integration and Recovery Office

Tiffany Spann-Winfield – Deputy Environmental/Historic Presevation Program Lead, FEMA, Louisiana Integration and Recovery Office

Bianca King London – Environmental Protection Specialist, FEMA, Louisiana Integration and Recovery OfficeCornelia Wyma – Historic Preservation Specialist, FEMA Serco Contractor, Louisiana Integration and Recovery Office

Cornelia Wyma, Historic Preservation Specialist, FEMA SERCO CTR, Louisiana Integration and Recovery Office

Amber Martinez – Lead Historical Preservation Specialist, FEMA, Louisiana Integration and Recovery OfficeLeSchina Holmes – Lead Environmental Protection Specialist, FEMA, Louisiana Integration and Recovery Office

Agaha Brass, Environmental Manager, Louisiana Housing Corporation

Abdelmagid Mahgoub – Environmental Protection Specialist, FEMA, Louisiana Integration and Recovery Office

11 REFERENCES

- Clean Air Act of 1970. Statutes at large. 1970. Vol. 84, secs. 1-16, 1676; available from http://www.gpo.gov/fdsys/pkg/STATUTE-84/pdf/STATUTE-84-Pg1676.pdf. Amended: Clean Air Act Amendments of 1977. Statutes at large. 1977. Vol. 91, secs. 1-406, 685; http://www.gpo.gov/fdsys/pkg/STATUTE-91/pdf/STATUTE-91-Pg685.pdf. Amended: Clean Air Act Amendments of 1990. 1990. Vol. 104, secs. 101-1101, 2399; http://www.gpo.gov/fdsys/pkg/STATUTE-104/pdf/STATUTE-104-Pg2399.pdf; Internet; accessed 25 September 2019.
- Clean Water Act of 1977. Statutes at large. 1977. Vol. 91, secs. 1-78, 1566; available from http://www.gpo.gov/fdsys/pkg/STATUTE-91/pdf/STATUTE-91-Pg1566.pdf. Original: Federal Water Pollution Control Act. Statutes at large. 1972. Vol. 86, secs. 1-13, 816; http://www.gpo.gov/fdsys/pkg/STATUTE-91/pdf/STATUTE-91-Pg1566.pdf. Original: Federal Water Pollution Control Act. Statutes at large. 1972. Vol. 86, secs. 1-13, 816; http://www.gpo.gov/fdsys/pkg/STATUTE-86/pdf/STATUTE-86-Pg816.pdf. Amended: Water Quality Act. Statutes at large. 1987. Vol. 101, secs. 1-525, 7; http://www.gpo.gov/fdsys/pkg/STATUTE-101/pdf/STATUTE-86/pdf/STATUTE-86-Pg816.pdf. Amended: Water Quality Act. Statutes at large. 1987. Vol. 101, secs. 1-525, 7; http://www.gpo.gov/fdsys/pkg/STATUTE-101/pdf/STATUTE-101-Pg7.pdf; Internet; accessed 4 October 2019.
- Coastal Zone Management Act of 1972. Statutes at large. 1972. Vol. 86, secs. 301-315, 1280; available from <u>http://www.gpo.gov/fdsys/pkg/STATUTE-86/pdf/STATUTE-86-Pg1280.pdf;</u> Internet; accessed 25 September 2019.
- Comprehensive Environmental Response, Compensation, and Liability Act. Statutes at large. 1980. Vol. 94, secs. 101-308, 2767; as amended through 31 December 2002; available from <u>http://www.epw.senate.gov/cercla.pdf;</u> Internet; accessed 25 September 2019.
- Council on Environmental Quality. 2007. Considering Cumulative Effects Under the National Environmental Policy Act. Executive Office of the President. Washington, DC: GPO; available from <u>http://energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/G-CEQ-ConsidCumul Effects.pdf</u>; Internet; accessed 25 September 2019.
- Endangered and Threatened Wildlife and Plants. 1975. 17 C.F.R. §§ 1-108. Federal Register 40 (26 September): 44415 ff.
- *Endangered Species Act of 1973. Statutes at large.* 1973. Vol. 87, secs. 1-17, 884; available from http://www.gpo.gov/fdsys/pkg/STATUTE-87/pdf/STATUTE-87-Pg884.pdf; Internet; 14 August 2019.
- *Environmental Considerations*. 1980. 44 C.F.R. §§ 10. *Federal Register* 45 (18 June): 41142 ff. Amended 2009. *Federal Register* 74 (3 April): 15328-15357; available from <u>http://www.gpo.gov/ fdsys/pkg/FR-2009-04-03/pdf/E9-6920.pdf</u>; Internet; accessed 26 August 2019.
- Farmland Protection Policy Act. Statutes at large. 1981. Vol. 95, secs. 1539-1549, 1341; availablefromhttp://www.gpo.gov/fdsys/pkg/STATUTE-95/pdf/STATUTE-95-Pg1213.pdf.Amended1985.Statutes at large, Vol. 99, sec. 1255, 1518;

Construction of HANO's Mazant Royal Housing – Draft Environmental Assessment (October 2022) 70

http://www.gpo.gov/fdsys/pkg/STATUTE-99/pdf/STATUTE-99-Pg1354.pdf; Internet; accessed 4 September 2019.

- Floodplain Management and Protection of Wetlands. 1980. 44 C.F.R. §§ 9. Federal Register 45 (9 September): 59526 ff. Amended 2009. Federal Register 74 (3 April): 15328-15357; available from <u>http://www.gpo.gov/fdsys/pkg/FR-2009-04-03/pdf/E9-6920.pdf</u>; Internet; accessed 25 September 2019.
- Frazier, D. E., 1967. Recent deltaic deposits of the Mississippi: their development and chronology: Gulf Coast Association of Geological Societies Transactions, v. 27, p. 287-315.
- General Provisions; Revised List of Migratory Birds. 2013. 50 C.F.R. §§ 10 and 21. Federal Register 78 (1 November): 65844-65864; available from <u>http://www.fws.gov/migratorybirds/Regulations</u> <u>Policies/mbta/MBTA%20LIst%20of%20Brds%20Final%20Rule.pdf;</u> Internet; accessed 23 August 2019.
- Louisiana Department of Environmental Quality. 2019. *Electronic Document Management System* (*EDMS*). Database on-line; available from <u>http://edms.deq.louisiana.gov/</u>; Internet; accessed 22 August 2019.
- Louisiana Department of Natural Resources. 2016b. SONRIS Interactive Maps Oil/Gas. Database on-line; available from <u>http://sonris-www.dnr.state.la.us/gis/agsweb/IE/JSViewer/index.html?TemplateID=181</u>; Internet; accessed 22 August 2019.
- Louisiana Department of Natural Resources. 2014. Permits/Mitigation Division; available from http://dnr.louisiana.gov/index.cfm?md=pagebuilder&tmp=home&pid=90&pnid=0&nid=189; In-ternet; accessed 23 August 2019.
- Louisiana Department of Transportation and Development. 2014. LaDOTD website; available from <u>http://www.dotd.louisiana.gov/;</u> Internet; accessed 23 August 2016.
- Lousiana Department of Transportation and Development. LaDOTD Estimated Annual Average Daily Traffic Routine Traffic Counts interactive mapper. 2019. LaDOTD website; available from <u>http://wwwapps.dotd.la.gov/engineering/tatv/</u>; Internet; accessed 5 September 2019.
- Louisiana Department of Wildlife and Fisheries. 2019. Rare Animals of Louisiana: Redcockaded of Louisiana, Picoides borealis. Available online from http://www.wlf.louisiana.gov/sites/default/files/pdf/fact_sheet_animal/32284-Picoides%20borealis/picoides_borealis.pdf. [Accessed 01 October 2019].
- Louisiana Geological Survey. 2010. *Generalized geologic map of Louisiana*; available from http://www.lgs.lsu.edu/deploy/content/PUBLI/contentpage17.php; Internet; accessed 23 August 2016.

- Migratory Bird Treaty Act of 1918. Statutes at large. 1918. Vol. 40, 755, as amended; summary available from <u>https://www.fws.gov/laws/lawsdigest/migtrea.html</u>; Internet; accessed 6 January 2015.
- Mississippi Flyway Council. n.d. The Mississippi Flyway; available from <u>http://mississippi.flyways.us/;</u> Internet; accessed 20 September 2019.
- National Environmental Policy Act of 1969. Statutes at large. 1970. Vol. 83, secs. 1-207, 852; available from <u>http://www.gpo.gov/fdsys/pkg/STATUTE-83/pdf/STATUTE-83-Pg852.pdf</u>. Amended 1975. Statutes at large, Vol. 89, sec. 102, 424; <u>http://www.gpo.gov/fdsys/pkg/STATUTE-89/pdf/STATUTE-89-Pg424.pdf</u>; Internet; accessed 12 September 2019.
- National Historic Preservation Act. Statutes at large. 1966. Vol. 80, secs. 1-205, 915; available from <u>http://www.gpo.gov/fdsys/pkg/STATUTE-80/pdf/STATUTE-80-Pg915.pdf</u>. Amended 2006. Statutes at large, Vol. 120, secs. 1 and 216, 3367; <u>http://www.gpo.gov/fdsys/pkg/STATUTE-120/pdf/STATUTE-120-Pg3367.pdf</u>; Internet; accessed 2 October 2019.
- National Oceanic and Atmospheric Administration. Climate Data Online; available from <u>https://www.ncdc.noaa.gov/cdo-web/</u>; Accessed 01 November 2019.
- National Oceanic and Atmospheric Administration. Essential Fish Habitat Mapper; available from <u>https://www.habitat.noaa.gov/protection/efh/efhmapper/index.html</u>; Accessed 23 September 2019.
- National Oceanic and Atmospheric Administration. What are pelagic fish?; available from <u>https://oceanservice.noaa.gov/facts/pelagic.html</u>; accessed 23 September 2019.
- Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act. 2005. 40 C.F.R. §§ 1500-1508. Original edition, Federal Register 45 (28 August 1980): 57488-57514; available from <u>http://energy.gov/sites/prod/files/NEPA-40C.F.R.1500_1508.pdf</u>; Internet; accessed 17 September 2019.
- Regulatory Programs of the Corps of Engineers. 1986. 33 C.F.R. §§ 320-330. Federal Register51(13November):41206-41260;availablefromhttp://www.spk.usace.army.mil/Portals/12/documents/regulatory/pdf/FRs/FR13nov86.pdf;Internet;accessed 5 November 2019.
- Resource Conservation and Recovery Act. Statutes at large. 1976. Vol. 90, secs. 1-4, 2795; as amended through 31 December 2002 available from <u>http://www.epw.senate.gov/rcra.pdf</u>; Internet; accessed 5 November 2019.
- Revisions to the General Conformity Regulations. 2010. 40 C.F.R. §§ 51 and 93. Federal Register 75 (5 April): 17254-17279; available from <u>http://www.gpo.gov/fdsys/pkg/FR-2010-04-05/pdf/2010-7047.pdf</u>; Internet; accessed 4 November 2019.

Rivers and Harbors Act of 1899. Statutes at large. 1899. Vol. 30, secs. 1-22, 1121.

- State and Local Coastal Resources Management Act of 1978. Louisiana State Legislature. 1978. No. 361, R.S. 49, sec. 214.21; available from <u>http://www.legis.la.gov/Legis/Law.aspx?d=103626</u>; Internet; accessed 17 November 2014.
- *Toxic Substances Control Act. Statutes at large*. 1976. Vol. 90, secs. 1-31, 2003; available from http://www.gpo.gov/fdsys/pkg/STATUTE-90/pdf/STATUTE-90-Pg2003.pdf; Internet; accessed 2 October 2019.
- *Transportation Safety Act of 1974. Statutes at large.* 1974. Vol. 88, secs. 101-309, 2156; available from <u>http://www.gpo.gov/fdsys/pkg/STATUTE-100/pdf/STATUTE-100-Pg1613.pdf;</u> Internet; accessed 30 September 2019.
- U.S. Department of Agriculture. 2013. *National soil survey handbook, title 430-VI*. Natural Resources Conservation Service; available from <u>http://www.nrcs.usda.gov/wps/portal/nrcs/</u> <u>detail/national/nedc/training/soil/?cid=nrcs142p2_054242</u>; Internet; accessed 20 September 2019.
- U.S. Department of Agriculture. 2019. Web Soil Survey. Natural Resources Conservation Service; available from <u>http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx;</u> Internet; accessed 29 August 2019.
- U.S. Department of Commerce. 2016. Data from the U.S. Census Bureau compiled and extrapolated by Enforcement and Compliance History Online. U.S. Environmental Protection Agency; available from <u>http://echo.epa.gov/;</u> Internet; accessed 29 August 2019.
- U.S. Department of Commerce. 2016. American FactFinder: Median household income in the past 12 months (in 2016 inflation-adjusted dollars). U.S. Census Bureau; available from <u>http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_12_5YR_B19013&prodType=table</u>; Internet; accessed 23 September 2019.
- U.S. Department of Homeland Security. 2019. Effective Flood Insurance Rate Map. Map number: 22063C0205E (03 April 2012). FEMA; available from https://msc.fema.gov/portal/home; accessed 29 October 2019.
- U.S. Department of the Interior. 2019. National Wetlands Inventory Wetland Mapper. U.S. Fish and Wildlife Service; available from <u>http://www.fws.gov/wetlands/Data/Mapper.html</u>; Internet; accessed 24 September 2019.
- U. S. Department of the Interior. 2019a. *Coastal Barrier Resources Act*. U. S. Fish and Wildlife Service; available from <u>http://www.fws.gov/CBRA/;</u> Internet; accessed 18 October 2019.
- U.S. Department of the Interior. 2019b. Endangered, Threatened, and Candidate Species of Louisiana. U.S. Fish and Wildlife Service; available from <u>http://www.fws.gov/lafayette/pdf/ LA_T&E_Species_List.pdf;</u> Internet; accessed 20 September 2019.

- U.S. Environmental Protection Agency. 2008. Section 404 of the Clean Water Act- Compensatory Mitigation; available from https://www.epa.gov/cwa-404/compensatory-mitigation; Internet; accessed 16 September 2019.
- U.S. Environmental Protection Agency. 1974. *EPA Identifies Noise Levels Affecting Health and Welfare*; available from <u>http://www2.epa.gov/aboutepa/epa-identifies-noise-levels-affecting-health-and-welfare/;</u> Internet; accessed 25 September 2019.
- U.S. Environmental Protection Agency. 2019a. *Envirofacts Toxics Release Inventory (TRI) Search*; available from <u>http://www.epa.gov/enviro/facts/tri/search.html</u>; Internet, accessed 23 September 2019.
- U.S. Environmental Protection Agency. 2019b. *NEPAssist*; available from <u>http://nepassisttool.epa.gov/ nepassist/entry.aspx;</u> Internet; accessed 23 September 2019.
- U.S. Environmental Protection Agency. 2019c. *The Green Book nonattainment areas for criteria pollutants*; available from <u>http://www.epa.gov/oaqps001/greenbk/</u>; Internet; accessed on 27 August 2019.
- U.S. President. 1977a. Executive Order. Floodplain Management, Executive Order 11988. *Federal Register* 42 (25 May): 26951; available from <u>http://www.fema.gov/media-library-data/20130726-1438-20490-9495/eo11988.pdf</u>; Internet; accessed 12 September 2019.
- U.S. President. 1977b. Executive Order. Protection of Wetlands, Executive Order 11990. *Federal Register* 42 (25 May): 26961; available from <u>http://www.archives.gov/federal-register/</u>codification/executive-order/11990.html; Internet; accessed 5 September 2019.
- U.S. President. 1994. Executive Order. Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, Executive Order 12898. Federal Register 59 (16 February): 7629; available from <u>http://www.archives.gov/federal-register/executive-orders/pdf/12898.pdf</u>; Internet; accessed 16 September 2019.