Draft Environmental Assessment

Alternative Housing Pilot Program Hidden Cove Group Housing Site, Baton Rouge, Louisiana

East Baton Rouge Parish
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FEMA

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List of Acronyms and Abbreviations

$\mu g/m^3$	micrograms per cubic meter of air
AADT	Average Annual Daily Traffic
ABFE	Advisory Base Flood Elevation
ACHP	Advisory Council on Historic Preservation
AHPP	Alternative Housing Pilot Program
APE	Area of Potential Effect
ASTM	American Society for Testing and Materials
BEA	Bureau of Economic Analysis
BMP	Best Management Practice
BREC	Baton Rouge Recreation and Parks Commission
C	Candidate species
CAA	Clean Air Act
CO	Carbon monoxide
CERCLA	Comprehensive Environmental Response, Compensation, & Liability Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DFIRM	Digital Flood Insurance Rate Maps
DHS	Department of Homeland Security
DNL	Day-night Average Sound Level
DO	Dissolved oxygen
E	Endangered Species
EA	Environmental Assessment
ECO	EcoScience Resource Group, LLC.
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EO	Executive Order
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Maps
FPPA	Farmland Protection Policy Act
FONSI	Finding of No Significant Impact
FWCA	Fish and Wildlife Coordination Act
GLP	Green Light Plan
GOHSEP	Governor's Office of Homeland Security and Emergency Preparedness
GSRC	Gulf South Research Corporation
HUD	U.S. Department of Housing and Urban Development
I	Interstate
LA	Louisiana highway
LaDOTD	Louisiana Department of Transportation and Development
LDEQ	Louisiana Department of Environmental Quality
LDWF	Louisiana Department of Wildlife and Fisheries
LOHSEP	Louisiana Office of Homeland Security and Emergency Preparedness
Louisiana Cottages	Permanent single-family AHPP units
LRA	Louisiana Recovery Authority
LTCR	Louisiana Long-term Community Recovery

MBTA	Migratory Bird Treaty Act
mg/m^3	milligrams per cubic meter of air
mL	milliliter
MRI	Midwest Research Institute
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NWI	National Wetland Inventory
NO_2	Nitrogen dioxide
NO_x	Nitrous oxides
NOAA	National Oceanic and Atmospheric Administration
NOAA Fisheries	NOAA National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
O_3	Ozone
P	Primary
PA	Programmatic Agreement
Pb	Lead
PCPI	Per Capita Personal Income
P.L.	Public Law
PM-2.5	Particulate matter less than 2.5 micrometers
PM-10	Particulate matter less than 10 micrometers
ppm	parts per million
POV	Personally owned vehicle
RCRA	Resource Conservation and Recovery Act
ROI	Region of Influence
S	Secondary
SHPO	State Historic Preservation Officer
SO_2	Sulfur dioxide
Stafford Act	Robert T. Stafford Disaster Relief and Emergency Assistance Act
State	State of Louisiana
SURA	Surveys Unlimited Research Associates Inc.
SWPPP	Stormwater Pollution Prevention Plan
T	Threatened Species
THPO	Tribal Historic Preservation Officer
TPI	Total Personal Income
tpy	Ton per year
TSCA	Toxic Substances Control Act
US	U.S. highway
U.S.	United States
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VOC	Volatile organic compound
WSRA	Wild and Scenic Rivers Act
WUS	Waters of the US

SECTION 1.0
INTRODUCTION

1.0 Introduction

Recognizing the extensive and complex housing challenges facing victims and communities along the Gulf Coast region, a result of the 2005 hurricane season, and acknowledging the limitations on the Federal Emergency Management Agency's (FEMA) ordinary statutory authority to provide long-term and permanent housing solutions, the United States (U.S.) Congress appropriated funds to the Department of Homeland Security (DHS) to support alternative housing pilot programs (Emergency Supplemental Appropriations Act, 2006, Public Law (P.L.) 109-234). The Alternative Housing Pilot Program (AHPP) represents a one-time exception to FEMA's existing authority under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act). The Stafford Act legally binds FEMA to a temporary housing mission, by providing an opportunity to explore, implement, and evaluate innovative approaches to housing solutions, and to address ongoing housing challenges created by the 2005 hurricane season in the states of the Gulf Coast region, including the State of Louisiana.

The Louisiana Recovery Authority (LRA), in conjunction with the State of Louisiana, has applied for FEMA funding under the AHPP to provide permanent housing solutions for eligible applicant families displaced by Hurricanes Katrina and Rita throughout the State of Louisiana, including within East Baton Rouge Parish (Appendix A, Figure 1).

In accordance with the National Environmental Policy Act (NEPA), as implemented through 40 Code of Federal Regulations (CFR) 1500 *et. seq*., 44 CFR 10 *et. seq*., and DHS's Management Directive 5100.1, FEMA must fully understand and consider the environmental impacts of actions proposed for Federal funding. The purpose of this Environmental Assessment (EA) is to analyze the potential impacts of the proposed AHPP housing project on the natural and human environment and to determine whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

1.1 Project Location

The Hidden Cove Subdivision (Hidden Cove), located along Elvin Drive in Baton Rouge, East Baton Rouge Parish Louisiana, is a previously developed 20-acre plot of land, and is comprised of 118 private home sites (Appendix A, Figure 2). Currently, approximately 80 home sites within the subdivision are vacant. The proposed site is owned by The Resource Foundation, Inc., a

public non-profit organization. The proposed site was developed in 2006 by the current owner in conjunction with U.S. Department of Housing and Urban Development (HUD) assistance.

SECTION 2.0
PURPOSE & NEED

2.0 Purpose and Need

The purpose of this action is to provide alternative disaster housing within East Baton Rouge Parish, and other nearby southern parishes within the State of Louisiana that include long-term and permanent solutions. The need for this action is to address the housing shortages caused by the catastrophic effects of Hurricanes Katrina and Rita, and to move disaster victims from current temporary solutions (*e.g.*, rental dwellings, manufactured housing, *etc.*) to permanent housing. Currently in Louisiana, 967 mobile homes, 6,112 manufactured housing, and 334 park model houses are still occupied by residents displaced by Hurricanes Katrina and Rita. An additional 4,225 people are currently receiving rental assistance.

SECTION 3.0
ALTERNATIVES

3.0 Alternatives

This section describes the two alternatives that the State of Louisiana (State) and FEMA propose to undertake in order to evaluate permanent AHPP group housing to Louisiana residents displaced as a result of Hurricanes Katrina and Rita within East Baton Rouge Parish and surrounding parishes (program area) (Appendix A, Figure 1). The two alternatives evaluated were: the No Action Alternative, and the Proposed Action Alternative, which consist of the construction of AHPP group housing on a 20-acre plot of land located within the Hidden Cove Subdivision in Baton Rouge, Louisiana. The alternatives are more fully described below.

3.1 Alternatives Evaluated

3.1.1 Alternative 1: No Action Alternative

Inclusion of a No Action Alternative in the environmental analysis and documentation is required under NEPA and is defined as maintaining the *status quo*, with no FEMA funding for any alternative action. This alternative evaluates the effects of not providing eligible assistance for a specific action and provides a benchmark against which other alternatives may be evaluated.

Under the No Action Alternative, no AHPP housing would be provided for families displaced from their homes. Rental resources are very limited in the affected area, and people displaced by the 2005 hurricane season would remain in housing provided by family members or friends, in hotels, in temporary "dormitories" such as homeless shelters or churches, or in facilities damaged by the storm and determined structurally unsafe or unsanitary.

3.1.2 Alternative 2: Proposed Action Alternative

The Proposed Action Alternative would include the construction of approximately 42 single-family dwellings (Louisiana Cottages) within the Hidden Cove Subdivision. Figure 3 provides a conceptual layout of the project site. The living area for the various Louisiana cottages (cottages) at the proposed site would range from 910 square feet to 1,112 square feet. The cottages would be built on piers to bring them up to the required elevation, as necessary. Each home site would utilize municipal water, electricity, sewerage, and telephone utilities previously installed during development of the subdivision. Individual cottage sites would be cleared of all vegetation and debris and then grubbed. Contouring and grading would be done, if necessary. Driveways and walkways would be constructed to facilitate access to each cottage. Photograph 1 shows a typical Louisiana Cottage. Appendix A,

Section 4 summarizes the potential impacts of the Proposed Action Alternative and conditions or mitigation measures to avoid or reduce those impacts. Section 5 describes in detail the resources and analyzes the potential impacts of the No Action and Proposed Action Alternatives. Section 6 outlines the cumulative impacts of the Proposed Action. Section 7 discusses the public involvement while Section 8 outlines the interagency coordination by FEMA. A list of preparers is found in Section 9 while Section 10 provides the references cited throughout the document.

Photograph 1. Typical Louisiana Cottage

SECTION 4.0
SUMMARY OF IMPACTS & MITIGATION

4.0 Summary of Impacts and Mitigation

The following table summarizes the potential impacts of the No Action and Proposed Action Alternatives, and conditions or mitigation to offset those impacts. Potential impacts to resources are discussed in greater detail in Section 5.0.

Affected Environment	No Action Alternative	Proposed Action Alternative
Geology and Soils	No impacts to geology, soils, or prime or unique farmland are anticipated.	No impacts to geology; short-term impacts to soils during the construction period. A permanent loss of 20 acres of Prime Farmland; would occur and although zoning is designated as rural, its use as a low density residential use precludes its use as farmland. Appropriate Best Management Practices (BMPs) would be implemented, such as installing silt fences and revegetating bare soils immediately upon completion of construction.
Water Quality	No impacts to water quality are anticipated.	Minor impacts from erosion and sedimentation to surface water are possible during construction and AHPP housing use. A Stormwater Pollution Prevention Plan (SWPPP), a National Pollutant Discharge Elimination System (NPDES) would be required and appropriate BMPs would be implemented to minimize these impacts and minimize runoff.
Floodplains	No impacts to floodplains are anticipated.	Construction would not occur in the 100-year floodplain; therefore, no impacts to the floodplain would occur.
Wetlands	No impacts to wetlands and waters of the U.S are anticipated.	No impacts to wetlands and waters of the U.S are anticipated.
Air Quality	No impacts to air quality are anticipated.	Temporary and minor impacts to air quality would occur during the construction period. To minimize these impacts all construction equipment would be properly maintained and dust suppression BMPs would be implemented.
Noise	No impacts to noise are anticipated.	Short-term impacts from increased noise would occur at the proposed project site during construction and have the potential to expose sensitive receptors to noise emissions that are normally unacceptable. To minimize this impact, construction activities would be limited to 7:00 AM to 5:00 PM, Monday through Friday. Construction activities would not occur in the late evenings and early mornings or on weekends and holidays.
Biological Resources	No impacts to biological resources are anticipated.	Approximately 20 acres of developed land would be lost as a result of the Proposed Action; however, as the permanent housing site is predominately surrounded by residential and commercial areas there is limited use of the site by common urban wildlife species. No impacts to biological resources would occur; however, some beneficial urban wildlife could benefit with proper tree and shrub plantings.

Table, continued

Affected Environment	No Action Alternative	Proposed Action Alternative
Cultural Resources	No impacts to cultural resources are anticipated.	No impacts to archaeological or cultural resources are anticipated. In the event of a find during ground disturbance, activities in the area of the find would be suspended and appropriate mitigation measures would be developed in consultation with the State Historic Preservation Officer (SHPO), appropriate Tribes and Tribal Historic Preservation Officers (THPO), and through the Section 106 process.
Socioeconomics	Displaced residents would continue to utilize FEMA manufactured housing and mobile homes. Potential health effects could continue to affect displaced residents.	No adverse socioeconomic impacts are anticipated. Beneficial impacts from the FEMA AHPP housing development are anticipated.
Traffic and Transportation	No impacts to traffic are anticipated.	Short term impacts would occur during construction activities and minimal but insignificant impacts would occur during use of the AHPP cottages due to an increase in traffic volumes. To minimize these impacts during construction, traffic along adjacent roadways would be temporarily rerouted as necessary during construction and any lane closures would be coordinated with the appropriate local government.
Hazardous Materials and Wastes	No impacts to hazardous materials are anticipated.	Although a Phase I Environmental Site Assessment was conducted in 2005 and no *recognized environmental conditions* were reported; however, with the expansion of an adjacent oil and gas production and storage facility there now constitutes a *recognized environmental condition.* The risk posed to the Hidden Cove AHPP residents is a potential risk, and no current hazardous or dangerous conditions affect the proposed site. Excavation activities could expose or otherwise affect subsurface hazardous wastes or materials; any hazardous materials discovered, generated, or used during construction would be disposed of and handled in accordance with applicable local, state, and Federal regulations. The LRA and the state would coordinate with state and local agencies, and the USEPA, as appropriate. . In addition, to minimize any future environmental, health, and safety risks associated with the oil and gas facility, the LRA will coordinate with the current owner or operating company of the facility, Lamar Oil and Gas Company, in developing an emergency response plan to ensure public health and safety in the event of a off-normal or emergency event.

SECTION 5.0
AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, & MITIGATION MEASURES

5.0 Affected Environment, Environmental Consequences, and Mitigation Measures

The following subsections discuss the regulatory setting and the existing conditions for the following resource areas in East Baton Rouge Parish, Louisiana that may be impacted by the Proposed Action Alternative and No Action Alternative considered.

- Geology and Soils
- Water Quality
- Floodplains
- Wetlands
- Air Quality
- Noise
- Biological Resources
- Cultural Resources
- Socioeconomics
- Traffic and Transportation
- Hazardous Materials and Wastes

5.1 Geology and Soils

5.1.1 Affected Environment

Regulatory Setting

The Farmland Protection Policy Act (FPPA) requires Federal agencies to evaluate the effects (direct and indirect) of their activities before taking any action that could result in converting designated prime or unique farmland or farmland of statewide and local importance for nonagricultural purposes. If an action would adversely affect farmland preservation, alternative actions that could avoid or lessen adverse effects must be considered. Determination of the level of impact on prime and unique farmland or farmland of statewide and local importance is done by the lead Federal agency (proponent), which inventories farmlands affected by the proposed action and scores the land as part of an Farmland Conversion Impact Rating (AD 1006 Form), for each alternative. In consultation with the proponent, Natural Resources Conservation Service (NRCS) completes the AD 1006 Form and determines the level of consideration for protection of farmlands that needs to occur under the FPPA (NRCS 2008).

Existing Conditions

There are active faults in East Baton Rouge Parish; however, overall the State of Louisiana is not considered seismically active even though the State does experience periodic small earthquakes (Louisiana Geological Services 2001). Surface exposures in East Baton Rouge Parish consist of Quaternary (Pleistocene and Holocene) sediments. The parish is underlain by coast-parallel terraces formed by deposits of the Mississippi River and smaller coastal-plain

streams and bayous from the recent geologic past. The terraces are remnants of pre-existing floodplains that have been cut into by the river and various streams and bayous. The proposed site has an elevation of 20 feet.

The entire Hidden Cove site contains one soil type, Commerce silt loam. The Commerce Series consists of highly fertile, poorly to somewhat poorly drained soil and has very slow to moderately slow infiltration rates (U.S. Department of Agriculture [USDA] 2008). Although the Commerce silt loam is classified as prime farmland soils; prime or unique farmlands are not impacted by the proposed project due to its current land use designation of low density residential use.

5.1.2 Environmental Consequences and Mitigation Measures

5.1.2.1 No Action Alternative

This alternative does not include any FEMA action. Therefore, FEMA would not be required to comply with the FPPA. The No Action Alternative does not have the potential to affect geology, soils, or prime or unique farmland.

5.1.2.2 Proposed Action Alternative

No impacts to geology would occur due to the minimal depth of disturbance from the installation of cottage footings and driveway placement.

The FPPA directed that Federal agencies must assess the NRCS classification of soils as prime or unique farmland. According to the NRCS, all of the common soils, except urban land, are classified as prime farmland soils. The current zoning of the project area as rural does not preclude its use for crop production, however, its current land use as low density residential use would make the land unavailable for farming; therefore, withdrawal of these soils for use as an AHPP group development would not require a Farmland Conversion Impact Rating Analysis.

As the subdivision was previously graded and contoured during development, it is anticipated that any soil loss would be minimal. Short-term impacts to soils would occur during any additional ground clearing or site preparation, including the installation of driveways. Any soil loss would be directly from ground disturbing activities or indirectly via wind or water. Best Management Practices (BMP), such as developing and implementing an erosion and sedimentation control plan, using silt fences or hay bales, revegetating disturbed soils, and

maintaining site soil stockpiles, would be implemented to prevent soils from eroding and dispersing off-site. On December 17, 2008, a letter requesting project review was sent to NRCS. No response has been received to date.

5.2 Water Quality

5.2.1 Affected Environment

Regulatory Setting

The Clean Water Act (CWA) establishes the basic structure for regulating pollutant discharges to navigable waters of the United States. It sets forth procedures for effluent limitations, water quality standards and implementation plans, national performance standards, and point source (*e.g.,* municipal wastewater discharges) and nonpoint source programs (*e.g.*, stormwater). The CWA also establishes the National Pollutant Discharge Elimination System (NPDES) under Sections 401 and 402 and permits for dredged or fill material under Section 404.

Existing Conditions

The major surface water body in the project area is Bayou Manchac. Smaller hydrologic features within the watershed include Bayou Fountain, ditches and wetlands. Louisiana Department of Environmental Quality (LDEQ) has prescribed water quality standards for surface waters of the State in order to promote a healthy and productive aquatic system. Surface water standards are set to protect the quality of all waters of the state, including rivers, streams, bayous, lakes, reservoirs, wetlands, estuaries, and many other types of surface water. Standards apply to pH, temperature, bacterial density, dissolved oxygen (DO), chloride concentration, sulfate concentration, and total dissolved solids. LDEQ has assigned Bayou Manchac a sub-segment number, LA 040201 sub-watershed.

The LDEQ 040201 sub-watershed is approximately 110,000 acres and contains several ponds, wetland areas and ditches. Water quality in the 040201 sub-watershed is not improving. The sub-watershed is not meeting designated uses for all recreational uses, i.e. primary and secondary contact recreation and fish and wildlife propagation. Suspected causes of impairment are low DO, nutrients, total dissolved solids, chloride, sulfates and fecal coliforms. The suspected sources of pollutants are thought to originate from land development, septic systems, sanitary sewer overflows, and other unknown sources (LDEQ 2006). The water quality concerns associated with LA 041101 watershed are presented in Table 1.

Table 1. Water Quality Attainment Status for the Sub-watershed within the Project Area

Sub-watershed Name & LDEQ ID	Water Quality Attainment Status	Suspected Causes of Impairment	Suspected Sources of Impairment
Bayou Manchac, LA 041101	Does not meet attainment for fish and wildlife propagation and primary and secondary contact recreation	Chlorides, sulfates, total dissolved solids, phosphorus, ammonia, DO, and fecal coliform	Land development, septic systems, sanitary sewer overflows, and other unknown sources

Source: LDEQ 2006 303 (d) list.
Table Key:

- Primary Contact Recreation. No more than 25 percent of the total samples collected on a monthly or near-monthly basis shall exceed a fecal coliform density of 400/100 milliliter (mL). This primary contact recreation criterion shall apply only during the defined recreational period of May 1 through October 31. During the nonrecreational period of November 1 through April 30, the criteria for secondary contact recreation shall apply.
- Secondary Contact Recreation. No more than 25 percent of the total samples collected on a monthly or near-monthly basis shall exceed a fecal coliform density of 2,000/100 mL. This secondary contact recreation criterion shall apply year round.
- Fish and Wildlife Propagation includes the suitability of the water body to sustain fish and wildlife and is based water quality parameters such as DO, nutrients, turbidity, pH, chlorides, metals, and toxics.

The proposed project site is located in the Southeastern Louisiana aquifer system, also known as the Southern Hills aquifer system, which consists of approximately 30 named aquifers. The aquifer system ranges in thickness from 50 to 1,100 feet with an increasing depth toward the southern end. The Southern Hills aquifer system's primary user is public water supply and industry use. The largest withdrawal of water is from East Baton Rouge Parish. Saltwater intrusion into the aquifer primarily occurs south of the Baton Rouge Fault, which trends through Baton Rouge eastward across the northern part of Lake Pontchartrain. Concentrated pumping in Baton Rouge north of the fault zone has lowered water levels in many of the aquifers and caused saltwater to migrate northward across the fault.

Groundwater withdrawals from the Southern Hills aquifer system for the year 2000 were approximately 290 million gallons per day. The breakdown in use was 49 percent by public supply, 39 percent by industry, 5 percent by power generation facilities, 6 percent by rural domestic sources, and 1 percent for all other uses (Louisiana Department of Transportation and Development [LaDOTD] 2002).

5.2.2 Environmental Consequences and Mitigation Measures

5.2.2.1 No Action Alternative

The No Action Alternative does not have the potential to affect water quality.

5.2.2.2 Proposed Action Alternative

Implementation of the Proposed Action Alternative would result in minor impacts to the water quality in the project corridor area. The contractor will obtain a National Pollutant Discharge System (NPDES) permit and develop a Stormwater Pollution Prevention Plan (SWPPP) to control stormwater runoff from the proposed project. Employment of BMPs through the construction process would minimize the water quality impacts. Construction of homes and driveways would result in minor increases in stormwater runoff due to the additional area of impervious surface; however, this would be a minor increase compared to the rapidly developing landscape. Due to the existing degraded conditions of sub-watershed, impacts would be minor. The implementation of BMPs as part of the SWPPP would minimize potential erosion and sedimentation discharge from stormwater and non-stormwater discharges during construction and post-construction.

Implementation of the Proposed Action Alternative would not impact groundwater supplies. Some activities such as soil excavation would be expected to occur; however, these activities would be conducted in the upper surface of the soil. The southeastern aquifer Southern Hills aquifer system in the vicinity of the project varies in depth from 400 feet to over 2,000 feet deep, a significantly greater depth than the depth construction activities would take place.

5.3 Floodplains

5.3.1 Affected Environment

Regulatory Setting

Executive Order (EO) 11988 (Floodplain Management) requires Federal agencies to avoid direct or indirect support of development within the 100-year floodplain whenever there is a practicable alternative. A floodplain is defined as the lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, and including, at a minimum, that area subject to a 1 percent or greater chance of flooding in any given year.

FEMA uses Flood Insurance Rate Maps (FIRM) to identify the regulatory 100-year floodplain from the National Flood Insurance Program (NFIP). FIRMs generally show a community's Advisory Base Flood Elevation (ABFE), flood zones, and floodplain boundaries. However, maps are constantly being updated due to changes in geography, construction and mitigation activities, and meteorological events (FEMA 2007).

When evaluating actions in the floodplain, FEMA applies the decision process described in 44 CFR Part 9, referred to as the Eight-Step Planning Process, to ensure that its actions are consistent with EO 11988. By its nature, the NEPA compliance process involves the same basic decision-making process as the Eight-Step Planning Process.

Existing Conditions

Based on FEMA FIRM data the proposed Hidden Cove site is not within the 100-year floodplain and is designated as Zone X on Map Number 22033C0310E Panel 310 of 360, effective date May 2, 2008 (FEMA 2008).

5.3.2 Environmental Consequences and Mitigation Measures

5.3.2.1 No Action Alternative

This Alternative does not include any FEMA actions. Therefore, FEMA would not be required to comply with EO 11998. The No Action Alternative does not have the potential to affect floodplains.

5.3.2.2 Proposed Action Alternative

The Hidden Cove AHPP proposed site is not within the 100-year floodplain; therefore, the Proposed Action Alternative does not have the potential to affect floodplains.

5.4 Wetlands

5.4.1 Affected Environment

Regulatory Setting

The Clean Water Act (CWA), as amended in 1977, established the basic framework for regulating discharges of pollutants into the waters of the United States. The U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or filled material into waters of the U.S., including wetlands, pursuant to Section 404 of the Clean Water Act.

In addition, EO 11990 (Protection of Wetlands) requires Federal agencies to follow avoidance, mitigation, and preservation procedures with public input before proposing new construction in wetlands. The implementation of EO 11990 is described in 44 CFR Part 9. As with EO 11988, the Eight-Step Planning Process is used to evaluate the potential effects of an action on wetlands. As discussed in the Clean Water Act (CWA) subsection above, formal legal protection of jurisdictional wetlands is promulgated through Section 404 of the CWA. A permit

from the U.S. Army Corps of Engineers (USACE) may be required if an action has the potential to affect wetlands.

The Coastal Zone Management Act of 1972 authorizes the Coastal Zone Management Program, which is a Federal-state partnership dedicated to comprehensive management of the nation's coastal resources. By making Federal funds available, the laws encourage states to preserve, protect and, where possible, restore or enhance valuable natural coastal resources, such as wetlands, floodplains, estuaries, beaches, dunes, barrier islands, and coral reefs, as well as the fish and wildlife using those habitats. Any Federal agency whose activities directly affect the coastal zone would, to the maximum extent practicable, be consistent with approved state management programs. The Louisiana Department of Natural Resources supervises land acquisition and construction within the Louisiana Coastal Zone. FEMA must conduct its activities in a manner consistent with Louisiana's Federally approved Coastal Management Program.

Existing Conditions

During a reconnaissance site visit by Gulf South Research Corporation (GSRC) in November 19, 2008, no waters of the U.S. (WUS) including wetlands were observed within the project area. The proposed site is a partially developed residential neighborhood in which the land has been cleared, graded, and contoured for housing. The site has few trees and the grasses appear to be mowed on a regular basis. In addition, the approximate 20-acre site is not designated as wetland based on the National Wetland Inventory (NWI) (USFWS 2006).

The proposed site is within East Baton Rouge Parish and is therefore not within the Louisiana Coastal Zone.

5.4.2 Environmental Consequences and Mitigation Measures

5.4.2.1 No Action Alternative

Under the No Action Alternative, FEMA would not install AHPP housing on the proposed project site. Therefore, no impacts to wetlands or WUS would occur.

5.4.2.2 Proposed Action Alternative

No waters of the U.S., including wetlands, occur on the proposed project site. Under the Proposed Action Alternative, no impacts to waters of the U.S., including wetlands, would occur.

On December 17, 2008, a letter requesting project review was sent to USACE. No response has been received to date.

5.5 Air Quality

5.5.1 Affected Environment

Regulatory Setting

The U.S. Environmental Protection Agency (USEPA) established National Ambient Air Quality Standards (NAAQS) for specific pollutants. The NAAQS standards are classified as either "primary" or "secondary" standards. The major pollutants of concern, or criteria pollutants, are carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), ozone (O_3), Particulate matter less than 10 microns (PM-10), Particulate matter less than 2.5 microns (PM-2.5), and lead (Pb). NAAQS represent the maximum levels of background pollution that are considered safe, with an adequate margin of safety, to protect the public health and welfare. The NAAQS are included in Table 2.

Table 2. National Ambient Air Quality Standards

POLLUTANT	STANDARD VALUE	STANDARD TYPE
Carbon Monoxide (CO)		
8-hour average	9ppm (10mg/m^3)	P
1-hour average	35ppm (40mg/m^3)	P
Nitrogen Dioxide (NO_2)		
Annual arithmetic mean	0.053ppm (100μ/m^3)	P and S
Ozone (O_3)		
8-hour average*	0.08ppm (157μg/m^3)	P and S
1-hour average*	0.12ppm (235μg/m^3)	P and S
Lead (Pb)		
Quarterly average	1.5μg/m^3	P and S
Particulate<10 micrometers (PM-10)		
Annual arithmetic mean	50μg/m^3	P and S
24-hour average	150μg/m^3	P and S
Particulate<2.5 micrometers (PM-2.5)		
Annual arithmetic mean	15μg/m^3	P and S
24-hour average	65μg/m^3	P and S
Sulfur Dioxide (SO_2)		
Annual average mean	0.03ppm (80μg/m^3)	P
24-hour average	0.14ppm (365μg/m^3)	P
3-hour average	0.50ppm (1300μg/m^3)	S

Legend: P= Primary S= Secondary
Source: USEPA 2006.
ppm = parts per million
mg/m^3 = milligrams per cubic meter of air μg/m^3 = micrograms per cubic meter of air
* Parenthetical value is an approximate equivalent concentration

Areas that do not meet these NAAQS standards are called non-attainment areas or maintenance areas; areas that meet both primary and secondary standards are known as attainment areas. The Federal Conformity Final Rule (40 CFR Parts 51 and 93) specifies criteria or requirements for conformity determinations for Federal projects. The Federal Conformity Rule was first promulgated in 1993 by the USEPA, following the passage of Amendments to the Clean Air Act (CAA) in 1990. The rule mandates that a conformity analysis must be performed when a Federal action generates air pollutants in a region that has been designated a non-attainment or maintenance area for one or more NAAQS.

A conformity analysis is the process used to determine whether a Federal action meets the requirements of the general conformity rule. It requires the responsible Federal agency to evaluate the nature of the proposed action and associated air pollutant emissions, calculate emissions as a result of the proposed action, and mitigate emissions if *de minimis* thresholds are exceeded.

Existing Conditions

East Baton Rouge Parish is in moderate non-attainment for ozone (USEPA 2008). Air emissions from internal combustion engines produce volatile organic compounds (VOC) and nitrogen oxides (NO_x), which are comprised of precursor molecules that react with oxygen in the atmosphere to create ozone. The annual *de minimis* thresholds for project air emissions are 100 tons per year (tpy) for VOCs and NO_x.

5.5.2 Environmental Consequences and Mitigation Measures

5.5.2.1 No Action Alternative

Under the No Action Alternative, traffic volumes and air quality would continue at current levels. No localized or regional effects to air quality are expected.

5.5.2.2 Proposed Action Alternative

Temporary and minor increases in air pollution will occur from the use of construction equipment (combustible emissions) and the disturbance of soils (fugitive dust) during construction of the new facilities. The following describes the air calculation methodologies utilized to estimate air emissions produced by the Proposed Action Alternative. Fugitive dust emissions were calculated using the emission factor of 0.19 ton per acre per month (Midwest Research Institute

[MRI] 1996), which is a more current standard than the 1985 PM-10 emission factor of 1.2 tons per acre-month presented in AP-42 Section 13 Miscellaneous Sources 13.2.3.3 (USEPA 2001).

USEPA's NONROAD Model (USEPA 2005) was used, as recommended by USEPA's *Procedures Document for National Emission Inventory, Criteria Air Pollutants, 1985-1999* (USEPA 2001), to calculate emissions from construction equipment. Combustible emission calculations were made for standard construction equipment, such as front-end loaders, backhoes, bulldozers, and cement trucks. Assumptions were made regarding the total number of days each piece of equipment will be used, and the number of hours per day each type of equipment will be used.

Construction workers would temporarily increase the combustible emissions in the airshed during their commute to and from the project area. Emissions from delivery trucks contribute to the overall air emission budget. Emissions from delivery trucks, construction worker commuters traveling to the job site were calculated using the USEPA MOBILE6.2 Model (USEPA 2005a, 2005b and 2005c).

The total annual air quality emissions were calculated for the construction activities (worst case scenario, year 2012) to compare to state and Federal *de minimis* thresholds. Summaries of the total emissions for the construction of the Proposed Action are presented in Table 3. Details of the analyses are presented in Appendix C.

Table 3. Total Air Emissions (tons/year) from Construction Activities vs. the *de minimis* Levels

Pollutant	Total (tons/year)	*de minimus* Thresholds (tons/year)
CO	20.81	NA
VOCs	4.39	100
NO_x	32.36	100
PM-10	16.52	NA
PM-2.5	4.13	NA
SO_2	4.11	NA

Source: 40 CFR 51.853 and Gulf South Research Corporation (GSRC) model results (Appendix C).
Note: East Baton Rouge is in non-attainment for ozone, VOCs and NO_x gases are precursor molecules which transform into ozone.

Several sources contribute to the overall air impacts of the construction project. The air calculations as shown in Table 3 include emissions from:

1. Combustible engines of construction equipment
2. Construction workers commute to and from work
3. Supply trucks delivering materials for construction
4. Fugitive dust from job site ground disturbances

Ongoing Air Emissions

Air emissions from the vehicles owned by new residents commuting to work and daily activities were calculated. The new residents would most likely be from areas outside of East Baton Rouge Parish that were severely devastated by Hurricanes Katrina and Rita. Therefore, the emissions from new residents were calculated in this analysis. Table 4 presents estimated air emissions from automobiles of new residents.

Table 4. Total Air Emissions (tons/year) from Daily Auto Activities vs. the *de minimis* Levels

Pollutant	Total (tons/year)	*de minimus* Thresholds (tons/year)
CO	11.30	NA
VOCs	1.19	100
NO_x	0.87	100
PM-10	0.00	NA
PM-2.5	0.00	NA
SO_2	0.00	NA

Source: 40 CFR 51.853 and GSRC model results (Appendix C).
Note: East Baton Rouge is in non-attainment for ozone, VOCs and NO_x gases contain precursor molecules which transform into ozone.

As there are no violations of air quality standards and no conflicts with the state implementation plans, there would be no significant impacts to air quality from the implementation of the Proposed Action Alternative.

During the construction of the proposed project, proper and routine maintenance of all vehicles and other construction equipment would be implemented to ensure that emissions are within the design standards of all construction equipment. Dust suppression methods should be implemented to minimize fugitive dust. In particular, wetting solutions would be applied to construction area to minimize the emissions of fugitive dust. By using these BMPs, air emissions from the Proposed Action Alternative would be temporary and should not significantly impair air quality in the region.

On December 17, 2008, a letter requesting project review was sent to USEPA. No response has been received to date.

5.6 Noise

5.6.1 Affected Environment

Noise is generally described as unwanted sound, which can be based either on objective effects (*i.e.*, hearing loss, damage to structures, *etc.*) or subjective judgments (*e.g.*, community annoyance). Sound is usually represented on a logarithmic scale with a unit called the decibel (dB). Sound on the decibel scale is referred to as sound level. The threshold of human hearing is approximately 0 dB and the threshold of discomfort or pain is around 120 dB.

Noise levels occurring at night generally produce a greater annoyance than do the same levels occurring during the day. It is generally agreed that people perceive intrusive noise at night as being 10 dBA (A-weighted decibel is a measure of noise at a given, maximum level or constant state level) louder than the same level of intrusive noise during the day, at least in terms of its potential for causing community annoyance. This perception is largely because background environmental sound levels at night in most areas are also about 10 dBA lower than those during the day. Acceptable noise levels have been established by HUD for construction activities in residential areas:

> **Acceptable** (not exceeding 65 dBA) – The noise exposure may be of some concern but common building construction will make the indoor environment acceptable and the outdoor environment will be reasonably pleasant for recreation and play.
>
> **Normally Unacceptable** (above 65 but not greater than 75 dBA) – The noise exposure is significantly more severe. Barriers may be necessary between the site and prominent noise sources to make the outdoor environment acceptable. Special building constructions may be necessary to ensure that people indoors are sufficiently protected from outdoor noise.
>
> **Unacceptable** (greater than 75 dBA) – The noise exposure at the site is so severe that the construction costs to make the indoor noise environment

acceptable may be prohibitive and the outdoor environment would still be unacceptable.

As a general rule of thumb, noise generated by a stationary noise source, or "point source," will decrease by approximately 6 dBA over hard surfaces and 9 dBA over soft surfaces for each doubling of the distance. For example, if a noise source produces a noise level of 85 dBA at a reference distance of 50 feet over a hard surface, then the noise level would be 79 dBA at a distance of 100 feet from the noise source, 73 dBA at a distance of 200 feet, and so on. To estimate the attenuation of the noise over a given distance the following relationship is utilized:

$$\text{Equation 1: } dBA_2 = dBA_1 - 20 \log (d_2/d_1)$$

Where:

dBA_2 = dBA at distance 2 from source (predicted)
dBA_1 = dBA at distance 1 from source (measured)
d_2 = Distance to location 2 from the source
d_1 = Distance to location 1 from the source

Source: California Department of Transportation 1998

Existing Conditions

The Hidden Cove Subdivision is comprised of 118 individual home sites, 76 of which are part of the HUD housing initiative which has homes currently being built or in the planning stages prior to actual construction. These homes would have residents who would be classified as sensitive noise receptors.

5.6.2 Environmental Consequences and Mitigation Measures

5.6.2.1 No Action Alternative

Under the No Action Alternative, construction of AHPP housing at the proposed project site would not occur resulting in no noise impacts.

5.6.2.2 Proposed Action Alternative

The installation of the new AHPP housing units and driveway would require the use of common construction equipment. Table 5 describes noise emission levels for construction equipment which range from 76 dBA to 84 dBA at a distance of 50 feet (Federal Highway Administration 2007 [FHWA] 2007).

Table 5. A-Weighted (dBA) Sound Levels of Construction Equipment and Modeled Attenuation at Various Distances[1]

Noise Source	50 feet	100 feet	200 feet	500 feet	1000 feet
Backhoe	78	72	68	58	52
Crane	81	75	69	61	55
Dump truck	76	70	64	56	50
Excavator	81	75	69	61	55
Front end loader	79	73	67	59	53
Concrete mixer truck	79	73	67	59	53
Pneumatic tools	81	75	69	61	55
Auger drill rig	84	78	72	64	58
Bull dozer	82	76	70	62	56
Generator	81	75	69	61	55

Source: FHWA 2007 and GSRC

1. The dBA at 50 feet is a measured noise emission (FHWA 2007). The 100 to 1,000 foot results are modeled estimates.

Assuming the worst case scenario of 84 dBA, the noise model projected that noise levels of 84 dBA from a point source (*i.e*., bull dozer) would have to travel 450 feet before the noise would be attenuated to an acceptable level of 65 dBA. To achieve an attenuation of 84 dBA to a normally unacceptable level of 75 dBA, the distance from the noise source to the receptor is 140 feet.

Assuming the construction activities are contained within the delineated construction area, several residential receptors may be exposed to noise emissions that are normally unacceptable. Table 6 contains the number of sensitive noise receptors located within the 65 dBA noise contour created by the miscellaneous construction equipment.

Table 6. Number of Sensitive Noise Receptors within the 65 dBA Noise Contour

Type of Noise Receptor	Greater than 75 dBA	Greater than 65 dBA
Single family homes	7	65

The residential homes that may be exposed to noise emissions greater than 75 day-night average sound level (DNL) are located along Martinique Drive, Pascagoula Drive, and Elvin Drive. These homes are located immediately adjacent to and within the project area. The residential homes that may be exposed to noise emissions greater than 65 DNL would occur northwest of the project site. These homes are located on along General Cleburne Avenue and the east side of General Mouton Avenue. To minimize this impact potential, construction activity

will be limited to daylight hours during the work week, between 7:00 am to 5:00 pm on Monday through Friday. Noise impacts should be minor if these timing restrictions are implemented. Noise generated by the construction of the Proposed Action would be intermittent and last for less than one year, after which, noise levels would return to ambient levels. Therefore, the noise impacts from construction activities would be considered insignificant.

5.7 Biological Resources

5.7.1 Affected Environment

Regulatory Setting

The Endangered Species Act (ESA) establishes a Federal program to conserve, protect, and restore threatened and endangered plants and animals and their habitats. Section 7 of the ESA mandates that all Federal agencies must ensure that any action authorized, funded, or implemented is not likely to jeopardize the continued existence of a threatened or endangered species or result in the destruction of critical habitat for these species. To accomplish this, Federal agencies must consult with the U.S. Fish and Wildlife Service (USFWS) or the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NOAA Fisheries) when taking action that has the potential to affect species listed as endangered or threatened or proposed for threatened or endangered listing.

The Migratory Bird Treaty Act (MBTA) makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird species listed in 50 CFR 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). Disturbance that causes nest abandonment and/or loss of reproductive effort (*e.g.,* killing or abandoning eggs or young) may be considered take, and is potentially punishable by fines and/or imprisonment. If an action is determined to cause a potential take of migratory birds, as described above, then a consultation process with the USFWS needs to be initiated to determine measures to minimize or avoid these impacts. This consultation should start as an informal process.

The Magnuson-Stevens Fishery Conservation and Management Act (as amended), also known as the Sustainable Fisheries Act, requires all Federal agencies to consult with the NOAA Fisheries on activities or proposed activities authorized, funded, or undertaken by that agency that may adversely affect Essential Fish Habitat (EFH). The EFH provisions of the Sustainable

Fisheries Act are designed to protect fisheries habitat from being lost due to disturbance and degradation.

Existing Conditions

There are 4 species that are listed by USFWS as threatened, endangered, or candidate species for East Baton Rouge Parish (Louisiana National Heritage Program 2008). The Federally protected species in East Baton Rouge Parish are provided in Table 7 (USFWS 2008a and b). There are 4 species listed as threatened and endangered by the Louisiana Department of Wildlife and Fisheries (LDWF) for East Baton Rouge Parish. A list of rare, threatened, and endangered species, and natural communities is provided in Appendix D (Louisiana Natural Heritage Program 2008).

Table 7. USFWS Listed Species for East Baton Rouge Parish, Louisiana

Common Name	Scientific Name	Status
Alabama shad	*Alosa alabamae*	C
Inflated heelsplitter	*Potamilus inflatus*	T
Pallid sturgeon	*Scaphirhynchus albus*	E
Manatee	*Trichechus manatus*	E

Source: Louisiana National Heritage Program 2008
C = candidate species, T = listed threatened, E = listed endangered

The AHPP units would be constructed within a pre-existing residential community. Since this area is previously developed it would not support the same vegetation and wildlife communities as it did before it was developed. When the area was developed contractors removed most of the native trees and planted or sodded the yards with grass. However, in the case of the wildlife communities, some species of wildlife are highly adaptable and thrive in urban and suburban areas (LDEQ 1999).

Mammals found in urban areas of East Baton Rouge include gray squirrels (*Sciurus carolinensis*), opossums (*Didelphis virginiana*), raccoons (*Procyon lotor*), rabbits (*Sylvilagus floridanus*), armadillos (*Dasypus novemcinctus*), and mice and rats (Family *Muridae*). Many urban and suburban mammals seek shelter or den sites under raised buildings or in attics (LDWF 2005).

Birds are the most common wildlife observed in the suburban areas. More than 400 species of birds occur in Louisiana. There are four categories of birds that occur in this area. Resident

birds stay in the area year-round. Examples of these include cardinals (*Cardinalis cardinalis*), mockingbirds (*Mimus polyglottos*), American crows (*Corvus brachyrhynchos)*, and several species of egrets and herons (Family *Ardeidae*). Summer residents are birds that only occur during the breeding season in spring and summer, and migrate south to Central or South America for the winter. Examples of these are the ruby-throated hummingbird (*Archilochus colubris*), and the purple martin (*Progne subis*). Winter residents spend the winter in Louisiana and migrate north to their breeding grounds in the spring. This includes most ducks and geese (Family *Anatidae*), and many of the sparrows (Family *Emberizidae*). Transient birds also breed in areas north of Louisiana and migrate through the State in the fall to their wintering grounds in Central and South America. They pass through again in the spring on their way back to the breeding range. This group includes Baltimore orioles (*Icterus galbula*) and Tennessee warblers (*Vermivora peregrine*). Many of these birds can be observed in trees and around feeders in suburban areas (LDWF 2003).

Several species of reptiles occur in the East Baton Rouge area. Common lizards that can be found include green anoles (*Anolis carolinensis*), five-lined skinks (*Eumeces fasciatus*), and Mediterranean geckos (*Hemidasctylus turcicus turcicus*). Common snakes that occur in this area include corn snakes (*Elaphe guttata*), Texas rat snakes (*Elaphe obsolete lindheimeri)*), eastern garter snakes (*Thamnophis sirtalis*) and speckled kingsnakes (*Lampropeltis getula holbrooki*), terrestrial turtles are limited to the three toed box turtle (*Terrapine carolina triunguis*) but there are many aquatic turtles (Conant and Collins 1991).

Amphibian species that are common in the area include eastern narrow-mouthed toads (*Gastrophtyne carolinensis)*, American toads (*Bufo americanus*), Fowler's toads (*Bufo woodhousei*), southern cricket frogs (*Acris gryllus*), spring peepers (*Hyla crucifer*), bullfrogs (*Rana catesbeiana*), and the southern leopard frog (*Rana sphenocephala*). Furthermore, there are numerous species of salamanders from two families, *Ambystomatidae* and *Plethodontidae* (Conant and Collins 1991).

5.7.2 Environmental Consequences and Mitigation Measures

5.7.2.1 No Action Alternative

This alternative does not include any FEMA action. Therefore, FEMA would not be required to consult with USFWS, NOAA Fisheries, or LDWF to comply with the ESA, MBTA, Fish and Wildlife Coordination Act (FWCA), or the Sustainable Fisheries Act. Compliance with EO 13112

is also not required. The No Action Alternative does not have the potential to affect sensitive biological resources.

5.7.2.2 Proposed Action Alternative

There would be no impact to USFWS or state-listed threatened and endangered species because the AHPP area has already been developed. Furthermore, there would be no suitable habitat for these species in the project area. Since the Hidden Cove Subdivision has already been developed there are no natural vegetation or wildlife communities to impact. There will be no impact from assembling the AHPP units on the lots or installing utilities or driveways.

Some species would benefit from the habitat modifications that would take place in the developed areas. Some species of wildlife are highly adaptable and thrive in urban and suburban areas. There are many species of wildlife, especially birds that can thrive in urban and suburban areas (LDEQ 1999).

If trees or shrubs are planted in the AHPP group housing area, using native trees and shrubs would enhance wildlife habitat and attract some of the native species of wildlife that have had to look elsewhere for their food, water, and shelter. This is especially true for birds. Most birds depend on plants either directly or indirectly for food. Birds that eat seeds, berries, and fruits, need plants that produce these foods. Plants provide habitat for insects and other invertebrates that insectivorous birds feed on. The trees and shrubs provide shelter for the birds for loafing, escaping into when alarmed, protection from severe weather, and in many cases, nesting sites (LDEQ 1999).

In addition to the wildlife benefits, native plants are adapted to the local climate, soil, and water conditions. This means that they require very little maintenance and watering. Many exotic species that have been introduced into an area have become a serious problem for other native plant species and will often out-compete native species (LDEQ 1999). Planting native species of vegetation will have a beneficial impact on the local environment.

On December 17, 2008, letters requesting project review was sent to USFWS and NOAA. No response has been received to date from USFWS; however NOAA responded via email on December 23, 2008 stating that the project area is not tidally influenced and provides no marine fishery support functions and further that no essential fish habitat or marine fishery resources would be impacted.

5.8 Cultural Resources

5.8.1 Affected Environment

Regulatory Setting

Section 106 of the National Historic Preservation Act (NHPA), as amended, and implemented by 36 CFR Part 800, requires Federal agencies to consider the effects of their actions on historic properties, and provide the Advisory Council on Historic Preservation (ACHP) an opportunity to comment on Federal projects that would have an effect on historic properties prior to implementation. Historic properties are defined as archaeological sites, standing structures, or other historic resources listed in or eligible for listing in the National Register of Historic Places (NRHP).

The Section 106 process includes identifying significant historic properties and districts that may be affected by an action and mitigating adverse effects on properties listed, or eligible for listing, in the NRHP (36 CFR 60.4). FEMA, Louisiana State Historic Preservation Officer (SHPO), Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP), formally the Louisiana Office of Homeland Security and Emergency Preparedness (LOHSEP), and the ACHP have executed a Programmatic Agreement (PA) to streamline the Section 106 review process. A copy of the PA for Louisiana is provided on the FEMA website site at http://www.fema.gov/plan/ehp/hp/programmatic.shtm.

Existing Conditions

The proposed project includes installing 42 AHPP cottages on a total of 20 acres within an existing subdivision which is defined as the Area of Potential Effect (APE). For this proposed undertaking, a records search for previously reported sites and cultural resources surveys within one-mile of the proposed project area was conducted at the Louisiana Division of Archaeology in Baton Rouge, Louisiana. The records search revealed one archaeological site within one-mile of the proposed project area. The Longwood Plantation site 16EBR41 was first investigated by George Castille in 1976, although no report was submitted. Later investigations by the National Park Service (NPS) in 1984 and Surveys Unlimited Research Associates Inc., (SURA) in 1998 reported the site as being the remains of a sugar plantation dating from the 1780s to the 20th century (Jones, *et al* 1998). The site was recommended for NRHP eligibility by the NPS survey as well as the SURA survey (NPS 1984). Site 16EBR41 would not be impacted by the proposed project. No other prehistoric/historic sites, structures, or Historic districts were reported within one-mile of the proposed action.

A preliminary site visit was conducted on December 15, 2008 was done by a Secretary of Interior qualified archeologist. The undertaking will occur on vacant lots in a previously developed subdivision. The landscape was highly disturbed in the process of the subdivision construction. No historic structures or other cultural resources were observed on the vacant lots or in the immediate vicinity.

The proposed project area has no record of having been previously surveyed. The house lots upon which the AHPP cottages would be constructed are located in a previously developed subdivision that has been cleared, graded and has had roads, water, sewer and electric utilities installed. If cultural resources ever were located on the project property they were likely disturbed by the previous development episode.

5.8.2 Environmental Consequences and Mitigation Measures

5.8.2.1 No Action Alternative

This alternative does not include any FEMA undertaking. Therefore, no cultural resources review would be required of FEMA under Section 106 of the NHPA or the PA. Since FEMA does not participate in any activities under the No Action Alternative, it does not need to take into consideration individuals, local governments, or the State's actions on historic structures. Neither would FEMA need to take into consideration impacts to archaeological resources associated with built-environment resources, or coincidentally in proximity to such resources under the No Action Alternative.

5.8.2.2 Proposed Action Alternative

The Proposed Action would include the construction of approximately 42 AHPP dwellings on a developed 20-acre plot of land located in Baton Rouge, Louisiana. The construction plan for these AHPP cottages require some ground disturbance including possible contouring and grading, if necessary, and construction of driveways and tie-in of houses into existing water and sewer infrastructure for each individual cottage. Much of this ground disturbance has already occurred during the original development of the subdivision. The likelihood of the ground disturbance required by the Proposed Action Alternative to impact intact cultural resources is minimal and not anticipated.

In the event that archaeological deposits, including but not limited to any Native American pottery, stone tools, historic artifacts or human remains, are uncovered, project activities will be

halted. The contractor will stop all work immediately in the vicinity of the discovery and take reasonable measures to avoid or minimize harm to the finds. All archaeological findings will be secured and access to the sensitive area restricted. The contractor would inform FEMA immediately and FEMA would consult with the SHPO or THPO and interested tribes. Work in sensitive areas would not resume until consultation is completed and appropriate measures have been taken to ensure that the project is in compliance with the NHPA. As a result no impacts to cultural resources would be expected.

On December 23, 2008, a letter requesting project review was sent to the SHPO. No response has been received to date.

5.9 Socioeconomics

5.9.1 Affected Environment

Regulatory Setting

EO 12898 (Federal Actions to Address Environmental Justice in Minority and Low-Income Populations) requires Federal lead agencies to ensure rights established under Title VI of the Civil Rights Act of 1964 when analyzing environmental effects. FEMA and most Federal lead agencies determine impacts on low-income and minority communities as part of the NEPA compliance process. Agencies are required to identify and correct programs, policies, and activities that have disproportionately high and adverse human health or environmental effects on minority or low-income populations. EO 12898 also tasks Federal agencies with ensuring that public notifications regarding environmental issues are concise, understandable, and readily accessible.

EO 13045 (Protection of Children from Environmental Health Risks and Safety Risks) requires Federal agencies to identify and assess health risks and safety risks that may disproportionately affect children. As with EO 12898, FEMA and most Federal lead agencies determine impacts on children as part of the NEPA compliance process.

Existing Conditions

The Region of Influence (ROI) for the proposed project is East Baton Rouge Parish, Louisiana. East Baton Rouge Parish is one of 64 Parishes in Louisiana. It is part of the Baton Rouge, Louisiana Metropolitan Statistical Area (MSA). Its 2006 population of 431,278 ranked 1st in the state (Bureau of Economic Analysis [BEA] 2008).

The estimated population of the City of Baton Rouge for 2007 was 227,071, and the total population of East Baton Rouge Parish was 430,317. The 2007 figure for the parish is slightly higher the 2000 populations of 412,852, but the figure for the City of Baton Rouge is slightly lower than the 2000 estimate of 227,818 (U.S. Census Bureau 2008). The predominant race in the parish is Caucasian (52.7 percent) followed by 44.1 percent African-American. People claiming to be of some race other than Caucasian, African-American, Native American, Asian, Native Hawaiian, and other Pacific Islander constituted 0.5 percent of the population. Only 2.6 percent of the population East Baton Rouge Parish claim to be of Hispanic origin (U.S. Census Bureau 2008).

The total number of jobs in the project area in 2006 was 456,298, an increase of 20 percent over the 1996 number of jobs of 380,037 (BEA 2008). Retail, health care and related occupations were the largest employment group, followed by the accommodations and food services, and professional jobs. The 2006 annual average unemployment rate for East Baton Rouge Parish was 8.4 percent (U.S. Census Bureau 2008). This is higher than the average annual unemployment rate for the State at 7.9 percent (U.S. Census Bureau 2006).

In 2006, East Baton Rouge Parish had a per capita personal income (PCPI) of $34,367. This PCPI ranked 6th in the State and was 108 percent of the state average, $31,821, and 94 percent of the National average, $36,714. The 2006 PCPI reflected an increase of 2.5 percent from 2005. The 2005-2006 state change was 27.8 percent and the National change was 5.6 percent. In 1996, the PCPI of East Baton Rouge Parish was $22,907 and ranked 2nd in the State. The 1996 to 2006 average annual growth rate of PCPI was 4.1 percent. The average annual growth rate for the State was 4.9 percent and 4.3 percent for the Nation (BEA 2008).

In 2006, East Baton Rouge Parish had a total personal income (TPI) of $14.8 billion. This TPI ranked 2nd in the State and accounted for 11.0 percent of the state total. In 1996 the TPI of East Baton Rouge was $9.3 billion and ranked 3rd in the state. The 2006 TPI reflected an increase of 7.3 percent from 2005. The 2005 to 2006 state change was 20.6 percent and the National change was 6.7 percent (BEA 2008).

The increase in TPI for East Baton Rouge Parish and the State, when the National TPI is much lower is more than likely related to Hurricanes Katrina and Rita. The 1996 to 2006 average

annual growth rate of TPI was 4.7 percent. The average annual growth rate for the State was 4.5 percent and for the Nation was 5.4 percent (BEA 2008).

Earnings of persons employed in East Baton Rouge Parish increased from $12 billion in 2005 to $13.3 billion in 2006, an increase of 10.8 percent. The 2005 to 2006 state change was 11.1 percent and the National change was 5.7 percent. The average annual growth rate from the 1996 estimate of $7,803,300 to the 2006 estimate was 5.5 percent. The average annual growth rate for the State was 4.7 percent and for the Nation was 5.5 percent (BEA 2008).

The total number of housing units in the ROI was 181,588 in 2007 (U.S. Census Bureau 2008). This represents less than 10 percent of the total housing units reported for Louisiana. Of the housing units within East Baton Rouge Parish, 164,450 (90.6 percent) are occupied and the remaining 17,138 (9.4 percent) are vacant. Approximately 61.7 percent (101,532) of the occupied housing units are owner occupied, while 38.3 percent (62,918) are renter-occupied (U.S. Census Bureau 2008).

5.9.2 Executive Order 12898, Environmental Justice

According to the U.S. Census Bureau, the population of East Baton Rouge Parish consisted of approximately 49.3 percent minorities and 14.2 percent of low-income families in contrast to the U.S population of 24.3 percent minorities and 9.8 percent low income families (U.S. Census Bureau 2008).

5.9.3 Executive Order 13045, Protection of Children

Of the total population of East Baton Rouge Parish, 25 percent is comprised of children under the age of 18 (U.S. Census Bureau 2008).

5.9.4 Environmental Consequences and Mitigation Measures

5.9.4.1 No Action Alternative

Although there is no requirement for compliance with EOs 12898 and 13045 when there are no Federal actions, the No Action Alternative would likely result in disproportionate health and safety risks to low-income and minority persons and to children, as these groups will be most likely to be affected by the lack of permanent housing.

Displaced persons currently residing with family members or friends, in hotels, in temporary dormitories, or in structurally unsafe or unsanitary facilities would result in adverse socioeconomic and public safety impacts. The hosts would suffer the economic effects of these living arrangements from expending additional living expenses, such as food and increased utility use. In many cases, displaced residents would be subject to adverse financial impacts due to the relocations by being distant from their places of employment. Further, the hosts and displaced residents could endure emotional stress associated with the disruption of their normal lives. For persons who attempt to occupy structurally unsafe or unsanitary facilities, public safety associated with building collapse and transmission of disease is a high risk.

5.9.4.2 Proposed Action Alternative

The Proposed Action Alternative is not expected to pose disproportionately high and adverse public health effects on minority or low-income populations. The availability of Federal assistance, including AHPP housing for displaced individuals, is consistent with EO 12898. All forms of FEMA disaster housing assistance are available to any affected household that meets the conditions of eligibility and demographics are not among the eligibility requirements.

Implementation of the Proposed Action Alternative would result in beneficial economic impacts. The availability of AHPP housing would result in a positive impact to displaced individuals regardless of their race or economic status.

Any development such as the Proposed Action Alternative would alter housing values in the surrounding neighborhoods. Whether these impacts are beneficial or negative are unknown at this time.

5.10 Traffic and Transportation

5.10.1 Affected Environment

LaDOTD is responsible for the design, construction, and maintenance of the State's highway system, as well as the portion of Federal interstate highways within Louisiana's boundaries. Arterials, connectors, rural roads, and local roads are constructed and maintained by county or city governments. The Baton Rouge District of LaDOTD (District 61) consists of a nine-parish region around Baton Rouge and includes Ascension, Assumption, East Baton Rouge, East Feliciana, Iberville, Pointe Coupee, St. James, West Baton Rouge and West Feliciana Parishes. As shown below in Table 8, East Baton Rouge Parish has an extensive network of Federal

(Interstates [I] and US highways [US]) and state highways (LA) throughout the program area (LaDOTD 2008).

Existing Conditions

The State provides actual traffic counts along various highways for the year 2004, 2005 and 2006, depending on the parish. Traffic counts for East Baton Rouge Parish were given for the year 2005. Traffic counts are given in units of Average Annual Daily Traffic (AADT). As shown below in Table 8, in East Baton Rouge Parish the highest of the traffic counts on Federal highways was on the interstate systems of I 10 with counts ranging from 67,215 to 166,902 and I 12 with counts of 77,607 to 116,283. On other Federal highways (US 61, US 165 and US 190) counts ranged from as low as 4,924 to as high as 47,896. State highway traffic counts ranged from 9,653 to 39,539 AADT (LaDOTD 2008).

Table 8. Federal and State Major Highways with Traffic Counts within the Project Area

Parish	Highways	AADT (2005)
East Baton Rouge	I 10	67,215 – 166,902
	I 12	77,607 – 116,283
	I 110	37,236 – 88,780
	US 61	4,924 – 47,896
	US 165	12,277
	US 190	20,802 – 36,652
	LA 30 (Nicholson Dr.)	10,789 – 26,379
	LA 42 (Highland Rd.)	9,653 – 21,391
	LA 73 (Jefferson Hwy.)	16,056 – 35,442
	LA 427 (Perkins Rd.)	12,048 – 32,199
	LA 1248 (Bluebonnet Blvd.)	29,352 – 32,477
	LA 3064 (Essen Ln.)	39,539
	LA 3246 (Burbank Dr.)	17,287 – 33,616

Source: LaDOTD 2008

The proposed project site is located in Baton Rouge, East Baton Rouge Parish Louisiana and is bordered on the south by Gardere Lane, on the north by Nicholson Drive, and on the west by GSRI Road. The Capital Area Transit System provides buses that run along a bus route near the proposed project. There are several city bus stops near the proposed project area including the intersections of Old Hermitage Parkway and Gardere Lane, GSRI and Gardere Lane and Ned Avenue and Gardere Lane. These bus stops are all located at least 0.5 mile from the proposed project area. The Baton Rouge Metropolitan Airport is approximately 13 miles north of

the proposed site. LA 30 is a major state highway through Baton Rouge and is approximately 0.3 miles west of the project. I 10 is a major artery through Baton Rouge and is located approximately 5 miles east of the proposed project site. A transportation map is provided in Appendix A (Appendix A, Figure 4).

5.10.2 Environmental Consequences and Mitigation Measures

5.10.2.1 No Action Alternative

Under the No Action Alternative there would be no AHPP units constructed, and displaced residents would continue to utilize temporary housing. There would be no effect on traffic or transportation.

5.10.2.2 Proposed Action Alternative

The Proposed Action Alternative would result in increased traffic volumes associated with site preparation, construction, and installation of the AHPP units. To minimize adverse impacts to traffic resulting from construction equipment, traffic along adjacent roadways would be temporarily rerouted as necessary during construction, traffic lane closures would be coordinated with the appropriate local government, equipment staging and worker Personally Owned Vehicles (POV) would be sited to hinder the traffic flow as little as possible in the areas where the actions are implemented, and adjacent residential neighborhoods and commercial/industrial areas would be notified in advance of construction activities and any rerouting of local traffic.

Traffic volumes would also increase in the vicinity of the Proposed Action Alternative site from new residents. However, current zoning for the property would allow 42 homes to be built on the 20-acre plot of land. Furthermore, there will be at least two streets allowing ingress/egress of vehicles under the Proposed Action; therefore, the level of service on the streets would not be less than development of the property under the No Action Alternative.

5.11 Hazardous Materials and Wastes

5.11.1 Affected Environment

5.11.1.1 Regulatory Setting

Hazardous materials and wastes are regulated in the U.S. under a variety of Federal and state laws. Federal laws and subsequent regulations governing the assessment, transportation, and disposal of hazardous materials and wastes include the Resource Conservation and Recovery

Act (RCRA); the RCRA Hazardous and Solid Waste Amendments; Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); the Solid Waste Act; the Toxic Substances Control Act (TSCA); and the CAA. RCRA is the Federal law that regulates hazardous waste. RCRA regulates hazardous waste from "cradle to grave," that is, from the time the waste is generated through its management, storage, transport, treatment, and final disposal. USEPA is responsible for implementing this law and has delegated this responsibility to the State of Louisiana. RCRA also sets forth a framework for the management of non-hazardous wastes. The 1986 amendments to RCRA enable USEPA to address the environmental problems that can result from underground tanks storing petroleum and hazardous substances. RCRA focuses only on active and proposed facilities, and does not address abandoned or historical sites.

TSCA gives USEPA the ability to track the approximately 75,000 industrial chemicals currently produced or imported into the U.S. USEPA repeatedly screens these chemicals, and can require reporting or testing of those that may pose an environmental or human-health hazard. USEPA may ban the manufacture and import of those chemicals that pose an unreasonable risk and control these chemicals as necessary to protect human health and the environment.

Phase I Environmental Site Assessments are performed on real estate in the U.S. as part of the due diligence process with regards to a range of contaminants within the scope of CERCLA (42 USC 9601) and petroleum products. These Phase I Environmental Site Assessments are performed according to the American Society for Testing and Materials (ASTM) guidelines (ASTM E1527-05), which define good commercial and customary practices in the U.S. for conducting an environmental site assessment of a parcel of commercial real estate. Prior to 2005, the ASTM standard which was generally used was ASTM E1527-00.

5.11.1.2 Existing Conditions

A Phase I Environmental Site Assessment was performed for the proposed 20-acre Hidden Cove subdivision on December 7, 2005 by EcoScience Resource Group, LLC. (ECO) for the non-profit, The Resource Foundation, Inc. This Phase I Environmental Site Assessment used the current ASTM standard for that year which was ASTM E1527-00. ECO found no *recognized environmental conditions* related to the 20-acre site. However, six active wells were located within the 1 mile search area, with the nearest well located approximately 0.15 mile from the site. As the site was originally co-developed using HUD funds, an Explosive and Flammable

Hazard Analysis was performed on September 6, 2005 to satisfy 24 CFR Part 51, Subpart C, *Siting of HUD-Assisted Projects Near Hazardous Operations Handling Petroleum Products or Chemicals of an Explosive or Flammable Nature*. In summary, the report stated that nearby oil/gas storage tanks were abandoned and not in use, and that the closest well was still in production but little to no oil/gas was being produced. The 2005 Explosive or Flammable Hazard Report concluded that there was no concern with explosive and hazardous substances.

In 2006, the oil field site was enhanced and expanded into a larger oil separation and storage facility. It currently includes 4 large closed fiberglass tanks for salt water (brine) storage, 1 large closed fiberglass product separation tank, and 2 smaller closed metal tanks for oil and gas product storage. All of the tanks, the associated piping, and a pump are within a bermed containment area. Outside of the bermed area there is additional piping, compressors, pumps, motors, and fuel and lubrication oil storage tanks. Two wells which were largely nonfunctional in 2005 have been recompleted and appear fully functionally and a third well has been added as a salt water disposal well with the expansion of the facility. A fourth well has been plugged and abandoned.

Current operations at the facility comprise of two functioning oil and gas wells and one salt water brine injection well. The piping associated with product removal from the oil and gas wells to the product storage tanks is buried underground and the piping containing salt water from the catchment area to the salt water injection well is also buried underground.

GSRC obtained a current Environmental Data Resources, Inc. report to verify if other conditions were similar to those in 2005; the executive summary for the report can be found in Appendix E. Within 0.25 mile of the proposed AHPP housing, the report indicates that there are 8 oil and gas wells (including the 4 mentioned previously). In addition, the orphan sites section included a search which reported that an NPDES permit was in existence for The Resource Group, Inc., the non-profit who initially developed Hidden Cove. No other conditions within the proposed site appear to have changed since 2005; however, with the expansion of the oil and gas production facility there currently exists a *recognized environmental condition* with respect to the adjacent property.

5.11.2 Environmental Consequences and Mitigation Measures

5.11.2.1 No Action Alternative

Although the No Action Alternative would not actively use hazardous materials or generate hazardous wastes, it may prolong the exposure of individuals to storm generated wastes that evacuees may be exposed to. Residents who find themselves without alternative housing may continue to live in substandard housing contaminated by hazardous materials or wastes, such as petro-chemicals (from ruptured storage tanks), air-borne asbestos (from damaged asbestos-containing materials), or lead-paint chips (from peeling surfaces). Further, temporary dormitories not typically used as shelters could contain lead-based paint or other sources of hazardous materials or wastes.

5.11.2.2 Proposed Action Alternative

The Proposed Action itself does not constitute impacts on any hazardous material or wastes; however, due to the adjacent oil and gas production facility (less than 100 feet), there is a risk of spills, leaks, or catastrophic failure of the oil and gas storage tanks which could cause indirect impacts to the proposed project site. Small leaks or spills from the tanks and associated tank piping are within a containment area and should be fully contained within the bermed area; although, should a catastrophic failure occur to more than one tank, there is the possibility that the tank material could overtop or cause failure to the bermed containment and result in soil hydrocarbon contamination or even a fire hazard to the residents of the Hidden Cove AHPP group housing units. In addition, if the piping from the active wells to the processing and storage area should leak, groundwater contamination could occur. If this would occur, there is the possibility that hydrocarbon-contaminated groundwater contamination could migrate under the proposed AHPP housing units. Potable water for the residents of the group housing would not be affected since the Hidden Cove development potable water is provided by the City of Baton Rouge.

Any hazardous materials discovered, used, or generated during construction activities would be handled and disposed of in accordance with Federal, state, and local regulations. If any hazardous wastes are confirmed or suspected at the site, the LRA would follow local, state, and Federal regulations for the handling, transport, and disposal of these substances prior to the installation of AHPP units. The LRA and the State would coordinate with state and local agencies, and the USEPA, as appropriate. In addition, to minimize any future environmental, health, and safety risks associated with the oil and gas facility, the LRA will coordinate with the

current owner or operating company of the facility, Lamar Oil and Gas Company, in developing an emergency response plan to ensure public health and safety in the event of a off-normal or emergency event.

On December 17, 2008, a letter requesting project review was sent to USEPA. No response has been received to date.

SECTION 6.0
CUMULATIVE IMPACTS

6.0 Cumulative Impacts

According to the Council on Environmental Quality (CEQ) regulations, cumulative impacts represent the "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR 1508.7). In accordance with NEPA, and to the extent reasonable and practical, this EA considered the combined effect of the AHPP in Louisiana and other actions occurring or proposed in the vicinity of the proposed project sites.

The entire Louisiana Gulf Coast is undergoing recovery efforts after Hurricanes Katrina and Rita caused extensive damages in 2005, and Hurricanes Gustav and Ike in 2008. The recovery efforts in the area include demolition, reconstruction, and new construction both within the private and non-profit sector, as well as projects by Federal and state agencies. These projects and the proposed AHPP action may have impacts on the proposed project area and their surroundings.

East Baton Rouge Parish

The Parish Recovery Planning Tool, created by the Louisiana Long-term Community Recovery (LTCR) planning team, allows Federal and state agencies, local parish governments, general public and displaced Louisianans, as well as other LTCR parish teams, access to the planning process. The Horizon Plan is the 20-year Comprehensive Land Use and Development Plan for the City of Baton Rouge and East Baton Rouge Parish. The Horizon Plan concentrates recovery efforts on the following seven elements: Land Use; transportation; wastewater, solid waste and drainage; conservation and environmental resources; recreation and open space; housing; and public services, public buildings, and health and human services. The plan acts as a blueprint for the future by serving as a guide for officials making decisions about land use and development within the City Parish. The Horizon Plan's primary emphasis is to identify major issues that will influence future growth, to decide the actions necessary to address these issues, and to propose specific strategies that will help the City Parish target its resources in the most efficient manner (Baton Rouge 2008).

East Baton Rouge Parish has begun numerous recovery projects that address economic workforce development, environmental management, human services, education, public health and health care, transportation and infrastructure, and housing and community development (Louisiana Speaks 2006). In addition to previously approved recovery funds totaling $200 million for Louisiana parishes impacted by Hurricanes Katrina and Rita, in April 2008, the LRA approved $500 million to be appropriated for the initiation of the LTCR in parishes most heavily impacted by those storms (LRA 2008). The following programs hold high priority with the LRA in regards to hurricane recovery assistance for East Baton Rouge Parish:

- Construct scattered-site mixed income housing
- Initiate CDC technical assistance
- Create Harmon family Transitional Recovery Services Center
- Construct a clinical research building
- Expand air cargo and industrial park

In addition, the East Baton Rouge Housing Authority using funds from HUD is currently installing HOPE (Housing Opportunities for People Everywhere) VI program housing in the Hidden Cove Subdivision where the proposed action cottages would be installed. HOPE VI allows housing authorities to provide affordable housing to troubled communities.

City of Baton Rouge

The City of Baton Rouge has initiated several infrastructure projects to aid in hurricane recovery efforts and address concerns of parish citizens. Traffic congestion, and road safety and maintenance are the highest priorities, as voiced by East Baton Rouge Parish citizens. The existing urban and rural roadway infrastructure is under capacity to adequately and safely carry the number of vehicles moving daily to/from and within the city and parish. In response to this, the City Parish has initiated a road construction and improvement program called The Green Light Plan (GLP). Funds are generated from an approved 0.5 percent tax increase to be applied to road projects through 2030. According to the GLP website, 39 projects to alleviate traffic congestion in and around the City of Baton Rouge are currently underway (GLP 2008). GLP funded projects occurring near the Hidden Cove project site are listed below:

- Burbank-Highland connector (Seyburn Drive). Cost - $4.3 million. A three-lane curb and gutter roadway with sidewalks on both sides and a bridge over Bayou Fountain. Location – oriented north/south at a point 0.5 miles east of Lee Drive.

- Burbank Drive (segment 1). Cost $9.3 million. Add traffic lanes, turning lanes, and make improvements to Burbank Road intersections from Lee Drive to Bluebonnet Avenue.
- Burbank Drive (segment 2). Cost - $6.8 million. Add traffic lanes, turning lanes, and make improvements to Burbank Road intersections from Bluebonnet Avenue to a point 750' south of Highland Road.
- Staring Lane extension. Cost - $14.4 million. New roadway will connect Burbank Drive to Staring-Essen Lane.
- Staring Lane widening. Cost - $43.3 million. Staring will be widened to four lanes including a left turn lane at several intersections between Highland Road and Perkins Road. A raised median and sidewalks on both sides will be installed as well.
- Brightside Lane. Cost - $12.9 million. Objective - provide a three lane section for Brightside Lane from River Road to west of Nicholson Drive. The project will include sidewalks and dedicated bike lanes on both sides of the road. It will tie into the Nicholson at Brightside/Lee Intersection Improvements project.
- Nicholson Drive (segment 1). Cost - $26 million. The proposed typical section is a five-lane curb and gutter roadway with bike lanes on both sides and one sidewalk. The project will provide significantly improved access into and out of the Louisiana State University (LSU) area and downtown Baton Rouge, along with an improved connection to the proposed Brightside Lane improvement.
- Siegen Lane. Cost - $17.6 million. The proposed typical section is a four lane curb and gutter roadway with a raised median and sidewalks on both sides. When combined with proposed improvement to Burbank Drive and an existing project on North Sherwood Forest, the project will provide a vital north-south/east-west link that will extend from Greenwell Springs Road south to Burbank Drive and then westward into the LSU and downtown area.

LaDOTD is currently working on a project to widen 3 miles of Perkins Road between Essen and Siegen Lanes. This portion of Siegen Lane serves approximately 25,000 vehicles per day. The finished roadway will be five lanes with curbs and gutters. There will be two through lanes in each direction and a center turn-lane with an additional turn lane added at the intersection of Perkins and Bluebonnet Boulevard. There will be a 6-foot wide sidewalk and subsurface drainage on each side of the roadway (LaDOTD 2008a).

The Hidden Cove AHPP is not anticipated to have significant impacts relative to other Federal and state funded projects listed above which are currently underway near the Hidden Cove project site. The Proposed Action Alternative described in the EA will be conducted in accordance with the LDEQ regulations and permits, and subsequently will not have any significant impacts on the environment or human health and safety.

SECTION 7.0
PUBLIC INVOLVEMENT

7.0 Public Involvement

Public involvement is being performed in compliance with NEPA, FEMA's regulations implementing NEPA at 44 CFR 10.9(c), and EO 12898, 11988, and 11990. An electronic version of this draft EA will be provided to interested agencies prior to and during the public comment period. Agency coordination and consultation will be deemed complete at the end of the public comment period. All agency and public correspondence is provided in Appendix B.

A Public Notice is being published in *The Advocate* newspaper and is included in Appendix B. The public comment period will be from December 29, 2008 through January 12, 2009. Written comments on the draft EA can be faxed to FEMA's representative in New Orleans, Louisiana, at (504) 762-2670 and email at Cindy.Teeter@dhs.gov. The draft EA can be viewed and downloaded from FEMA's website at http://www.fema.gov/plan/ehp/envdocuments/ea-region6.shtm. Comments via email can be sent to EAComments@dhs.gov. The draft EA is also available for public review at the East Baton Rouge Main Library, 7711 Goodwood Boulevard, Baton Rouge, Louisiana 70806 and the Bluebonnet Regional Branch Library, 9200 Bluebonnet Boulevard, Baton Rouge, LA 70810 during the public comment period. If no substantive comments are received, the draft EA will become final, a FONSI will be issued, and the initial Public Notice will also serve as the final Public Notice. Substantive comments will be addressed as appropriate in the final EA.

SECTION 8.0
AGENCY COORDINATION

8.0 Agency Coordination

The following agencies and organizations were contacted by a letter requesting project review during preparation of this EA. Any response letters received to date are included in Appendix B.

Federal

- U. S. Fish and Wildlife Services (USFWS)
- Natural Resources Conservation Service (NRCS)
- U.S. Environmental Protection Agency (USEPA)
- National Oceanic and Atmospheric Administration (NOAA)
- U.S. Army Corps of Engineers (USACE)

State

- Louisiana Department of Wildlife and Fisheries (LDWF)
- Louisiana Department of Environmental Quality (LDEQ)
- Office of Culture, Recreation and Tourism, State Historic Preservation Officer (SHPO)

Other

- Baton Rouge Recreation and Parks Commission (BREC)

SECTION 9.0
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SECTION 10.0
REFERENCES

10.0 References

Baton Rouge. 2008. The Horizon Plan. City Parish Planning Commission. Internet URL: http://brgov.com/Dept/planning/horizon.htm . Last Accessed: December 2008.

Bureau of Economic Analysis (BEA). 2008. BEARFACTS: East Baton Rouge Parish. Internet URL: http://www.bea.gov/regional/bearfacts/action.cfm. Last Accessed December 2008.

California Department of Transportation. 1998. Technical Noise Supplement by the California Department of Transportation Environmental Program Environmental Engineering-Noise, Air Quality, and Hazardous Waste Management Office. October 1998 Page 24-28.

Conant, R. and Collins, J.T. 1991. Reptiles and Amphibians: Eastern and Central North America. Houghton Mifflin Company, Boston.

Federal Emergency Management Agency (FEMA). 2008. FEMA issued Flood Maps. Map Community Number 22058 and FIRM Panel Number 22033C031E. Internet URL: http://msc.fema.gov/webapp/wcs/stores/servlet/MapSearchResult?storeId=10001&catalogId=10001&langId=-1&userType=G&panelIDs=22033C0310E&Type=pbp&nonprinted=&unmapped=. Last Accessed: November 2008.

FEMA. 2007. Advisory Flood Elevations and Disaster Assistance. http://www.fema.gov/news/newsrelease.fema?id+23283. Last Accessed: June 2008.

Federal Highway Administration (FHWA). 2007. Special Report: Highway construction Noise: Measurement, Prediction, and Mitigation, Appendix A. Construction Equipment Noise Levels and Ranges.

Green Light Plan. 2008. Transportation and Street Improvements Program. East Baton Rouge City Parish. Internet URL: http://greenlight.csrsonline.com/projects.asp . Last Accessed: December 2008.

Jones, D., S., M. Shuman, T. Wells and B. Goodwin. 1998. *Cultural Resources Survey of a Proposed Pipeline in Ascension, East Baton Rouge, Iberville, St. James and West Baton Rouge Parishes, Louisiana.* Surveys Unlimited Research Associates. Submitted to the Exxon Pipeline Company, Houston, Texas.

Louisiana Department of Environmental Quality (LDEQ). 1999. Urban Wildlife Program: Landscaping for Wildlife. Online URL: http://www.deq.louisiana.gov/portal/tabid/1948/Default.aspx. Last Accessed: December 2008.

LDEQ. 2006. Water Quality Inventory Integrated Report (Section 305(b) and 303(d) Reports) 2006. Louisiana's FINAL DRAFT of the 2006 Integrated Report was submitted to EPA Region 6 February 9, 2007. Internet URL: http://www.deq.louisiana.gov/portal/tabid/2692/Default.aspx.

Louisiana Department of Transportation and Development (LaDOTD). January 30, 2002. Water-level decline in the Southern Hills aquifer system in southeastern Louisiana during the period 1990 to 2000, based on data from USGS/DOTD/CAGWCC water-level networks. Internet URL: http://www.dotd.state.la.us/intermodal/wells/ground_water_status.ppt

LaDOTD. 2008. Encyclopedia Louisiana, enlou.com/maps, Internet URL: http://www.dotd.la.gov/highways/tatv/default.asp. Last Accessed: September 2008.

LaDOTD. 2008. Programs and Projects. Internet URL: http://www.dotd.state.la.us. Last Accessed: December 2008.

Louisiana Department of Wildlife and Fisheries (LDWF). 2003. Birding. Internet URL: http://www.wlf.state.la.us/experience/ecotourism/birding/. Last Accessed: December 2008.

LDWF. 2005. Urban Wildlife. Online URL: http://www.wlf.state.la.us/experience/lawildlife/nongame/urban_wildlife.cfm. Last Accessed: December 2008.

Louisiana Geological Survey. 2001. Public Information Series No. 8. Internet URL: http://www.lgs.lsu.edu/deploy/uploads/8faults.pdf. Last Accessed: December 2008.

Louisiana Natural Heritage Program. 2008. Rare, Threatened, & Endangered Species & Natural Communities Tracked by the Louisiana Natural Heritage Program, East Baton Rouge Parish. Internet URL: http://www.wlf.state.la.us/pdfs/experience/naturalheritage/east%20baton%20rouge.pdf. Last Accessed: December, 2008.

Louisiana Recovery Authority (LRA). 2008. Board of Directors Meeting. Minutes. Baton Rouge Community College. April 18, 2008.

Louisiana Speaks. 2006. Louisiana Speaks, Long–term Community Recovery Planning. Internet URL: http://www.louisianaspeaks-parishplans.org/.

Midwest Research Institute, (MRI). 1996. Improvement of Specific Emission Factors (BACM Project No. 1) Prepared for South Coast Air Quality Management District. SCAQMD Contract 95040, Diamond Bar, CA. March 1996.

National Park Service (NPS). 1984. *Mississippi River Cultural Resources Survey: A Comprehensive Study: Phase I Component B: Cultural Resources Site Inventory.* Denver Service Center, National Park Service, U.S. Department of the Interior. Submitted to the U.S. Army Corps of Engineers, New Orleans District.

Natural Resources Conservation Service (NRCS). 2008. Farmland Policy Protection Act. Internet URL: http://www.nrcs.usda.gov/programs/fppa/. Accessed: July 2008.

U.S. Census Bureau. 2006. Internet URL: http://www.census.gov/. Last Accessed: June 2008.

U.S. Census Bureau 2008. American Factfinder. Internet URL: http://factfinder.census.gov/home/saff/main.html. Last Accessed December 2008.

U.S. Department of Agriculture (USDA). 2008. Soil Survey Data Mart. Internet URL: http://soildatamart.nrcs.usda.gov. Last Accessed: November 2008.

U.S. Environmental Protection Agency (USEPA). 2001. Procedures Document for National Emission Inventory, Criteria Air Pollutants 1985-1999. EPA-454/R-01-006. Office of Air Quality Planning and Standards Research Triangle Park NC 27711.

USEPA. 2005. User's Guide for the Final NONROAD2005 Model. EPA420-R-05-013 December 2005.

USEPA. 2005a. Emission Facts: Average In-Use Emissions from Heavy Duty Trucks. EPA 420-F-05-0yy, May 2005.

USEPA. 2005b. Emission Facts: Average In-Use Emission Factors for Urban Buses and School Buses. Office of Transportation and Air Quality EPA420-F-05-024 August 2005.

USEPA. 2005c. Emission Facts: Average Annual Emissions and Fuel Consumption for Gasoline-Fueled Passenger Cars and Light Trucks. EPA 420-F-05-022.

USEPA. 2006. National Ambient Air Quality Standards (NAAQS). Internet URL: http://epa.gov/air/criteria.html. Last Accessed: April 2008.

USEPA. 2008. Welcome to the Green Book Nonattainment Areas for Criteria Pollutants Internet URL: www.epa.gov/oar/oaqps/greenbk.

U.S. Fish and Wildlife Service (USFWS). 2006. National Wetlands Inventory Maps. U.S. Fish and Wildlife Service Online Wetlands Mapper. Internet URL: http://wetlandsfws.er.usgs.gov/wtlnds/launch.html. Last Accessed: November 2008.

USFWS. 2008a. County Lists. Last Updated: 2003. Internet URL: http://www.fws.gov/southeast/es/county%20lists.htm. Last Accessed: November 2008.

USFWS. 2008b. Endangered Species. Species in Louisiana. nternet URL: http://www.fws.gov/midwest/endangered/permits/hcp/nisource/species/NisourceSppLA.html. Last Accessed: November 2008.