Draft Environmental Assessment

Santa Maria de la Mer Senior Living Center Relocation

Harrison County, Mississippi

November 2009

FEMA

U.S. Department of Homeland Security
FEMA-1604-DR-MS
Mississippi Recovery Office – Biloxi, MS

This document was prepared by

600 Parsippany Road, Suite 301
Parsippany, NJ 07054

200 Orchard Ridge Drive, Suite 101
Gaithersburg, MD 20878

Contract No. HSFEHQ-06-D-0489
Task Order No. HSFEHQ-06-J-0003

15708003.00200

TABLE OF CONTENTS

ABFE	advisory base flood elevation
ACHP	Advisory Council on Historic Preservation
amsl	above mean sea level
APE	Area of Potential Effects
BMP	Best Management Practice
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	carbon monoxide
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
dB	decibel
DFIRM	Digital Flood Insurance Rate Map
DNL	Day-Night Average Sound Level
EA	Environmental Assessment
EO	Executive Order
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FPPA	Farmland Protection Policy Act
MDAH	Mississippi Department of Archives and History
MDEQ	Mississippi Department of Environmental Quality
MDMR	Mississippi Department of Marine Resources
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NISTAC	Nationwide Infrastructure Support Technical Assistance Consultants
NO_2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
O_3	ozone
OSHA	Occupational Safety and Health Administration

Pb	lead
$PM_{2.5}$	particulate matter less than 2.5 microns
PM_{10}	particulate matter less than 10 microns
SHPO	State Historic Preservation Office
SO_2	sulfur dioxide
STP	shovel test pit
SWPPP	Storm Water Pollution Prevention Plan
URA	Uniform Relocation Assistance Act
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service

1.0 INTRODUCTION

On August 29, 2005, Hurricane Katrina struck the Mississippi Gulf Coast, causing extensive damage. Subsequently, a Presidential Disaster Declaration, FEMA-1604-DR-MS, was signed for Katrina.

The Catholic Charities Housing Association of Biloxi (Catholic Charities) has submitted an application for Federal Emergency Management Agency (FEMA) funding under FEMA's Public Assistance Program being administered in response to FEMA-1604-DR-MS, for the proposed relocation of the Santa Maria de la Mer Senior Living Center (Center).

In accordance with the Robert T. Stafford Disaster Relief and Emergency Assistance Act, PL 93-288, as amended, and implementing regulations at 44 Code of Federal Regulations (CFR) Part 206, FEMA is required to review the environmental effects of the proposed action prior to making a funding decision. This Environmental Assessment (EA) has been prepared in accordance with FEMA's National Environmental Policy Act (NEPA) regulations found in 44 CFR Part 10.

2.0 PURPOSE AND NEED

The Santa Maria de la Mer Senior Living Center was located at 674 Beach Boulevard in Biloxi, Mississippi (Figure 1 in Appendix A) and consisted of a 13-story, 209-unit low-income senior living apartment complex. According to the Digital Flood Insurance Rate Map (DFIRM), the facility was located within a special flood hazard area, with the southern portion in the 100-year coastal high hazard area, and the northern portion in the 100-year floodplain. On August 29, 2005, Hurricane Katrina made landfall in Mississippi, causing a storm surge and high winds that severely damaged the Center. Damages exceeded the 50% repair/replacement ratio, making the building eligible for demolition and replacement.

Catholic Charities provided former residents of the Center with the option to take vacancies in other assisted living facilities in the Gulf Coast area, or to be placed in the care of relatives. Catholic Charities has a need for a replacement facility to re-establish a senior assisted living housing facility within the Biloxi area.

3.0 ALTERNATIVES

This section describes the alternatives that were considered in addressing the purpose and need stated in Section 2. Three alternatives are evaluated in this EA: the No Action Alternative, a Demolition Only Alternative, and the Proposed Action Alternative, which is the relocation of the Center to Medical Park Drive. One alternative was considered and dismissed.

3.1 Alternatives Evaluated

<u>Alternative 1: No Action</u>

Under the No Action Alternative, Catholic Charities would mothball the existing Center building to control the long-term deterioration of the structure. Catholic Charities would comply with City

ordinances for unsafe buildings and has boarded up most of the existing Center on Beach Boulevard and installed a security fence around the building.

Alternative 2: Demolition Only

Under the Demolition Only Alternative, the existing Center on Beach Boulevard would be demolished and the site would be returned to grade and revegetated in accordance with FEMA's policy for FEMA-1604-DR-MS.

Alternative 3: Relocation of the Center to Medical Park Drive (Proposed Action)

Under the Proposed Action Alternative, Catholic Charities would relocate the Center to a 10-acre mostly wooded site on Medical Park Drive in Biloxi, approximately 5 miles northwest of the original location (Figure 2 in Appendix A). The proposed relocation site is owned by the Catholic Diocese of Biloxi, and is located outside the 100-year and 500-year floodplain. The proposed relocation site is bounded to the east by Biloxi Commerce Park and Tommy Munro Drive, to the north by an unnamed tributary to the Tchoutacabouffa River, to the west by a partially wooded lot and a former FEMA temporary trailer site, and to the south by the Catholic Diocese Administrative Office and Popps Ferry Road. Access to the site would be provided via Medical Park Drive. Catholic Charities would also acquire an adjacent 0.85-acre access parcel along Tommy Munro Drive (owned by the Harrison County Development Commission) for the construction of an additional access road for the facility. Approximately 7.1 acres would be cleared, including 6.4 acres for the building, parking areas, and driveways, 0.5 acre for a detention basin and buffer, and 0.2 acre for a future nature trail. The new facility would include a 163,892-square-foot building composed of two six-story residential towers with a one-story common area, and parking lots. Excavated material from the creation of a 53,000-cubic-foot detention basin will be used for site grading, with any excess material disposed of at a licensed landfill. The new facility would connect to existing utilities along Medical Park Drive and Tommy Munro Drive, including municipal water, sewer, and electricity.

The existing Center on Beach Boulevard would be demolished for public health and safety reasons. The site would be returned to grade and revegetated in accordance with FEMA's policy for FEMA-1604-DR-MS.

3.2 Alternative Considered and Dismissed

Catholic Charities considered relocating the Center to a 5.4-acre site located at 15195 Barbara Drive in Biloxi, adjacent to the Carlow Manor Retirement Community apartment complex. Relocation of the Center to this site would involve clearing approximately 4 acres of wooded vegetation, including more than 2 acres of wetlands. This alternative was dismissed from further consideration due to the potential for extensive wetland impacts.

4.0 AFFECTED ENVIRONMENT AND IMPACTS

The following table summarizes the potential impacts of the alternatives and conditions or mitigation measures to offset those impacts. Following the summary table, any resource areas for which potential impacts were identified, as well as high priority resources including floodplains, waters of the U.S., environmental justice, biological resources, and cultural resources, will be discussed in greater detail.

	No Action Alternative		Demolition Only Alternative		Proposed Action Alternative	
Affected Environment	**Impacts**	**Mitigation**	**Impacts**	**Mitigation**	**Impacts**	**Mitigation**
Geology and Soils	No impacts to geology or soils are anticipated.	None.	No impacts to geology are anticipated. Impacts to soils will occur during grading of the existing Center site after the building is demolished.	Appropriate Best Management Practices (BMPs), such as installing silt fences and revegetating bare soils, would minimize runoff.	No impacts to geology are anticipated. Impacts to soils will occur during demolition of the existing Center and construction of the new facility. Soils excavated to create an onsite detention basin at the proposed relocation site will be used for site grading, with any excess material disposed of at a licensed landfill.	Appropriate BMPs, such as installing silt fences and revegetating bare soils, would minimize runoff.
Surface Water	No impacts to surface water are anticipated.	None.	Minor, short-term impacts to downstream surface waters are possible during grading of the demolition site.	Appropriate BMPs, such as installing silt fences and stabilizing soils, would minimize runoff into downstream surface waters.	Minor, short-term impacts to the onsite wetland system and downstream surface waters are possible during construction and demolition activities. Impacts to the wetland system will affect surface water drainage on the proposed relocation site, which may need to be re-routed.	The applicant will need a Stormwater Pollution Prevention Plan (SWPPP) and National Pollutant Discharge Elimination System (NPDES) permit for the proposed project. Appropriate BMPs, such as installing silt fences and stabilizing soils, would minimize runoff into downstream surface waters.
Groundwater	No impacts to groundwater are anticipated.	None.	No impacts to groundwater are anticipated.	None.	No impacts to groundwater are anticipated.	None.

	No Action Alternative		Demolition Only Alternative		Proposed Action Alternative	
Affected Environment	**Impacts**	**Mitigation**	**Impacts**	**Mitigation**	**Impacts**	**Mitigation**
Floodplains	No impacts to floodplains are anticipated. Because of its location in the 100-year floodplain, the existing Center would remain at risk of future damages from storm events.	None.	The demolition site is within the 100-year floodplain; this alternative would remove the existing Center building from the floodplain.	None.	The demolition site is within the 100-year floodplain; this alternative would remove the existing Center building from the floodplain. The proposed project relocation site is outside the 100-year and 500-year floodplain; no impacts to the floodplain are anticipated.	None.
Waters of the U.S., including Wetlands	No impacts to waters of the U.S., including wetlands, are anticipated.	None.	No impacts to waters of the U.S., including wetlands, are anticipated.	None.	Impact to 0.37 acre of forested wetlands would occur on the proposed relocation site. No impacts to waters of the U.S., including wetlands, are anticipated at the demolition site or the access parcel.	A Section 404 Permit will be required and wetland mitigation may be required on the proposed relocation site. Appropriate BMPs, such as installing silt fences and stabilizing soils, would minimize runoff into wetlands and downstream water resources.

	No Action Alternative		Demolition Only Alternative		Proposed Action Alternative	
Affected Environment	**Impacts**	**Mitigation**	**Impacts**	**Mitigation**	**Impacts**	**Mitigation**
Transportation	No impacts to transportation are anticipated.	None.	There would be a minor temporary increase in the volume of construction traffic on roads in the immediate vicinity of the demolition site.	Construction vehicles and equipment would be stored on-site during demolition activities and appropriate signage would be posted on affected roadways.	There would be a minor temporary increase in the volume of construction traffic on roads in the immediate vicinity of the proposed relocation site and the demolition site. Minor long-term impacts to traffic levels on roads in the vicinity of the proposed relocation site are anticipated.	Construction vehicles and equipment would be stored on-site during project construction and appropriate signage would be posted on affected roadways.
Public Health and Safety	The existing Center would be mothballed and maintained; no impacts to public health and safety are anticipated.	None.	Demolition activities could present safety risks to those performing the activities.	All demolition activities would be performed using qualified personnel and in accordance with the standards specified in Occupational Safety and Health Administration (OSHA) regulations. Appropriate signage and barriers would be in place prior to construction activities to alert pedestrians and motorists of project activities.	Construction and demolition activities could present safety risks to those performing the activities.	All construction and demolition activities would be performed using qualified personnel and in accordance with the standards specified in OSHA regulations. Appropriate signage and barriers would be in place prior to construction activities to alert pedestrians and motorists of project activities.

	No Action Alternative		Demolition Only Alternative		Proposed Action Alternative	
Affected Environment	**Impacts**	**Mitigation**	**Impacts**	**Mitigation**	**Impacts**	**Mitigation**
Hazardous Materials	No hazardous materials or waste impacts are anticipated.	None.	No hazardous materials or waste impacts are anticipated for the demolition site. The applicant would need a building asbestos certification from Mississippi Department of Environmental Quality (MDEQ) prior to demolition of the existing Center.	Any hazardous materials discovered, generated, or used during demolition would be disposed and handled in accordance with applicable local, state, and federal	No hazardous materials or waste impacts are anticipated for the proposed project relocation site or demolition site. The applicant would need a building asbestos certification from MDEQ prior to demolition of the existing Center. Because Catholic Charities would purchase the access parcel, a Phase I Environmental Site Assessment was conducted for the access parcel in October of 2009. No evidence of recognized environmental conditions in connection with the proposed access parcel or surrounding parcels was found (NISTAC, 2009).	Any hazardous materials discovered, generated, or used during construction would be disposed and handled in accordance with applicable local, state, and federal regulations.
Socioeconomic Resources	No socioeconomic impacts are anticipated.		No socioeconomic impacts are anticipated.	None.	No socioeconomic impacts are anticipated. Catholic Charities has agreed to provide Uniform	None.

	No Action Alternative		Demolition Only Alternative		Proposed Action Alternative	
Affected Environment	**Impacts**	**Mitigation**	**Impacts**	**Mitigation**	**Impacts**	**Mitigation**
					Relocation Assistance (URA) benefits to the three former residents who have chosen not to move to the new facility.	
Environmental Justice	No disproportionately high or adverse effect on minority or low-income populations is anticipated. All populations would continue to be adversely affected by the lack of senior assisted living services in the Biloxi area.	None.	No disproportionately high or adverse effect on minority or low-income populations is anticipated. All populations would continue to be adversely affected by the lack of senior assisted living services in the Biloxi area.	None.	No disproportionately high or adverse effect on minority or low-income populations is anticipated. Senior citizens in the Biloxi area would be provided access to senior living services formerly provided by the Center.	None.
Air Quality	No impacts to air quality are anticipated.	None.	Short-term impacts to air quality would occur during demolition.	Demolition contractors would be required to water down demolition areas when necessary; fuel-burning equipment running times would be kept to a minimum; engines would be properly maintained.	Short-term impacts to air quality would occur during construction and demolition.	Construction contractors would be required to water down construction areas when necessary; fuel-burning equipment running times would be kept to a minimum; engines would be properly maintained.

	No Action Alternative		Demolition Only Alternative		Proposed Action Alternative	
Affected Environment	**Impacts**	**Mitigation**	**Impacts**	**Mitigation**	**Impacts**	**Mitigation**
Noise	No impacts to air quality are anticipated.	None.	Short-term noise impacts would occur during demolition.	Demolition would occur during normal working hours and equipment would meet all local, state, and federal noise regulations.	Short-term noise impacts would occur during construction and demolition.	Construction and demolition would occur during normal working hours and equipment would meet all local, state, and federal noise regulations.
Biological Resources	No impacts to biological resources are anticipated. No impacts to threatened or endangered species are anticipated.	None.	No impacts to biological resources are anticipated. Revegetation of the demolition site would provide approximately 1.8 acres of suburban wildlife habitat. No impacts to threatened or endangered species are anticipated.	None.	Approximately 7.1 acres of mostly forested habitat (including 0.37 acre of forested wetland habitat) would be converted to facility use. Revegetation of the demolition site would provide approximately 1.8 acres of suburban wildlife habitat. No impacts to threatened or endangered species are anticipated.	None.
Cultural Resources	No impacts to cultural resources are anticipated.	None.	No impacts to cultural resources are anticipated.	None.	No impacts to cultural resources are anticipated.	None.

4.1 Geology and Soils

The proposed relocation site is underlain by the Citronelle Formation, an unconsolidated geologic formation consisting of red sand, gravel and white clay (MARIS, 2008; MDEQ, 2009).

The majority of the proposed relocation site and the access parcel contain soils classified as Poarch fine sandy loam, 2 to 5 percent slopes. These soils formed in sandy loamy marine deposits and are typically found on ridges. These soils are deep and well-drained and are not listed as hydric (USDA/NRCS, 2009b). The northeastern corner of the proposed relocation site and the northern side of the access parcel contain soils classified as Poarch fine sandy loam, 5 to 12 percent slopes. These soils formed in sandy and loamy marine deposits and are typically found on hillslopes. These soils are deep and well-drained and are listed as partially hydric (USDA/NRCS, 2009b). For the Poarch series, the water table is typically at a depth of approximately 2.5 to 5 feet (USDA/NRCS, 2009a). The southern portion of the proposed relocation site contains soils classified as Ocilla loamy sand, 0 to 2 percent slopes. These soils consist of very deep, somewhat poorly drained, moderately permeable soils that formed in sandy and loamy marine sediments. These soils are found on low uplands and stream terraces. Ocilla loamy sand is listed as a partially hydric soil (USDA/NRCS, 1997). For the Ocilla series, the water table is typically at a depth of approximately 1 to 2.5 feet (USDA/NRCS, 2009a).

The proposed relocation site terrain is relatively flat with elevations ranging from approximately 30 feet above mean sea level (amsl) in the southern portion of the site to approximately 18 feet amsl in the northern portion of a natural swale that extends through the center of the property. Surface water would flow first toward the swale in the center of the property, and then north toward an unnamed tributary to the Tchoutacabouffa River. Surface water on the access parcel would tend to flow to the north toward the unnamed tributary to the Tchoutacabouffa River. A concrete-lined drainage ditch extends along the eastern boundary of the proposed relocation site; this ditch drains north toward the unnamed tributary, as does the general area surrounding the proposed relocation site (Figure 2 in Appendix A). The water table on the relocation site is at approximately 4 to 5 feet below ground surface.

The Farmland Protection Policy Act (FPPA) states that federal agencies must "minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses…" According to the U.S. Department of Agriculture (USDA) Web Soil Survey, Poarch fine sandy loam 2 to 5 percent slopes is classified as a prime farmland soil, Poarch fine sandy loam 5 to 12 percent slopes is classified as a farmland soil of statewide importance, and Ocilla sandy loam 0 to 2 percent slopes is not classified as prime farmland (USDA/NRCS, 2009b). The proposed relocation site is within the City of Biloxi limits (City of Biloxi, 2009b), so the FPPA does not apply.

No Action Alternative – Under the No Action Alternative, no construction or demolition would occur and there would be no impacts to geology or soils.

Demolition Only Alternative – No impacts to geology would occur under this alternative. During the demolition of the existing Center on Beach Boulevard, short-term, minor impacts to previously disturbed soils would occur. To minimize the potential for erosion, appropriate BMPs would be implemented, including the installation of silt fences and revegetation of soils.

Proposed Action Alternative – Under the Proposed Action Alternative, no impacts to geology are anticipated. During the demolition of the existing Center on Beach Boulevard, short-term, minor impacts to previously disturbed soils would occur. To minimize the potential for erosion, appropriate BMPs would be implemented, including installation of silt fences and revegetation of soils.

Disturbance to native soils may occur during construction at the proposed relocation site and access parcel. Soils will be excavated to install a 53,000-cubic-foot detention basin (15,000 square feet in area); excavated material will be used for site grading, with any excess material disposed of at a licensed landfill. The applicant will need a SWPPP. Implementation of appropriate BMPs would be required at the construction location. BMPs could include the installation of silt fences and the revegetation of soils to minimize the potential for erosion.

On September 10, 2009, a letter requesting project review was sent to the Natural Resources Conservation Service (NRCS). A response letter dated September 22, 2009, from NRCS stated that the proposed relocation site is located within city limits, and therefore, no FPPA determinations are required (Appendix B).

4.2 Water Resources

4.2.1 Surface Water

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 proposed relocation site is relatively level and is bordered on the east by a concrete-lined drainage ditch. A perennial waterway, an unnamed tributary to the Tchoutacabouffa River, is located to the north of the proposed relocation site. The Tchoutacabouffa River flows to Biloxi Bay, and ultimately to the Mississippi Sound. The proposed relocation site is drained by a wetland system extending from south to north through the center of the proposed relocation site. Site visits conducted by Nationwide Infrastructure Support Technical Assistance Consultants (NISTAC) and FEMA biologists on July 24, 2009, and September 1, 2009, verified these findings.

No Action Alternative – Under the No Action Alternative, no construction would occur and there would be no impacts to surface waters.

Demolition Only Alternative – The demolition of the existing Center on Beach Boulevard and revegetation would reduce impervious surface area at that site. Minor, short-term impacts to downstream surface waters could occur due to the transport of sediment from disturbed soils by stormwater runoff during demolition activities. To reduce impacts to surface water resources, the applicant would implement appropriate BMPs, such as installing silt fences and revegetating bare soils.

Proposed Action Alternative – Under the Proposed Action Alternative, minor short-term impacts to the onsite wetland system, as well as downstream surface waters, including the unnamed tributary to the Tchoutacabouffa River, could occur due to the transport of sediment from disturbed soils by stormwater runoff during construction, and the increased amount of impervious surfaces that would exist after completion of the proposed new facility. The applicant would need a SWPPP and NPDES permit prior to construction. To reduce impacts to

surface water resources, the applicant would implement appropriate BMPs, such as installing silt fences and revegetating bare soils. Because the Proposed Action Alternative will also directly impact the wetland which provides natural drainage for the proposed relocation site (see Section 4.2.3 below), consultation with the USACE, Mississippi Department of Environmental Quality (MDEQ) and Mississippi Department of Marine Resources (MDMR) is being conducted to determine how site drainage will need to be re-routed.

The demolition of the existing Center on Beach Boulevard and revegetation of the site would reduce impervious surface area at that site.

On September 10, 2009, letters requesting project review were sent to the U.S. Environmental Protection Agency (EPA) Water Management Division, the MDEQ Office of Pollution Control, and the Mississippi Soil and Water Conservation Commission (Appendix B). To date, no responses have been received.

4.2.2 Floodplains

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. FEMA uses Flood Insurance Rate Maps (FIRMs) to identify the regulatory 100-year floodplain for the National Flood Insurance Program. Consistent with EO 11988, the Digital FIRM (DFIRM) was examined during the preparation of this EA. The DFIRM (FEMA, 2009; Map Number 28047C0279G) shows the proposed relocation site and access parcel as being located in Flood Zone X, which is outside of the 100-year and 500-year floodplain.

No Action Alternative – Under the No Action Alternative, no construction or demolition would occur, and there would be no change in occupancy of the floodplain. Due to its location within the 100-year floodplain, the existing building would be susceptible to future storm damages.

Demolition Only Alternative – The demolition site on Beach Boulevard is located within the 100-year floodplain. Consistent with accepted floodplain management practices, upon removal of the existing structure and revegetation of the site, occupancy of the floodplain would be reduced.

Proposed Action Alternative – The Proposed Action qualifies as a Critical Action (senior living complex), and must meet 500-year floodplain elevations. Under the Proposed Action Alternative, no impacts to the floodplain would occur because the proposed relocation site and access parcel are located outside of the 100-year and 500-year floodplain and development of the site would not impede natural floodplain uses. The demolition site on Beach Boulevard is located within the 100-year floodplain. Consistent with accepted floodplain management practices, upon removal of the existing structure and revegetation of the site, occupancy of the floodplain would be reduced.

4.2.3 Waters of the U.S. Including Wetlands

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 (CWA). Additionally, EO 11990 (Protection of Wetlands) requires federal agencies to avoid, to the extent possible, adverse impact of wetlands.

A review of the National Wetlands Inventory (NWI) map for the proposed relocation site and access parcel showed no wetlands on either site; however, wetland areas are identified adjacent to the Tchoutacabouffa River and these wetlands extend toward the proposed relocation site (USFWS, 2009).

A wetland determination was conducted by NISTAC and FEMA biologists of the proposed relocation site on June 24, 2009, and of the access parcel on September 1, 2009. One palustrine, forested wetland area was identified extending south to north through the center of the proposed relocation site and comprising 1.55 acres within the relocation site boundaries (NISTAC, 2009; Figure 3 in Appendix A). No wetland areas were identified on the access parcel. The methods and procedures used for this determination are in accordance with the 1987 *Corps of Engineers Wetlands Delineation Manual* (USACE, 1987) and the *Atlantic and Gulf Coastal Plain Regional Supplement* (USACE, 2008). The Corps requires evidence of hydric soils, the presence of hydrologic indicators, and a prevalence of vegetation typically adapted for life in saturated soil conditions for an area to be considered a wetland.

The Coastal Zone Management Act (CZMA) enables coastal states, including Mississippi, to designate state coastal zone boundaries and develop coastal management programs to improve protection of sensitive shoreline resources and guide sustainable use of coastal areas. According to the National Oceanic and Atmospheric Administration (NOAA), the proposed relocation site is located within the Mississippi Coastal Zone (NOAA, 2004).

No Action Alternative – Under the No Action Alternative, no construction or demolition would occur and there would be no impacts to waters of the U.S., including wetlands.

Demolition Only Alternative – Under the Demolition Only Alternative, no impacts to waters of the U.S., including wetlands, would occur. Appropriate BMPs would be implemented at the demolition site on Beach Boulevard to minimize soil erosion and reduce off-site sediment transport to adjacent surface waters and wetland areas.

Proposed Action Alternative – Under the Proposed Action Alternative, 0.37 acre of a forested wetland would be filled and converted to building and parking lot use on the proposed relocation site (Figure 3 in Appendix A). Development of the site may also cause indirect permanent impacts to other portions of the wetland system, due to changes that would occur to the wetland hydrology pathway. This project will require consultation with the USACE, MDEQ, and MDMR.

On October 14, 2009, a draft wetland report was sent to the USACE Mobile District and MDMR, Bureau of Wetlands Permitting, along with a request for a jurisdictional determination and pre-permit consultation. MDMR responded in a letter dated October 22, 2009, requesting submittal of a wetland joint permit application form to MDMR (Appendix B). The USACE responded in a letter dated October 27, 2009, that the request for a jurisdictional determination is under review (Appendix B).

After the permit review and approval process is completed, the CWA 404/401 permits will state what special conditions must be met as part of the permit requirement. These conditions would include using appropriate BMPs at the proposed construction and demolition sites to minimize soil erosion and reduce on-site and off-site sediment transportation to adjacent surface waters and wetland areas. Wetland mitigation may also be required.

4.3 Transportation

Primary access to the site would be from Medical Park Drive. An additional driveway would be constructed on the 0.85-acre access parcel to provide emergency access to the site from Tommy Munro Drive. Medical Park Drive is accessed by Cedar Lake Drive, approximately 0.2 mile south of Interstate 10. Tommy Munro Drive is accessed by Medical Park Drive and Popps Ferry Road. Popps Ferry Road and Cedar Lake Drive are classified by the Mississippi Department of Transportation as "principal arterials".

No Action Alternative – Under the No Action Alternative, no construction or demolition would occur and there would be no impacts on transportation.

Demolition Only Alternative – There would be a minor temporary increase in the volume of construction traffic on roads in the immediate vicinity of the demolition site on Beach Boulevard that could potentially result in a slower traffic flow for the duration of the demolition. To mitigate potential delays, demolition vehicles and equipment would be stored on site during project demolition and appropriate signage would be posted on affected roadways.

Proposed Action Alternative – There would be a minor temporary increase in the volume of construction traffic on roads in the immediate vicinity of the proposed relocation site including Medical Park Drive, Tommy Munro Drive, Popps Ferry Road, and Cedar Lake Road, as well as in the vicinity of the demolition site on Beach Boulevard. To mitigate potential delays, construction vehicles and equipment would be stored on site during project construction and appropriate signage would be posted on affected roadways.

Minor, long-term impacts to traffic levels on Medical Park Drive and Tommy Munro Drive would occur as a result of additional traffic generated by individuals using the new facility.

On September 10, 2009, a letter requesting project review was sent to the Mississippi Department of Transportation. To date, no response has been received.

4.4 Public Health and Safety

Safety and security issues considered in this EA include the health and safety of the area residents and the general public and the protection of personnel involved in activities related to the proposed construction

EO 13045, Protection of Children, requires federal agencies to make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children. There are residences and 2 schools (North Bay Elementary and Biloxi High School) within 1 mile of the proposed relocation site. Both single and multi-family residences and the Holy Guardian Angels Day Care Center are located within 1 mile of the demolition site.

No Action Alternative – Under the No Action Alternative, no construction or demolition would occur. The existing building would be closed and secured and the safety of the general public would remain unchanged.

Demolition Only Alternative – Under this alternative, demolition activities could present safety risks to those performing the activities. To minimize risks to safety and human health, all demolition activities would be performed using qualified personnel trained in all appropriate safety precautions, including the proper use of the appropriate equipment. Additionally, all

activities will be conducted in a safe manner in accordance with the standards specified in OSHA regulations.

Proposed Action Alternative – Under the Proposed Action Alternative, construction and demolition activities could present safety risks to those performing the activities. To minimize risks to safety and human health, all construction and demolition activities would be performed using qualified personnel trained in all appropriate safety precautions, including the proper use of the appropriate equipment. Additionally, all activities will be conducted in a safe manner in accordance with the standards specified in OSHA regulations.

The proposed relocation site is located on Medical Park Drive in a RM-25 Multi-family high density residential zone (City of Biloxi, 2009c). Appropriate construction barriers including exclusionary fences would be in place to protect the area. To alert motorists and pedestrians of project activities, appropriate signage and barriers would be on site prior to and during construction activities.

4.5 Environmental Justice

EO 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) mandates that federal agencies identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. Socioeconomic and demographic data for the project area were reviewed to determine if the proposed action would have a disproportionate impact on minority or low-income persons.

The proposed relocation site is located in Census Tract 33.02 Block Group 1, which has low-income and minority populations lower than that of the City of Biloxi, Harrison County, and the state of Mississippi. The U.S. Census Bureau lists the following census data for the project area (U.S. Census Bureau, 2000).

	State of Mississippi	Harrison County	City of Biloxi	Census Tract 33.02 Block Group 1
Total population (2000)	2,844,658	189,601	50,644	1125
Annual median household income	$31,330	$35,624	$34,106	$41,696
% Households below poverty level	20%	15%	15%	8%
% Minority population	39%	27%	29%	11%
% Hispanic (may be of any race)	1.39%	2.6%	4%	2%
% of population over 65	12%	11%	12%	8%

No Action Alternative – Under the No Action Alternative, there would be no disproportionately high or adverse impacts on minority or low-income populations. All populations would continue to be adversely affected by the lack of senior assisted living services in the Biloxi area.

Demolition Only Alternative – Under the Demolition Only Alternative, there would be no disproportionately high or adverse impacts on minority or low-income populations. All populations would continue to be adversely affected by the lack of senior assisted living services in the Biloxi area.

Proposed Action Alternative –The Proposed Action Alternative would not have any disproportionately high or adverse impacts on minority or low-income populations as it would not displace any residents, businesses, or community services. All populations in the Biloxi area would benefit from the senior assisted living services to be provided by the new facility.

4.6 Air Quality

The Clean Air Act (CAA) requires that states adopt ambient air quality standards. The standards have been established in order to protect the public from potentially harmful amounts of pollutants. Under the CAA, the U.S. Environmental Protection Agency (EPA) establishes primary and secondary air quality standards. Primary air quality standards protect the public health, including the health of "sensitive populations, such as people with asthma, children, and older adults." Secondary air quality standards protect public welfare by promoting ecosystem health, and preventing decreased visibility and damage to crops and buildings. EPA has set National Ambient Air Quality Standards (NAAQS) for the following six criteria pollutants: ozone (O_3), particulate matter ($PM_{2.5}$, PM_{10}), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), and lead (Pb). According to MDEQ, the entire state of Mississippi is classified as in attainment, meaning that criteria air pollutants do not exceed the NAAQS (MDEQ, 2002).

No Action Alternative – Under the No Action Alternative, there would be no short- or long-term impacts to air quality because no construction would occur.

Demolition Only Alternative – Short-term impacts to air quality could occur during demolition of the existing Center on Beach Boulevard. To reduce temporary impacts to air quality, the demolition contractors would be required to water down construction areas when necessary to minimize particulate matter and dust. Emissions from fuel-burning internal combustion engines (e.g., heavy equipment and earthmoving machinery) could temporarily increase the levels of some of the criteria pollutants, including CO, NO_2, O_3, PM_{10}, and non-criteria pollutants such as volatile organic compounds. To reduce the emission of criteria pollutants, fuel-burning equipment running times would be kept to a minimum and engines would be properly maintained.

Proposed Action Alternative – Under the Proposed Action Alternative, short-term impacts to air quality could occur during construction and demolition. To reduce temporary impacts to air quality, the construction and demolition contractors would be required to water down construction/demolition areas when necessary to minimize particulate matter and dust. Emissions from fuel-burning internal combustion engines (e.g., heavy equipment and earthmoving machinery) could temporarily increase the levels of some of the criteria pollutants, including CO, NO_2, O_3, PM_{10}, and non-criteria pollutants such as volatile organic compounds. To reduce the emission of criteria pollutants, fuel-burning equipment running times would be kept to a minimum and engines would be properly maintained.

4.7 Noise

Noise is generally defined as unwanted sound. Sound is most commonly measured in decibels (dB) on the A-weighted scale, which is the scale most similar to the range of sounds that the human ear can hear. The Day-Night Average Sound Level (DNL) is an average measure of sound. The DNL descriptor is accepted by federal agencies as a standard for estimating sound impacts and establishing guidelines for compatible land uses. EPA guidelines, and those of many other federal agencies, state that outdoor sound levels in excess of 55 dB DNL are "normally unacceptable" for noise-sensitive land uses such as residences, schools, or hospitals (EPA, 1974).

There are no noise-sensitive areas within a 1-mile radius of the proposed relocation site. There are residences located within a 1-mile radius of the demolition site.

No Action Alternative – Under the No Action Alternative, there would be no impacts to noise levels.

Demolition Only Alternative – Short-term increases in noise levels are anticipated during the demolition of the existing Center on Beach Boulevard. To reduce noise impacts on nearby residences, demolition activities would be scheduled between 6 a.m. and 7 p.m. in accordance with the City of Biloxi's Noise Ordinance (City of Biloxi, 2009a) and would not occur on Sundays or Federal holidays. Equipment and machinery utilized on the proposed relocation site would meet all local, state, and federal noise regulations.

Proposed Action Alternative – Under the Proposed Action Alternative, minor, short-term increases in noise levels are anticipated during construction and demolition. Equipment and machinery utilized on the proposed relocation site and the demolition site would meet all local, state, and federal noise regulations. Construction would be scheduled between 6 a.m. and 7 p.m. in accordance with the City of Biloxi's Noise Ordinance (City of Biloxi, 2009a) and would not occur on Sundays or Federal holidays.

4.8 Biological Resources

The proposed relocation site is heavily wooded and relatively flat with sandy, well to moderately well-drained soils and a forested wetland that extends north to south through the Center of the site. The access parcel is partially wooded and contains no wetlands. Vegetation is very thick and is dominted by slash pine (*Pinus elliottii*), sweet bay (*Magnolia virginiana*), swamp titi (*Cyrilla racemiflora*), redbay (*Persea borbonia*), red maple (*Acer rubrum*), yellow trumpets (*Sarracenia alata*), and greenbrier (*Smilax glauca*).

The U.S. Fish and Wildlife Service (USFWS) lists the following federally endangered and threatened animal species for Harrison County (USFWS, 2008):

Common Name	Scientific Name	Status
Louisiana black bear	*Ursus americanus luteolus*	T
Gulf sturgeon	*Acipenser oxyrhynchus desotoi*	T (CH)
Piping plover	*Charadrius melodus*	T (CH)
Gopher tortoise	*Gopherus polyphemus*	T

Common Name	Scientific Name	Status
Green turtle	*Chelonia mydas*	T
Loggerhead turtle	*Caretta caretta*	T
Kemp's Ridley turtle	*Lepidochelys kempii*	E
Mississippi gopher frog	*Rana capito sevosa*	E
Louisiana quillwort	*Isoetes louisianensis*	E
Alabama red-bellied turtle	*Pseudemys alabamensis*	E
Leatherback turtle	*Dermochelys comacea*	E
West Indian manatee	*Trichechus manatus*	E
Brown pelican	*Pelecanus occidentalis*	E
Red-cockaded woodpecker	*Picoides borealis*	E
T = threatened, E = endangered, (CH) = listed with critical habitat		

The site visits conducted by NISTAC and FEMA personnel on June 24, 2009, and September 1, 2009, confirmed that the proposed relocation site and access parcel do not contain habitat for any federally listed flora and fauna; therefore it is unlikely that any threatened or endangered species are present.

No Action Alternative – Under the No Action Alternative, there would be no impacts to biological resources or threatened or endangered species.

Demolition Only Alternative –Revegetation of the demolition site on Beach Boulevard would create approximately 1.8 acres of suburban wildlife habitat. This alternative would have no impacts to threatened or endangered species.

Proposed Action Alternative – Under the Proposed Action Alternative, approximately 7.1 acres of mostly forested habitat (including 0.37 acre of forested wetland habitat) would be cleared and converted to building, parking lot, and roadway use. Revegetation of the demolition site on Beach Boulevard would create approximately 1.8 acres of suburban wildlife habitat.

No suitable habitat for any federally listed flora and fauna species is located within the areas to be impacted by the proposed project activities. Therefore, under the Proposed Action Alternative, there would be no impacts to threatened or endangered species.

On September 10, 2009, a letter requesting project review was sent to the USFWS Jackson Field Office. To date, no response has been received.

4.9 Cultural Resources

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 will have an effect on historic properties prior to implementation. Historic properties are defined as archeological sites, standing structures, or

other historic resources listed in or eligible for listing in the National Register of Historic Places (NRHP).

A FEMA Archeologist and Architectural Historian, both qualified in their respective disciplines under the Secretary of the Interior's Professional Qualifications Standards (36 CFR Part 61), conducted an assessment of the project's potential to affect historic properties within the Area of Potential Effects (APE). The APE is the geographic area within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if such properties exist. For archaeological resources, the APE typically consists of the proposed project site; for historic architectural resources, the APE is extended out to a ¼ -mile radius around the proposed project site. This APE was previously established through FEMA consultation with the Mississippi State Historic Preservation Office (SHPO).

In September and October of 2009, NISTAC assisted FEMA in conducting a Phase I Cultural Resources Survey for the proposed project (Kerns-Nocerito et al., 2009). For above-ground resources, the APE consists of the proposed relocation site as well as portions of adjacent parcels within an approximate ¼ mile buffer to account for indirect effects. The indirect APE extends north toward the end of Tommy Munro Drive, south to Popps Ferry Road, east to what is visible from the proposed relocation site, and west encompassing a former FEMA temporary housing site. For archeological resources, the APE consists of the site of the proposed undertaking, including the 10-acre parcel on which the new facility will be located and the adjacent 0.85-acre parcel on which an access road will be constructed.

Above-ground Resources. One above-ground property 50 years old or older – a cemetery – was identified within the APE. This cemetery has been previously identified as archeological site 22HR872 and determined not eligible for listing in the NRHP as an archeological site. The cemetery burials span the period from circa 1860 to 1907, but the existing headstones are replacements. Therefore, FEMA has determined that the cemetery is not eligible for listing in the NRHP under any of the Criteria. No other above-ground resources over 50 years of age were identified within the APE, nor were there any above-ground resources less than 50 years of age that appeared to be eligible for the NRHP under Criterion Consideration G.

Archeological Resources. A records review was conducted of material available from the Mississippi Department of Archives and History (MDAH), the Mississippi State Archives, and other sources. Previous investigations documented the presence of six archaeological sites within 1 mile of the project area. Three prehistoric sites (22HR869, 22HR870, and 22HR871) and one historic cemetery (22HR872) were documented in 1999 directly east of the current project area, while a multi-component prehistoric and historic site (22HR932) was identified in 2005 to the west of the project area. Due to the proximity of prehistoric sites, the project area was considered to have a high potential for the presence of prehistoric materials and/or sites. The project area's environmental setting also contributes to the high potential for the presence of archaeological sites. The Back Bay of Biloxi within 1.75 miles to the south and the presence of a small wetland located north of the property would have provided a wide variety of natural resources. Due to the perceived high potential for encountering archaeological sites, a 20-meter interval shovel test survey was conducted across the project area to determine if any archaeological materials or sites were present. A total of 98 shovel test pits (STPs) were excavated within the project area. No artifacts were recovered and no cultural features were identified.

No Action Alternative – Under the No Action Alternative, no construction would occur and there would be no impacts to archeological or historic architectural resources.

Demolition Only Alternative – In 2006, FEMA completed Section 106 consultation for the demolition of the former Santa Maria de la Mer facility, located at 674 Beach Boulevard in Biloxi. FEMA made a determination of "No Adverse Effect" on historic properties based upon there being no above-ground historic properties in the APE and the adherence to the following list of conditions regarding the identification of additional archeological resources that may exist on the property:

1. Archeological monitoring for all ground disturbing work within the APE (which includes the pre-existing footprint of the building and parking lot)
2. Preparation of a monitoring report
3. Collection and preparation of a representative sample of artifacts
4. If major, intact cultural deposits are encountered, work in the vicinity of the discovery will be stopped and limits of the feature will be defined and recorded. The SHPO will then be notified and a plan of action will be coordinated between the office of the SHPO and FEMA.

MDAH concurred with this determination on November 21, 2006.

Proposed Action Alternative – In 2006, FEMA completed Section 106 consultation for the demolition of the former Santa Maria de la Mer facility, located at 674 Beach Boulevard in Biloxi. FEMA made a determination of "No Adverse Effect" on historic properties based upon there being no above-ground historic properties in the APE and the adherence to the following list of conditions regarding the identification of additional archeological resources that may exist on the property:

1. Archeological monitoring for all ground disturbing work within the APE (which includes the pre-existing footprint of the building and parking lot)
2. Preparation of a monitoring report
3. Collection and preparation of a representative sample of artifacts
4. If major, intact cultural deposits are encountered, work in the vicinity of the discovery will be stopped and limits of the feature will be defined and recorded. The SHPO will then be notified and a plan of action will be coordinated between the office of the SHPO and FEMA.

MDAH concurred with this determination on November 21, 2006.

FEMA has determined that no above-ground historic properties are located within the APE of the proposed relocation site, and, therefore, no above-ground historic properties will be affected by the proposed undertaking. Additionally, no archeological sites were identified within the APE of the proposed relocation site during the Phase I Archeological Survey. Accordingly, FEMA has determined that no additional work is required to identify archeological resources within the APE of the proposed relocation site, and, therefore, no archeological resources will be affected by the proposed undertaking. In letters dated November 18, 2009, FEMA submitted the Phase I Cultural Resources Survey Report to MDAH and six Tribal Historic Preservation Officers (THPOs), and requested concurrence with the findings presented above (Appendix B). No responses have been received to date.

5.0 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 Proposed Action Alternative and other actions occurring or proposed in the vicinity of the proposed relocation site.

Biloxi and the entire Mississippi Gulf coast are undergoing recovery efforts after Hurricane Katrina caused extensive damages. The recovery efforts in the area include demolition, reconstruction, and new construction. These projects and the proposed project may have cumulative temporary impacts on air quality, noise, traffic, and surface water resources in Biloxi during construction activities. No other cumulative effects are anticipated.

6.0 PUBLIC INVOLVEMENT

FEMA is the lead federal agency for conducting the NEPA compliance process for the proposed project in Biloxi, Mississippi. It is the goal of the lead agency to expedite the preparation and review of NEPA documents and to be responsive to the needs of the community and the purpose and need of the proposed action while meeting the intent of NEPA and complying with all NEPA provisions.

Catholic Charities will notify the public of the availability of the draft EA through publication of a public notice in a local newspaper. FEMA will conduct an expedited public comment period commencing on the initial date of publication of the public notice.

7.0 AGENCY COORDINATION AND PERMITS

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

- U.S. Army Corps of Engineers, Mobile District, Alabama
- U.S. Department of Agriculture, Natural Resources Conservation Service
- U.S. Environmental Protection Agency, Region 4, Water Management Division
- U.S. Fish and Wildlife Service, Jackson Field Office
- Tribal Historic Preservation Officers:
  - Mississippi Band of Choctaw Indians
  - Choctaw Nation of Oklahoma
  - Jena Band of Choctaw Indians
  - Seminole Nation of Oklahoma
  - Seminole Tribe of Florida

  - Thlopthlocco Tribal Town
- Mississippi Department of Agriculture and Commerce
- Mississippi Department of Archives and History
- Mississippi Department of Environmental Quality, Office of Pollution Control, Environmental Permits Division
- Mississippi Department of Marine Resources, Bureau of Wetlands Permitting
- Mississippi Department of Transportation, Environmental Division
- Mississippi Soil and Water Conservation Commission

In accordance with applicable local, state, and federal regulations, the applicant would be responsible for acquiring any necessary permits prior to commencing construction at the proposed relocation site.

8.0 CONCLUSIONS

No impacts to geology, groundwater, hazardous materials, socioeconomics, environmental justice, threatened or endangered species, or cultural resources are anticipated under the Proposed Action Alternative.

During the construction period, short-term impacts to surface water, transportation, air quality, and noise are anticipated at the proposed relocation site and the demolition site. Short-term impacts will be mitigated utilizing BMPs, such as silt fences, proper equipment maintenance, and appropriate signage.

Minor, long-term soil impacts will occur during the excavation of a detention basin on the proposed relocation site. Excavated material will be used for site grading, with any excess material disposed of at a licensed landfill. Minor, long-term impacts to traffic levels in the vicinity of the proposed relocation site would occur as use of the facility will generate additional traffic. Approximately 7.1 acres of forested habitat will be removed, including approximately 0.37 acre of forested wetlands. Wetland impacts will require a permit from the USACE; mitigation for wetland impacts may also be required.

9.0 REFERENCES

City of Biloxi. 2009a. *Municipal Code.* http://www.municode.com/Resources/gateway.asp?pid=10442&sid=24. Accessed August 11, 2009.

City of Biloxi. 2009b. *City of Biloxi Voter Ward Map.* http://www.biloxi.ms.us/citycouncil/Voter_WardMap05.pdf. Accessed August 12, 2009.

City of Biloxi. 2009c. *Zoning Map*. http://www.biloxi.ms.us/PDF/zoningmap.pdf. Accessed August 11, 2009.

Environmental Protection Agency (EPA). 1974. *EPA Identifies Noise Levels Affecting Health and Welfare*. http://www.epa.gov/history/topics/noise/01.htm. Accessed August 12, 2009.

Federal Emergency Management Agency (FEMA). 2009. *Flood Insurance Rate Map, Harrison County, Mississippi. Community Panel Number 28047C0279G.* Map Revised June 16, 2009. http://map1.msc.fema.gov/idms/IntraView.cgi?KEY=201431&IFIT=1. Accessed August 18, 2009.

Gulfport Regional Planning Commission. *Biloxi Proposed Functional Classification Changes.* http://www.grpc.com/pdf/BLX%20FuncChng.pdf. Accessed November 8, 2009.

Kerns-Nocerito, M., J. Bedard, B. Johnson, L. Mackey, and C. Watson. 2009. *Phase I Cultural Resources Survey of the Proposed Santa Maria de la Mer Senior Center Relocation Site, Biloxi, Harrison County, Mississippi*. Prepared by NISTAC for FEMA. November.

Mississippi Automated Resource Information System (MARIS). 2008. *Surface Geology*. http://www.maris.state.ms.us/HTM/DownloadData/Statewide-Theme.htm. Downloaded GIS data on April 3, 2008.

Mississippi Department of Environmental Quality (MDEQ). 2002. *New Air Quality Standards.* http://deq.state.ms.us/MDEQ.nsf/page/Air_NewAirQualityStandardsandAttainment?OpenDocument. Accessed August 12, 2009.

MDEQ. 2009. *Surface Geologic Unit Descriptions for Mississippi.* http://www.deq.state.ms.us/MDEQ.nsf/pdf/Geology_MSGeologicUnitDescription/$File/MS_GeologicUnit_Desc.pdf?OpenElement. Accessed August 11, 2009.

National Oceanic and Atmospheric Administration (NOAA). 2004. *State Coastal Zone Boundaries*. April 22. http://coastalmanagement.noaa.gov/mystate/docs/StateCZBoundaries.pdf. Accessed August 18, 2009.

Nationwide Infrastructure Support Technical Assistance Consultants (NISTAC). 2009. *Wetland Delineation Report, Santa Maria de la Mer Relocation Project, Harrison County, Mississippi*. Prepared for FEMA. October.

NISTAC. 2009. *Draft Phase I Environmental Site Assessment, 0.85-Acre Access Parcel for Santa Maria de la Mer Relocation Project, Harrison County, Mississippi*. Prepared for FEMA. November.

U.S. Army Corps of Engineers (USACE). 1987. *Corps of Engineers Wetland Delineation Manual*.

USACE. 2008. *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region*. eds. J.S. Wakely, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-30. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Census Bureau. 2000. Population and Income. Accessed August 11, 2009.

U.S. Department of Agriculture, Natural Resources Conservation Service (USDA/NRCS). 1997. http://ortho.ftw.nrcs.usda.gov/cgi-bin/osd/osdnamequery.cgi. Accessed August 11, 2009.

USDA/NRCS. 2009a. http://soildatamart.nrcs.usda.gov/County.aspx?State=MS. Downloaded March 19, 2009.

USDA/NRCS. 2009b. Web Soil Survey. Last modified July 14, 2009. http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed September 15, 2009.

U.S. Fish and Wildlife Service (USFWS). 2008. *Mississippi: List of Threatened and Endangered Species by County.* June.

USFWS. 2009. *National Wetlands Inventory Maps*. http://www.fws.gov/wetlands/Data/mapper.html. Accessed August 24, 2009.

Appendix A
Figures

Appendix B
Agency Coordination

Appendix C

Eight-Step Planning Process for Floodplains and Wetlands