Draft Programmatic Environmental Assessment

# Alternative Housing Pilot Program Permanent Housing

State of Mississippi
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FEMA

**U.S. Department of Homeland Security**
Federal Emergency Management Agency (FEMA)
FEMA Transitional Recovery Office – Biloxi, MS

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# List of Acronyms and Abbreviations

| | |
|---|---|
| AADT | Average Annual Daily Traffic |
| ABFE | Advisory Base Flood Elevation |
| ACHP | Advisory Council on Historic Preservation |
| AHPP | Alternative Housing Pilot Program |
| BFE | Base flood elevation |
| bgs | Below ground surface |
| BMP | Best management practice |
| CAA | Clean Air Act |
| CERCLA | Comprehensive Environmental Response Compensation and Liability Act |
| CERCLIS | Comprehensive Environmental Response Compensation and Liability Information System |
| CEQ | Council on Environmental Quality |
| CFR | Code of Federal Regulations |
| CHHA | Coastal high hazard area |
| CO | Carbon monoxide |
| CRMP | Comprehensive Resource Management Plan |
| CWA | Clean Water Act |
| CZMA | Coastal Zone Management Act |
| CZMP | Coastal Zone Management Program |
| DFIRM | Digital Flood Insurance Rate Map |
| DHS | Department of Homeland Security |
| EA | Environmental Assessment |
| EFH | Essential Fish Habitat |
| EIS | Environmental Impact Statement |
| EO | Executive Order |
| ESA | Endangered Species Act |
| FEMA | Federal Emergency Management Agency |
| FIRM | Flood Insurance Rate Map |
| FIS | Flood Insurance Study |
| FONSI | Finding of No Significant Impact |
| FPPA | Farmland Protection Policy Act |
| FWCA | Fish and Wildlife Coordination Act |
| GIS | Geographic Information System |
| GSRC | Gulf South Research Corporation |
| HUD | U.S. Department of Housing and Urban Development |
| I | Interstate |
| LOS | Level of service |
| MBTA | Migratory Bird Treaty Act |
| MCP | Mississippi Coastal Program |
| MDAH | Mississippi Department of Archives and History |
| MDEQ | Mississippi Department of Environmental Quality |
| MDMR | Mississippi Department of Marine Resources |
| MDOT | Mississippi Department of Transportation |
| MDWFP | Mississippi Department of Wildlife, Fisheries, and Parks |
| MEMA | Mississippi Emergency Management Agency |
| Mississippi Cottages | Permanent AHPP Units |
| MLRA | Major Land Resource Area |
| MSA | Magnuson-Stevens Fishery Conservation and Management Act |
| NAAQS | National Ambient Air Quality Standards |

| | |
|---|---|
| NEPA | National Environmental Policy Act |
| NESHAP | National Emissions Standards for Hazardous Air Pollutants |
| NFIP | National Flood Insurance Program |
| NHPA | National Historic Preservation Act |
| $NO_2$ | Nitrogen dioxide |
| NOAA | National Oceanic and Atmospheric Administration |
| NPDES | National Pollutant Discharge Elimination System |
| NPL | National Priorities List |
| NRCS | National Resource Conservation Service |
| NRHD | National Register Historic Districts |
| NRHP | National Register of Historic Places |
| $O_3$ | Ozone |
| PA | Programmatic Agreement |
| Pb | Lead |
| PCB | Polychlorinated biphenyls |
| PEA | Programmatic Environmental Assessment |
| P.L. | Public Law |
| PM-2.5 | Particulate matter less than 2.5 micrometers |
| PM-10 | Particulate matter less than 10 micrometers |
| PNP | Private Non-Profit organizations |
| POV | Personally owned vehicles |
| RCRA | Resource Conservation and Recovery Act |
| SARA | Superfund Amendments and Reauthorization Act |
| SEA | Supplemental Environmental Assessment |
| SHPO | State Historic Preservation Officer |
| $SO_2$ | Sulfur dioxide |
| Stafford Act | Robert T. Stafford Disaster Relief and Emergency Assistance Act |
| State | State of Mississippi |
| SWPPP | Stormwater Pollution Prevention Plan |
| THPO | Tribal Historic Preservation Office |
| TSCA | Toxic Substances Control Act |
| URA | Uniform Relocation Assistance and Real Property Acquisition Policy Act |
| 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 |
| WSRA | Wild and Scenic Rivers Act |
| WWTP | Wastewater treatment plant |

*SECTION 1.0*
*INTRODUCTION*

## 1.0 Introduction

The Department of Homeland Security's (DHS) Federal Emergency Management Agency (FEMA) is mandated by the United States (U.S.) Congress to administer Federal disaster assistance pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), Public Law (P.L.) 93-288, as amended. Under the authority of Section 408 of the Stafford Act, the Individual Assistance Program provides for temporary housing for disaster victims in the affected areas whose homes are uninhabitable or destroyed. This temporary housing is made available for the intermediate period (generally up to 18 months) that covers the gap between sheltering and securing permanent housing. FEMA typically addresses disaster-related housing requirements first with rental assistance and then a combination of travel trailers and manufactured homes. Travel trailers have been used principally for shorter-term housing needs and are placed on private sites while a homeowner's permanent residence is being repaired, or in group configurations to primarily support displaced renters. Manufactured homes have been used to meet both short and longer-term disaster housing needs and are typically placed on commercial pads or in group sites developed expressly for this purpose.

Hurricane Katrina spawned the largest natural disaster in our nation's history, decimating the housing stock in the Gulf Coast region, including the State of Mississippi. Although FEMA's traditional temporary housing options are sufficient to address the unmet housing needs of residents in most disasters; the catastrophic dimensions of Hurricane Katrina challenged the efficacy of these traditional methods. These traditional methods are based on the statutory supposition that such assistance will generally not be required for more than 18 months. Some of those catastrophic dimensions included:

- A significant number of homes on private lots were completely destroyed;
- Complete neighborhoods were destroyed;
- Protracted community recovery timelines, with the likelihood that temporary housing may be required in some cases for extended periods;
- A shortage of resources for reconstruction of homes, uncertainty with respect to community and neighborhood recovery, labor shortages and other factors that limit the pace of recovery; and,

- Community and individual resistance to the use of travel trailers for extended temporary housing; concurrent with the interest of the design community, local governments and Congress to find better temporary housing options for disaster victim use while pursuing permanent housing solutions.

Recognizing the extensive and complex housing challenges facing victims and communities as a result of Hurricane Katrina, and acknowledging the limitations on FEMA's ordinary statutory authority to provide long-term and permanent housing solutions, Congress appropriated funds to DHS to support alternative housing pilot programs (Emergency Supplemental Appropriations Act, 2006, P.L. 109-234). The Alternative Housing Pilot Program (AHPP) represents a one-time exception to FEMA's existing authority under the 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 Mississippi.

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 Programmatic Environmental Assessment (PEA) is to document the review and analysis of any potential impacts the AHPP will have on the natural and human environment in Mississippi.

### 1.1 Purpose and Need

The purpose of this action is to provide alternative disaster housing in the State of Mississippi that includes long-term and permanent solutions. The need for this action is to address the housing shortages caused by the catastrophic effects of Hurricane Katrina, and to move disaster victims from current temporary solutions (*e.g.*, rental dwellings, travel trailers, *etc*.) to permanent housing. At present time in Mississippi, 1,284 mobile homes, 3,691 travel trailers, and 127 park model houses are still occupied by residents displaced by Hurricane Katrina. An additional 652 people are currently receiving rental assistance, and approximately 2,000 displaced residents are in temporary AHPP units ("Mississippi Cottages").

## 1.2 Scope and Use of the Programmatic Environmental Assessment

FEMA has determined through experience that the majority of typical recurring actions proposed for funding, and for which an Environmental Assessment (EA) is required, can be grouped by type of action or location. These groups of actions can be evaluated in a PEA for compliance with NEPA and its implementing regulations without the need to develop and produce a stand-alone EA for every action. In addition, satisfying NEPA compliance through the use of a PEA would also streamline the process and allow displaced residents to be in permanent housing quicker.

This PEA evaluates the long-term and permanent housing actions proposed by the State of Mississippi (State) and FEMA under the AHPP for Mississippi residents displaced as a result of Hurricane Katrina. This PEA also provides the public and decision-makers with the information required to understand and evaluate the potential environmental consequences of these actions. FEMA will use this PEA to determine the level of environmental analysis and documentation required under NEPA for any proposed AHPP housing action in Mississippi, given the available site-specific information. If the alternatives, levels of analysis, and site-specific information of an action proposed for FEMA funding are fully and accurately described in this PEA, then no further documentation will be required to comply with NEPA. During the development of this PEA, FEMA has coordinated with various Federal and state agencies on the proposed AHPP in Mississippi. Coordination letters can be found in Appendix A. Any proposed action requiring further resource agency consultation or coordination will be documented by FEMA with all supporting documentation in the project's administrative record.

Should a specific action be expected to (1) create impacts not identified in the PEA; (2) create impacts greater in magnitude, extent, or duration than those described in the PEA; or (3) require mitigation measures to keep impacts below significant levels that are not described in the PEA; a Supplemental Environmental Assessment (SEA) and corresponding Finding of No Significant Impact (FONSI) would be prepared to address the specific action. The SEA would be tiered from this PEA, in accordance with 40 CFR Part 1508.28.[1] Actions that are determined, during the preparation of the SEA, to require a more detailed or broader environmental review would be subject to the stand-alone EA process. Actions that are determined to have significant environmental impacts would be subject to the environmental impact statement (EIS) process.

[1] Tiering refers to incorporating, by reference, the general assessments and discussions from this PEA into a focused SEA. The SEA would focus on the particular effects of the specific action.

## 1.3 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 PEA considered the combined effect of the AHPP in Mississippi and other actions occurring or proposed in the vicinity of the proposed project sites.

The entire Mississippi Gulf Coast is undergoing recovery efforts after Hurricane Katrina caused extensive damages. The recovery efforts in the area include demolition, reconstruction, and new construction both within the private sector as well as projects by Federal and State agencies. These projects and the proposed AHPP actions may have impacts to the proposed project areas and their surroundings. Cumulative impacts of the proposed AHPP actions will be considered by FEMA when determining the compatibility of this PEA for specific actions. Should cumulative impacts be greater in magnitude, extent, or duration than the direct and indirect effects described in the PEA, a SEA would be prepared to analyze the potential environmental impacts of the proposed AHPP action and other recovery efforts.

# *SECTION 2.0*
# *ALTERNATIVES*

## 2.0 Alternatives

This section describes typical actions that the State and FEMA propose to undertake in order to provide AHPP housing to Mississippi residents displaced as a result of Hurricane Katrina within George, Hancock, Harrison, Jackson, Pearl River and Stone counties (program area) (Figure 1). All available alternatives, including the No Action Alternative, are described below.

### 2.1 Alternative 1: No Action Alternative

Inclusion of a No Action Alternative in the environmental analysis and documentation is required under NEPA. The No Action Alternative is defined as maintaining the *status quo*, with no FEMA funding for long-term or permanent housing. This alternative evaluates the effects of not providing long-term or permanent housing and provides a benchmark against which the action alternatives may be evaluated.

Currently in Mississippi, 5,102 FEMA temporary units (*e.g.,* travel trailers, and park models) are still occupied by persons displaced by Hurricane Katrina. Persons who are receiving temporary resources would continue to do so, until a time when FEMA would discontinue providing temporary housing support. It is assumed that no state or local government agency, or non-governmental organization would provide long-term or permanent housing for disaster victims. Displaced persons would be required to find a suitable housing solution without FEMA assistance including seeking out housing provided by: family members or friends; hotels; temporary "dormitories" such as homeless shelters or churches; facilities damaged by the storm and determined structurally unsafe or unsanitary; or through charitable donations.

### 2.2 Alternative 2: Conversion of Temporary AHPP Units on Previously Disturbed Land to Permanent AHPP Units

Since the inception of the AHPP, the State has provided for approximately 2,000 temporary AHPP units (Mississippi Cottages) within the program area. A typical Mississippi Cottage is shown in Photograph 1.

**Photograph 1. Typical Mississippi Cottage**

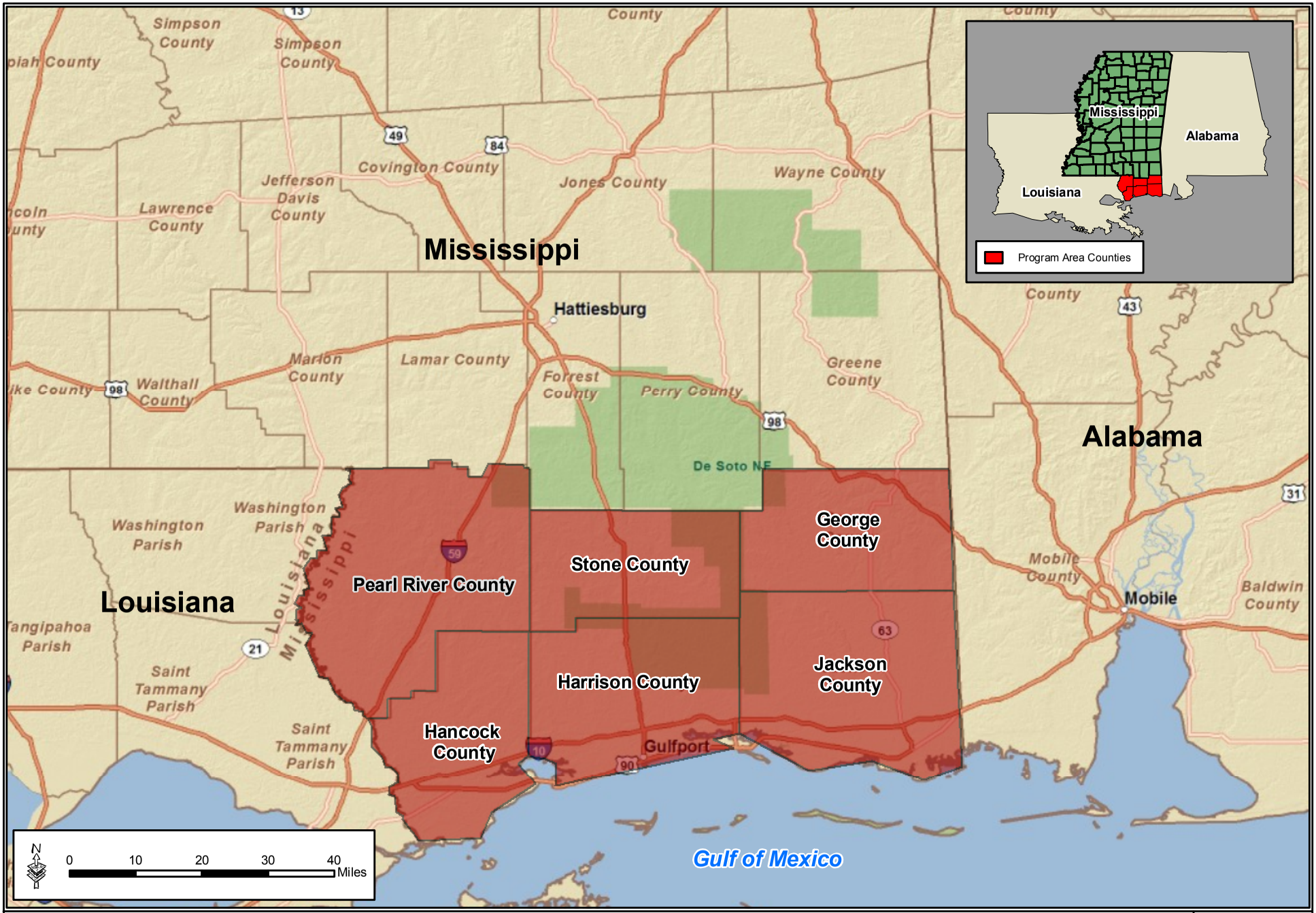


Figure 1: Program Area

GSRC

August 2008

In general, Mississippi Cottages:

- include two bedrooms at approximately 728 total square feet; or three bedrooms at approximately 840 total square feet;
- have a front porch;
- have a larger living area than travel trailers;
- maximize space and storage capabilities;
- are wind resistant up to 150 miles per hour; and,
- are designed to reflect typical Mississippi Gulf Coast architecture.

Under this alternative, existing temporary Mississippi Cottages would be made permanent by replacing temporary foundations at the same location and footprint with permanent foundations, and replacing existing, above-ground utilities with buried utilities. If necessary, shallow drainage ditches would be constructed to carry stormwater from the site to the municipal stormwater system. Temporary units in the coastal high hazard area (CHHA) would not be eligible for conversion due to the potential risk to public health and safety and the repetitive loss of property resulting from future flood events. However, temporary units currently in the CHHA may be sold to the public or relocated outside the CHHA, upon approval from the State.

### 2.3 Alternative 3: Installation of Permanent AHPP Units on Previously Developed Land

This alternative would place permanent AHPP units on permanent foundations with in-ground utilities on previously developed land. If located in a floodplain, the units would be elevated to the Base Flood Elevations (BFE) as designated in the Preliminary Digital Flood Insurance Rate Maps (DFIRM) using open works (*e.g.,* walls, columns, piers, piles, *etc.*) rather than fill, where practicable. Projects under this alternative may involve ground disturbing activities, including the demolition of the former housing structure, slab/foundation removal, and the refurbishment of existing utilities (*e.g.,* utility lines, septic systems, water wells, *etc*.).

These sites either have existing infrastructure, including electricity, domestic water, stormwater, sanitary sewer, and telecommunication systems, or have had ground disturbance to at least the depth that these infrastructure systems would be installed. Examples of these sites include vacant parcels that once contained residential, commercial, light industrial, or institutional structures.

At sites where sufficient electric service already exists, grid power would be connected to the site. If insufficient electric service exists on-site, then an on-site generator would be installed for power supply to the site until an electric transformer station could be installed. No lift stations would be required to convey domestic water, stormwater, or sewage to/from the site to local utility systems. If necessary, shallow drainage ditches would be constructed to carry stormwater from the site to the municipal stormwater system.

### 2.4 Alternative 4: Installation of Permanent AHPP Units on Undeveloped Land

This alternative would place permanent AHPP units on permanent foundations with in-ground utilities on undeveloped land. This alternative may involve placement of an individual unit on a single vacant lot or moving an existing cottage within the same property. If located in a floodplain, the units would be elevated to the base flood elevation (BFE) as designated in the Preliminary DFIRMs using open works (*e.g.,* walls, columns, piers, piles, *etc.*) rather than fill, where practicable. The site would be cleared of all debris and vegetation, then grubbed, contoured, and graded, if necessary. Projects under this alternative may require other ground disturbing activities, including installation of utilities (*e.g.,* utility lines, septic systems, water wells, *etc*.) and entryways (driveways, sidewalks, *etc.*). Paved roads would be constructed for ingress and egress to and from the site and within the site for traffic circulation.

New utility installations would consist of connecting electrical service, domestic water service, stormwater systems, sanitary sewer service, and telecommunication service to existing local government infrastructure, where these services or systems exist. A new transformer station may need to be installed for power supply to the site. If needed, an on-site generator may be temporarily installed to provide power during construction. If the site cannot be connected to existing sanitary sewer systems, then an engineered septic system or a site-specific wastewater treatment plant (WWTP) would be constructed on-site. If municipal water services are not available to the site, a water well would be installed. Safety fences would be installed and maintained around any transformer stations, water wells or WWTPs.

### 2.5 Alternative 5: Permanent Group Housing Sites on Previously Developed Group Sites

This alternative would create permanent group housing sites on previously developed group, residential, and commercial housing sites. This would include the use of vacant mobile home communities and former FEMA temporary trailer sites to create housing sites equivalent to a

residential housing subdivision. If located in a floodplain, the units would be elevated to the BFE as designated by the Preliminary DFIRMs using open works (*e.g.,* walls, columns, piers, piles, *etc.*) rather than fill, where practicable.

These sites either have existing infrastructure, including electricity, domestic water, stormwater, sanitary sewer, and telecommunication systems, or have had ground disturbance to at least the depth that these infrastructure systems would be installed. Examples of these sites include vacant parcels that once contained residential, commercial, light industrial, or institutional structures.

Projects under this alternative may involve ground disturbing activities, including the demolition of former housing structures, slab/foundation removal, debris removal, and the refurbishment of existing utilities (*e.g.,* utility lines, septic systems, water wells, *etc*.) to accommodate the proposed action. Additional ground disturbing activities may include grubbing, contouring, and grading of the site. If paved or gravel access and circulation roads do not yet exist, roads would be constructed for ingress and egress to and from the site and within the site for traffic circulation. For areas completely paved, designated circulation roads would be clearly demarcated.

At sites where adequate electrical service already exists, grid power would be connected to the site. If no service exists on-site, an on-site generator would be installed for power supply to the site until a transformer station can be installed. No lift stations would be required to convey domestic water, stormwater, or sewage to/from the site to the local government's system. If necessary, shallow drainage ditches would be constructed to carry stormwater from the site to the municipal stormwater system or existing retention ponds.

### 2.6 Alternative 6: Permanent Group Housing Sites on Undeveloped Land

This alternative would create permanent group housing sites on previously undeveloped land. These sites would require full development of infrastructure (*i.e.,* roads, utilities, *etc.*) to create housing sites equivalent to a residential subdivision. If located in a floodplain, the units would be elevated to the BFE as designated by the Preliminary DFIRMs using open works (*e.g.,* walls, columns, piers, piles, *etc.*) rather than fill, where practicable.

This alternative would also involve establishing AHPP group housing sites on land that has not previously been developed or does not have the infrastructure components in place to meet the requirements of Alternative 5. The site would be procured and cleared of all debris and vegetation, then grubbed, contoured, and graded, if necessary. Roads would be constructed for ingress and egress to and from the site and within the site for traffic circulation.

New utilities would be installed on-site, which would consist of connecting electrical service, domestic water service, stormwater systems, sanitary sewer service, and telecommunication service to existing municipal infrastructure, where these exist. A new electric transfer station may need to be installed for power supply to the site. If an electric transfer station is needed, an on-site generator may be temporarily installed to provide power during construction. Lift stations may need to be installed to convey domestic water, stormwater, or sewage to/from the site to the municipal sewer system. An engineered septic system, a site-specific WWTP, retention ponds, and/or drainage ditches may also be constructed on-site. Safety fences would be installed and maintained around any transfer stations, lift stations, retention ponds, or WWTPs.

### 2.7 Alternative 7: Demobilization of AHPP Units through Donations

Under this alternative the State would provide AHPP units that have been demobilized to Private Non-Profit organizations (PNP) as a donation. The PNP would, in turn, install the unit on private land and rent the unit to eligible program participants at low-cost. If a PNP uses Federal or state funds for site preparation or units are placed on public land, then a NEPA analysis would be conduct by FEMA or other lead agency (*e.g.,* U.S. Department of Housing and Urban Development [HUD]) for those sites, based on the funding mechanism. If the PNP does not require Federal or state assistance, the analysis of impacts will be limited to the donation or transfer of the unit only, as FEMA and the State would have no involvement in the project's site selection or development.

# *SECTION 3.0*
# *AFFECTED ENVIRONMENT AND IMPACTS*

## 3.0 Affected Environment and Impacts

The following table summarizes the potential impacts of the Proposed Action Alternatives. Potential impacts and conditions or mitigation measures to offset impacts are discussed further in Section 4.

| | Alternative 1: No Action | Alternative 2: Conversion of Temporary AHPP Units on Previously Disturbed Land to Permanent AHPP Units | Alternative 3: Installation of Permanent AHPP Units on Previously Developed Land | Alternative 4: Installation of Permanent AHPP Units on Undeveloped Land | Alternative 5: Permanent Group Housing Sites on Previously Developed Group Sites | Alternative 6: Permanent Group Housing Sites on Undeveloped Land | Alternative 7: Demobilization of AHPP Units through Donations |
|---|---|---|---|---|---|---|---|
| **Geology and Soils** | No impacts on geology, soils or prime or unique farmland are anticipated. | No additional impacts on geology are anticipated; however, short-term construction impacts could occur to soils. Potential soil erosion would be minimized through the use of Best Management Practices (BMP). Impacts on prime farmlands would not be anticipated. | Impacts on geology and soils would be the same as described in Alternative 2. | No impacts on geology; however short-term impacts on soils could occur during construction of units and auxiliary facilities. Prime farmlands could be impacted. | Impacts would be the same as described in Alternative 2. | Under this alternative impacts on geology, soils and prime farmland would be the same as described in Alternative 4. | If Federal or state funds are used or units are placed on public land, the impacts on geology and soils associated with site preparation would be similar to those in Alternative 3 through 6, whichever best describes the type of action utilized. |
| **Air Quality** | No impacts on air quality are anticipated. | Temporary increases in construction and fugitive dust emissions during construction. FEMA would consult with U.S. Environmental Protection Agency (USEPA) and Mississippi Department of Environmental Quality (MDEQ) on potential impacts to air resources. | Impacts on air quality during construction would be similar to Alternative 2. Auxiliary facilities could increase emissions of criteria pollutants. | Impacts on air resources under this alternative would be similar to Alternative 3. | Impacts under this alterative would be the same as Alternative 2 and 3; however, construction workers and residents' personally owned vehicles (POV) could increase criteria pollutants regionally, although the effect would be insignificant. | Impacts under this alternative would be similar to Alternative 3. | If the PNP uses Federal or state funds or places units on public land, the impacts on air quality associated with site preparation would be similar to those in Alternative 3 through 6, whichever best describes the type of action utilized. |
| **Water Quality** | No impacts on water resources are anticipated. | Minor, short term impacts on water resources are anticipated under this alternative during construction activities. | Impacts to groundwater and water quality would occur; however, BMPs would be implemented to minimize these impacts. Sewage would be treated at a licensed WWTP or septic system. Stormwater would be conveyed to the local government's stormwater system or treated on-site by retention ponds. FEMA would consult with appropriate agencies regarding National Pollutant Discharge Elimination System (NPDES) permitting, water quality certification and Coastal Zone Management Act (CZMA) compliance. | Impacts on water resources would be similar to Alternative 3. | Impacts on water resources would be similar to Alternative 3 and 4. | Impacts on water resources would be similar to Alternative 3. | If the PNP uses Federal or state funds for site preparation or place units on public land, the impacts on water resources associated with site preparation would be similar to those in Alternative 3 through 6, whichever best describes the type of action utilized. |
| **Floodplains** | No impacts on floodplains are anticipated. | All structures would be elevated so that the lowest floor is at or above the Advisory Base Flood Elevation (ABFE). FEMA would consult with the State and MDEQ in an effort to identify additional proposed mitigation. | Impacts on floodplains under this alternative would be the same as Alternative 2. | Impacts on floodplains would be similar to Alternative 2. | Impacts on floodplains would be similar to Alternative 2. | Impacts on floodplains would be similar to Alternative 2. | If the PNP uses Federal or state funds for site preparation or place units on public land, the impacts to floodplains associated with site preparation would be similar to those in Alternative 3 through 6, whichever best describes the type of action utilized. |

| | Alternative 1: No Action | Alternative 2: Conversion of Temporary AHPP Units on Previously Disturbed Land to Permanent AHPP Units | Alternative 3: Installation of Permanent AHPP Units on Previously Developed Land | Alternative 4: Installation of Permanent AHPP Units on Undeveloped Land | Alternative 5: Permanent Group Housing Sites on Previously Developed Group Sites | Alternative 6: Permanent Group Housing Sites on Undeveloped Land | Alternative 7: Demobilization of AHPP Units through Donations |
|---|---|---|---|---|---|---|---|
| **Wetlands** | No impacts on wetlands are anticipated. | Jurisdictional determinations would be conducted per site. If needed, Clean Water Act (CWA) Section 404 permitting would be coordinated with the U.S. Army Corps of Engineers (USACE), Mobile District. | The impacts on wetlands from this alternative would be similar to Alternative 2. | The impacts on wetlands from this alternative would be similar to Alternative 2. | The impacts on wetlands from this alternative would be similar to Alternative 2. | The impacts on wetlands from this alternative would be similar to Alternative 2. | If Federal or state funds are used for site preparation or units are placed on public land, the impacts on wetlands would be similar to those in Alternative 3 through 6. |
| **Biological Resources** | No impacts on biological resources are anticipated. | No additional impacts on biological resources are anticipated. | The impacts on biological resources from this alternative would be similar to Alternative 2. | Constructing AAHP units on undeveloped land would potentially impact biological resources. EMA would consult with Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP), U.S. Fish and Wildlife Services (USFWS) or National Oceanic and Atmospheric Administration (NOAA) Fisheries in an effort to minimize any impacts and to identify proposed mitigation. | The impacts on biological resources from this alternative would be similar to Alternative 2. | The impacts on biological resources from this alternative would be similar to Alternative 4. | If the PNP uses Federal or state funds or places units on public land, the impacts on biological resources associated with site preparation would be similar to those in Alternatives 3 through 6, whichever best describes the type of action utilized. |
| **Cultural Resources** | No impacts on cultural resources are anticipated. | No impacts to subsurface cultural resources would occur; however, historic viewsheds could be impacted under this alterative. Section 106 consultation with State Historic Preservation Officer (SHPO) would occur to minimize any potential impacts. | Impacts on cultural resources would be similar to Alternative 2. | There is a potential to affect subsurface cultural resources. If a proposed site is found to be within the viewshed of an historic property, an assessment of potential impacts would be conducted through viewshed analyses, on-site inspection, and photo inspection. Section 106 consultation with SHPO would occur to minimize any potential impacts. | The impacts on cultural resources from this alternative would be similar to Alternative 4. However, in addition historic structures could also be impacted. Section 106 consultation with SHPO would occur to minimize impacts. | The impacts on cultural resources from this alternative would be similar to Alternative 4. | If the PNP uses Federal or state funds for site preparation or places units on public land, the impacts on cultural resources associated with site preparation would be similar to those in Alternatives 3 through 6, whichever best describes the type of action utilized. |
| **Socioeconomics** | Displaced residents would continue to utilize FEMA travel trailers and mobile homes. Potential health effects could continue to affect displaced residents. | Beneficial socioeconomic effects would be anticipated. | Socioeconomic effects under this alternative would be similar to Alternative 2. However, some residents could be negatively impacted if longer commutes would occur. Some businesses could also suffer temporary losses due to a loss in local customer base. | Socioeconomic effects under this alternative would be similar to Alternative 3. | Socioeconomic effects under this alternative would be similar to Alternative 3. | Socioeconomic effects under this alternative would be similar to Alternative 3. | If the PNP uses Federal or state funds for site preparation or place units on public land, the impacts on socioeconomic resources associated with site preparation would be similar to those in Alternatives 3 through 6. |
| **Traffic and Transportation** | No impacts on traffic and transportation are expected. | Short-term impacts on traffic and transportation could occur during construction. However, FEMA would consult with MDOT to identify mitigation measures to lessen construction impacts. | Impacts to traffic and transportation are similar to Alternative 2. | Impacts under this alternative would be similar to Alternative 2; however, it is possible that residents could be adversely impacted due to a lack of public transportation. | Impacts on traffic and transportation would be similar to Alternative 2. | Impacts under this alternative would be similar to Alternative 4. | If PNP uses Federal or state funds for site preparation or places units on public land the impacts to traffic and transportation associated with site preparation would be similar to those in Alternatives 3 through 6, whichever best describes the type of action utilized. |

| | Alternative 1: No Action | Alternative 2: Conversion of Temporary AHPP Units on Previously Disturbed Land to Permanent AHPP Units | Alternative 3: Installation of Permanent AHPP Units on Previously Developed Land | Alternative 4: Installation of Permanent AHPP Units on Undeveloped Land | Alternative 5: Permanent Group Housing Sites on Previously Developed Group Sites | Alternative 6: Permanent Group Housing Sites on Undeveloped Land | Alternative 7: Demobilization of AHPP Units through Donations |
|---|---|---|---|---|---|---|---|
| **Hazardous Materials and Wastes** | No direct effects from hazardous materials and wastes are anticipated; however, indirect negative impacts to displaced residents from substandard housing could occur. | No additional use of hazardous materials is anticipated. | Impacts would be similar to those described in Alternative 2. | Impacts would be similar to those described in Alternative 2. | Impacts would be similar to those described in Alternative 2. | Impacts would be similar to those described in Alternative 2. | The impacts from hazardous materials would be limited to the donation or transfer unless the PNP uses Federal or state funds for site preparation or place units on public land. Then, the impacts from hazardous materials associated with site preparation would be similar to those in Alternatives 3 through 6, whichever describes the type of action the PNP would use to place the AHPP unit. |

# *SECTION 4.0*
# *AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION MEASURES*

# 4.0 Affected Environment, Environmental Consequences, and Mitigation Measures

The following subsections discuss the regulatory setting and the existing conditions for the following resource areas in Mississippi that may be impacted by the six action alternatives and one no action alternative considered:

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

This discussion is broad and regional in nature. It does not include a complete inventory of each resource, but does provide information to characterize those resources. This section also describes the potential impacts that each alternative could have on the identified resources. When mitigation is appropriate to avoid or reduce adverse impacts, these measures are also described. As a screening tool for evaluating potential impacts on resources for site-specific actions within the six coastal counties of Mississippi, the Mississippi Comprehensive Resource Management Plan (CRMP) and its Geographic Information System (GIS) database would be used (CRMP 2008).

## 4.1 Geology and Soils

### 4.1.1 Affected Environment

#### *4.1.1.1 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).

#### *4.1.1.2 Existing Conditions*

Near-subsurface geology in coastal Mississippi is the result of deposition and erosion of Holocene, Pleistocene, and Pliocene sediments during past sea level fluctuations due to glacial events on the North American continent. Surface deposits and soils are generally Pleistocene in age, and consist of near-shore sand beach deposits, sand and gravel river deposits, and intertidal bay silts and clays. In the northern portions of the coastal counties, the sands are exposed and provide recharge for potable water aquifers used farther south along the coastline (Oivanki 1998). There are five Major Land Resource Areas (MLRA) that encompass southern Mississippi. These are Alabama and Mississippi Blackland Prairie, Southern Mississippi Valley Loess, Southern Coastal Plain, Eastern Gulf Coast Flatwoods, and Gulf Coast Marsh (U.S. Department of Agriculture [USDA] 2006).

Prime Farmland

As illustrated in Table 1, the six coastal counties contain prime or unique farmland throughout the program area. The total acres depicted for each county can be classified as prime farmland, farmland of stateside interest, and prime farmland if drained. Due to the propensity of the soils in the program area to be designated as farmland, FEMA would work closely with the NRCS to determine each site specifics action's potential impact to important or unique farmland.

**Table 1. Total Acres of Prime or Unique Farmland within the Program Area**

| County | Soil Type | Acres |
|---|---|---|
| George County | Prime Farmland | 159,069 |
| | Farmland of Statewide Interest | |
| | Prime Farmland if Drained | |
| | | |
| Hancock County | Prime Farmland | 157,928 |
| | Farmland of Statewide Interest | |
| | Prime Farmland if Drained | |
| | | |
| Harrison County | Prime Farmland | 241,405 |
| | Farmland of Statewide Interest | |

**Table 1, continued**

| County | Soil Type | Acres |
|---|---|---|
| | Prime Farmland if Drained | |
| | | |
| Jackson County | Prime Farmland | 173,009 |
| | Farmland of Statewide Interest | |
| | Prime Farmland if Drained | |
| | | |
| Pearl River County | Prime Farmland | 208,032 |
| | Farmland of Statewide Interest | |
| | Prime Farmland if Drained | |
| | | |
| Stone County | Prime Farmland | 155,753 |
| | Farmland of Statewide Interest | |
| | Prime Farmland if Drained | |

Source: USDA 2008

### 4.1.2 Environmental Consequences and Mitigation Measures

**Alternative 1: No Action**

This alternative does not include any FEMA action. Therefore, FEMA would not be required to comply with the FPPA. Alternative 1 does not have the potential to affect geology, soils or prime or unique farmland.

**Alternative 2: Conversion of Temporary AHPP Units on Previously Disturbed Land to Permanent AHPP Units**

The installation of permanent pre-fabricated dwellings on previously developed temporary housing foundations and existing footprints does not have the potential to affect geology. Area soils would likely be disturbed when replacing existing, above-ground utilities with buried utilities. Soil loss could occur directly from disturbance or indirectly via wind or water. To minimize soil loss, the State would implement 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, to prevent soils from eroding and dispersing off-site. As these sites have been previously disturbed and converted for residential use, this alternative is not anticipated to impact prime, unique, or important farmlands.

Should a specific action have the potential to impact prime or unique farmland, FEMA would determine if the proposed site is within the limits of an incorporated city or if the site contains state-listed prime, unique, or important soils. If the site is within incorporated city limits or does

not contain prime, unique, or important soils, the action complies with FPPA and no further documentation is required. Otherwise, FEMA would prepare the appropriate sections of an AD1006 Farmland Conversion Impact Rating Form for the action, coordinate with the NRCS to determine the overall impact of the conversion, and document the results of FPPA compliance in the project's administrative record.

**Alternative 3: Permanent Installation of Pre-Fabricated Dwellings on Previously Developed Land**

The installation of pre-fabricated dwellings on previously developed land would not be deep enough to impact underlying geologic resources. Area soils would likely be disturbed during site preparation, installation of dwellings, and construction of auxiliary facilities. Soil loss could occur directly from disturbance or indirectly via wind or water erosion. The State would implement BMPs, as described in Alternative 2. As these sites have been previously disturbed and converted for residential use, this alternative is not anticipated to impact prime, unique, or important farmlands. Should a specific action have the potential to impact prime or unique farmland, FEMA would follow the FPPA compliance procedure as described in Alternative 2.

**Alternative 4: Permanent Installation of Pre-Fabricated Dwellings on Undeveloped Land**

Permanent installation of pre-fabricated dwellings on undeveloped land would not be deep enough to impact underlying geologic resources. The site would be cleared of all debris and vegetation, then grubbed, contoured, and graded, if necessary. Roads would be constructed for ingress and egress to and from the site. Area soils would likely be disturbed during site preparation, installation of dwellings, utilities, and other ancillary facilities. Soil loss could occur directly from disturbance or indirectly via wind or water erosion. The State would implement BMPs to mitigate soil loss and/or erosion as described in Alternative 2. The potential exists to convert agricultural land to other uses due to new construction. If prime or unique farmland is proposed for construction of new facilities, FEMA would follow the FPPA compliance procedure as described in Alternative 2.

**Alternative 5: Permanent Group Housing Sites on Previously Developed Group Sites**

Project activities for the creation of group housing sites on pre-existing group/commercial sites would not be deep enough to impact underlying geologic resources. Projects under this alternative may involve ground disturbing activities, including the demolition of former housing structures, slab/foundation removal, debris removal, and the refurbishment of existing utilities

(*e.g.,* utility lines, septic systems, water wells, *etc*.) to accommodate the proposed action. Additional ground disturbing activities may include grubbing, contouring, and grading of the site. If paved or gravel access and circulation roads do not yet exist, roads would be constructed for ingress and egress to and from the site and within the site for traffic circulation.

Area soils would likely be disturbed during site preparation, installation of dwellings, utilities, and other ancillary facilities. Soil loss could occur directly from disturbance or indirectly via wind or water erosion. The State would implement BMPs, as described in Alternative 2. As these sites have been previously disturbed and converted for residential or commercial use, this alternative is not anticipated to impact prime, unique, or important farmlands. Should a specific action have the potential to impact prime or unique farmland, FEMA would follow the FPPA compliance procedure as described in Alternative 2.

**Alternative 6: Permanent Group Housing Sites on Undeveloped Land**

Construction activities for the creation of group housing sites on undeveloped land would not be deep enough to impact underlying geologic resources.

The site would be cleared of all debris and vegetation, then grubbed, contoured, and graded, if necessary. Roads would be constructed for ingress and egress to and from the site. Area soils would likely be disturbed during site preparation, installation of dwellings, utilities, and other ancillary facilities. Soil loss could occur directly from disturbance or indirectly via wind or water erosion. The State would implement BMPs, as described in Alternative 2. The potential exists, due to new construction, to convert agricultural land to other uses. If farmland is proposed for construction of new facilities, FEMA would follow the FPPA compliance procedure as described in Alternative 2.

**Alternative 7: Demobilization of AHPP Units through Donations**

If the PNP does not require Federal or state assistance, the analysis of impacts will be limited to the donation or transfer of the unit only, as the State and FEMA would have no involvement in the project's site selection or development. The donation or transfer of the unit would not have the potential to affect geology or soils. If the PNP uses Federal or state funds for site preparation or places units on public land, the proposed action and their associated impacts on geology and soils would be similar to those discussed in Alternatives 3 through 6.

## 4.2 Air Quality

### 4.2.1 Affected Environment

#### *4.2.1.1 Regulatory Setting*

The Clean Air Act (CAA) requires that the U.S. Environmental Protection Agency (USEPA) establish primary and secondary National Ambient Air Quality Standards (NAAQS) for air pollutants that are considered harmful to the public and environment. Primary NAAQS are established at levels necessary, with an adequate margin of safety, to protect the public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Similarly, secondary NAAQS specify the levels of air quality determined appropriate to protect the public welfare from any known or anticipated adverse effects associated with air contaminants. The pollutants for which USEPA has established ambient concentration standards are called criteria pollutants, and include ozone ($O_3$), particulates that have aerodynamic diameters of 10 micrometers or less (PM-10), fine particles with aerodynamic diameters less than 2.5 micrometers, (PM-2.5), carbon monoxide (CO), nitrogen dioxide ($NO_2$), sulfur dioxide ($SO_2$), and lead (Pb).

The CAA also requires USEPA to assign a designation to each area of the Nation regarding compliance with the NAAQS. The USEPA categorizes the level of compliance or noncompliance as follows: attainment (area currently meets the NAAQS), maintenance (area currently meets the NAAQS but has previously been out of compliance), and nonattainment (area currently does not meet the NAAQS) (USEPA 2008a).

In addition, USEPA has delegated its CAA enforcement authority in Mississippi to the Mississippi Department of Environmental Quality (MDEQ), Air Quality Division. The MDEQ air quality standards regulation APC-S-4 are identical to the Federal standards, except that MDEQ also has odor standards that state that “there shall be no odorous substances in the ambient air in concentrations sufficient to adversely and unreasonably: (1) affect human health and well-being; (2) interfere with the use or enjoyment of property; or (3) affect plant or animal life.” (MDEQ 2002).

#### *4.2.1.2 Existing Conditions*

MDEQ has a network of monitoring stations throughout Mississippi that measure and record ambient air quality. Based on these measurements, Mississippi is in attainment for all NAAQS.

As a result, transportation and General Conformity requirements do not apply to Federally-funded or-approved activities in the state.

### 4.2.2 Environmental Consequences and Mitigation Measures

**Alternative 1: No Action**

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.

**Alternative 2: Conversion of Temporary AHPP Units on Previously Disturbed Land to Permanent AHPP Units**

Under this alternative, short-term impacts to air quality could occur during construction. 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. In addition, periodic watering of active construction areas, particularly areas close to any nearby sensitive receptors (*e.g.,* hospitals, senior citizen homes, and schools), would reduce temporary impacts from fugitive dust.

FEMA would consult with USEPA and MDEQ regarding potential long-term or significant impacts on air resources in an effort to identify mitigation measures that may be implemented to ensure that the site-specific project does not impact air resources.

**Alternative 3: Permanent Installation of Pre-Fabricated Dwellings on Previously Developed Land**

Under this alternative, ground disturbing activities, such as demolition, slab or foundation removal and installation of utilities, would occur. These activities would generate temporary increases in equipment exhaust emissions and fugitive dust similar to those discussed in Alternative 2.

Projects may require the installation of auxiliary facilities *(e.g.,* generators, drainage systems, *etc*.) during the construction and installation of AHPP housing. When in operation, these auxiliary facilities may result in increased emissions of criteria pollutants. The State would ensure that all equipment meets state and Federal standards and that appropriate permits from

the MDEQ are obtained. The MDEQ permitting process would ensure that any equipment requiring a permit has a negligible impact on air quality. Any stationary equipment exempt from permitting requirements is expected to be a negligible source of emissions. When the single unit dwellings are in use, increased emissions from the AHPP occupants' personally owned vehicles (POV) are not expected to adversely affect regional air quality.

FEMA would consult with USEPA and MDEQ regarding potential long-term or significant impacts on air resources in an effort to identify mitigation measures that may be implemented to ensure that the site-specific project does not impact air resources.

**Alternative 4: Permanent Installation of Pre-Fabricated Dwellings on Undeveloped Land**

Under this alternative, proposed sites would be cleared of all debris and vegetation, then grubbed, contoured, and graded, as necessary. Roads would be constructed for ingress and egress to and from the site and within the site for traffic circulation. These activities would generate temporary increases in equipment exhaust emissions and fugitive dust, similar to those discussed in Alternative 2. Site specific projects may also require the installation of auxiliary facilities (*e.g.,* generators, lift stations, drainage systems, *etc.*) during the construction and installation of AHPP housing. These activities would generate negligible increases in equipment exhaust emissions, similar to those discussed in Alternative 3.

FEMA would consult with USEPA and MDEQ regarding potential long-term or significant impacts on air resources in an effort to identify mitigation measures that may be implemented to ensure that the project does not adversely impact air resources.

**Alternative 5: Permanent Group Housing Sites on Previously Developed Group Sites**

Under this alternative, proposed sites may have either existing infrastructure or ground disturbance to at least the depth that these infrastructure items would be installed. Construction of new roads and infrastructure items would generate temporary increases in equipment exhaust emissions and fugitive dust, similar to those discussed in Alternative 2. Projects may also require the installation of auxiliary facilities (*e.g.,* generators, lift stations, drainage systems, *etc.*) during the construction and installation of AHPP housing. These activities would generate negligible increases in equipment exhaust emissions, similar to those discussed in Alternative 3.

FEMA would consult with USEPA and MDEQ regarding potential long-term or significant impacts on air resources in an effort to identify mitigation measures that may be implemented to ensure that the project does not impact air resources.

**Alternative 6: Permanent Group Housing Sites on Undeveloped Land**

Under this alternative, proposed sites would require full development of infrastructure (*i.e.,* roads, utilities, *etc.*). Ground disturbing activities would include clearing the sites of any debris, grubbing, contouring, and grading the site. Development of these sites would generate temporary increases in equipment exhaust emissions and fugitive dust, similar to those discussed in Alternative 2. Projects may also require the installation of auxiliary facilities (*e.g.,* generators, lift stations, drainage systems, *etc.*) during the construction and installation of AHPP housing. These activities would generate negligible increases in equipment exhaust emissions, similar to those discussed in Alternative 3.

FEMA would consult with USEPA and MDEQ regarding potential long-term or significant impacts on air resources in an effort to identify mitigation measures that may be implemented to ensure that the project does not impact air resources.

**Alternative 7: Demobilization of AHPP Units through Donations**

If the PNP does not require Federal or state assistance, the analysis of impacts will be limited to the donation or transfer of the unit only, as the State and FEMA would have no involvement in the project's site selection or development. The donation or transfer of the unit would not have the potential to affect air quality. If the PNP uses Federal or state funds for site preparation or places units on public land, the proposed action and their associated impacts on air quality would be similar to those discussed in Alternatives 3 through 6.

## 4.3 Water Quality

### 4.3.1 Affected Environment

#### *4.3.1.1 Regulatory Setting*

The Clean Water Act (CWA) establishes the basic structure for regulating pollutant discharges to navigable waters of the U.S. 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 Section 402 and permits for dredged or fill material under Section 404 (USEPA 2008b).

The U.S. Army Corps of Engineers (USACE) is charged with regulating the disposal of dredged and fill materials under Section 404 of the CWA. A Section 404 permit from the USACE must be obtained for any dredge or fill activities within jurisdictional waters of the U.S. During the permit review process, the USACE determines the type of permit appropriate for the proposed action. Two types of permits are issued by the USACE: (1) General Permits, issued on a state, regional, and nationwide basis and covering a variety of activities, including minimal individual and cumulative adverse affects, and (2) Individual Permits, issued for a case-specific activity (USACE 1998).

Section 401 of the CWA specifies that states must certify that any activity subject to a permit issued by a Federal agency, such as a CWA Section 404 permit, meets all state water quality standards. Water quality certification is also necessary when a project qualifies for a General Permit, even if the activity does not need to be reported to the USACE (USEPA 2008b).

The Wild and Scenic Rivers Act (WSRA) preserves selected rivers in a free-flowing condition and protects their local environments. These rivers possess outstanding scenic, recreational, geologic, fish and wildlife, historic, or cultural values.

The Coastal Zone Management Act (CZMA) of 1972 authorizes the Coastal Zone Management Program (CZMP), which is a Federal-state partnership dedicated to comprehensive management of the nation's coastal resources. By making Federal funds available, the law 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 or state agency whose activities directly affect the coastal zone must, to the maximum extent practicable, be consistent with approved state management programs. The Mississippi Department of Marine Resources (MDMR) supervises CZMA activities within the Mississippi Coastal Zone, which encompasses the three of the six counties (Hancock, Harrison, and Jackson). FEMA must conduct its activities in a manner consistent with the Federally-approved Mississippi Coastal Program (MCP).

#### *4.3.1.2 Existing Conditions*

The program area extracts groundwater from Holocene, Pleistocene and Pliocene aquifers ranging from approximately 120 feet below ground surface (bgs) to over 600 feet bgs. Groundwater supplies 100 percent of the domestic water used in the six coastal counties of Mississippi, and over 80 percent of the industrial water used (Oivanki 1998). Near-surface aquifers are generally too salty for domestic or industrial use. There is no current shortage or projected shortage of groundwater supplies along the Mississippi Gulf Coast.

The only Wild and Scenic River in Mississippi is a 21 mile reach of Black Creek from Fairley Bridge Landing upstream to Moody's Landing within the De Soto National Forest near Wiggins, Mississippi. This reach is designated as “scenic” meaning that it is undeveloped, occasionally accessible by road, with shorelines or watersheds largely undeveloped. The lower Wolf River in Harrison County is designated as a State Scenic River.

### 4.3.2 Environmental Consequences and Mitigation Measures

**Alternative 1: No Action**

This alternative does not include any FEMA actions. Therefore, FEMA would not be required to comply with the CWA, CZMA, or WSRA. Alternative 1 does not have the potential to affect water quality.

**Alternative 2: Conversion of Temporary AHPP Units on Previously Disturbed Land to Permanent AHPP Units**

Under this alternative, Mississippi Cottages would be made permanent by replacing temporary foundations at the same location and footprint. Minor, short-term impacts to the downstream surface waters may occur during the construction activities due to soil erosion. Existing stormwater drains and ditches located within or adjacent to the proposed project site would be removed and reconfigured, to provide improved drainage and accommodate unit placement. Construction sites greater than 1 acre require a Stormwater Pollution Prevention Plan (SWPPP) as part of the NPDES permit process that identifies BMPs for protection of water quality within ephemeral and perennial streams. To reduce impacts to the downstream surface waters, the State would implement appropriate BMPs, such as installing silt fences and revegetating bare soils. The State would be required to obtain an approved SWPPP and NPDES permit prior to the start of construction.

Project activities under this alternative are not anticipated to impact wetlands, wild and scenic rivers or the Mississippi Coastal Zone. In a letter dated July 3, 2008, MDMR stated no objections to this alternative in the coastal zone (Appendix A).

**Alternative 3: Permanent Installation of Pre-Fabricated Dwellings on Previously Developed Land**

Site preparation and construction of roads and driveways have the potential to increase impervious surfaces, reduce groundwater recharge, and adversely affect water quality through the transmission of sediment, debris, oils, hazardous substances, and effluent into surface waters. During construction, the State would mitigate these impacts by applying BMPs as described in Alternative 2 as well as the implementation of a NPDES, if needed, to reduce transport of sediment, debris, oils, and hazardous substances. Sewage would be treated at a licensed WWTP or an engineered septic system. Stormwater would be conveyed to the municipal stormwater system or treated on-site by retention ponds. Finally, FEMA would consult with appropriate agencies regarding NPDES permitting, water quality certification, and CZMA compliance for construction and operation of ancillary facilities. For activities not exempt from NPDES permitting or water quality certification or not consistent with the State MCP, FEMA would document permitting and other requirements to comply with CWA and CZMA in the project's administrative record.

Project activities under this alternative are not anticipated to impact wetlands, wild and scenic rivers or the Mississippi Coastal Zone. Should any site-specific action encounter the lower Wolf River, a State Scenic River, FEMA would coordinate with Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP). In a letter dated July 3, 2008, MDMR stated no objections to this alternative in the coastal zone (Appendix A).

**Alternative 4: Permanent Installation of Pre-Fabricated Dwellings on Undeveloped Land**

This alternative would have similar impacts and conditions on water quality as those described in Alternative 3. In a letter dated July 3, 2008, MDMR stated project activities under this alternative where impacts are anticipated will require consultation with MDMR and the USACE and an application form should be submitted for review of the proposed project (Appendix A). FEMA would coordinate with MDMR and USACE on projects where wetland impacts are anticipated and results would be documented in the project's administrative record.

**Alternative 5: Permanent Group Housing Sites on Previously Developed Group Sites**

This alternative would have similar impacts and conditions on water quality as those described Alternative 3.

**Alternative 6: Alternative 6: Permanent Group Housing Sites on Undeveloped Land**

This alternative would have similar impacts and conditions on water quality as those described Alternatives 3 and 4.

**Alternative 7: Demobilization of AHPP Units through Donations**

If the PNP does not require Federal or state assistance, the analysis of impacts will be limited to the donation or transfer of the unit only, as the State and FEMA would have no involvement in the project's site selection or development. The donation or transfer of the unit would not the potential to affect water quality. If the PNP uses Federal or state funds for site preparation or places units on public land, the proposed action and their associated impacts on water quality would be similar to those discussed in Alternatives 3 through 6.

## 4.4 Floodplains

### 4.4.1 Affected Environment

#### *4.4.1.1 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. The critical action floodplain is defined as the 500-year floodplain (0.2 percent chance floodplain) (USEPA 1979).

Flood zones are land areas identified by FEMA that describe the land area in terms of its risk of flooding. A flood insurance rate map (FIRM) is a map created by the National Flood Insurance program (NFIP) for floodplain management and insurance purposes. Digital versions of these maps are called DFIRMs. A FIRM would generally show a community's BFE, flood zones, and floodplain boundaries. However, maps are constantly being updated due to changes in geography, construction and mitigation activities, and meteorological events (FEMA 2008a).

EO 11988 requires that Federal agencies proposing activities in a 100-year floodplain must consider alternatives to avoid adverse effects and incompatible development in the floodplain. In accordance with 44 CFR Part 9, critical actions, such as the development of hazardous waste facilities, hospitals, or utility plants, must be undertaken outside of a 500-year floodplain. If no practicable alternatives exist to siting an action in the floodplain, the action must be designed to minimize potential harm to or within the floodplain. Furthermore, a notice must be publicly circulated explaining the action and the reasons for siting in the floodplain. 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.

#### *4.4.1.2 Existing Conditions*

FEMA has developed Advisory Base Flood Elevation (ABFE) Maps based on a flood frequency analysis completed by FEMA that update the flood risk data with information on storms that have occurred in the past 25+ years, including (but not limited to) Hurricane Katrina. FEMA currently utilizes the ABFE maps in conjunction with FIRMs to determine elevation requirements for planning and redevelopment projects. FEMA requires that communities adhere to the elevation requirements established by ABFE (FEMA 2006).

FEMA, Mississippi Emergency Management Agency (MEMA), and MDEQ have released the new or revised flood hazard and risk information to communities in the form of Preliminary DFIRMs and Flood Insurance Study (FIS) reports. This guidance is applicable to the 14 communities in Hancock, Harrison, and Jackson counties affected by Hurricane Katrina. The new DFIRMS would ultimately be used to determine building elevation requirements instead of the ABFEs (FEMA 2008b).

### 4.4.2 Environmental Consequences and Mitigation Measures

**Alternative 1: No Action**

This Alternative does not include any FEMA actions. Therefore, FEMA would not be required to comply with EO 11998. Alternative 1 does not have the potential to affect floodplains.

**Alternative 2: Conversion of Temporary AHPP Units on Previously Disturbed Land to Permanent AHPP Units**

Under this alternative, existing temporary units would be made permanent by replacing temporary foundations at the same location and footprint with permanent foundations, and elevating the units at or above the ABFE or highest elevation practicable. To minimize any potential impacts to the floodplain, projects located with the 100-year floodplain would elevate units with open works construction (walls, columns, piers, piles, *etc*.) rather than the use of fill. In accordance with EO 11988, FEMA will complete the Eight-Step Planning Process to identify, minimize, and mitigate floodplain impacts for projects located within the 100-year floodplain, where no practicable alternatives exist. FEMA would maintain all floodplain documentation in the project's administrative record.

Currently, over 1,000 AHPP temporary units reside within the CHHA; (Flood zone V). Temporary units in the CHHA would not be eligible for conversion to permanent housing due to the potential risk to public health and safety and the repetitive loss to property resulting from further flooding events. However, temporary units currently in the CHHA may be sold to the public or relocated outside the CHHA, upon approval from the State.

**Alternative 3: Permanent Installation of Pre-Fabricated Dwellings on Previously Developed Land**

Under this alternative, AHPP units would be installed on previously developed land and elevated at or above the ABFE or highest elevation practicable. To minimize potential impacts to the floodplain, site-specific projects located with the 100-year floodplain would elevate units with open works construction (walls, columns, piers, piles, *etc.*) rather than the use of fill. In accordance with EO 11988, FEMA would complete the Eight-Step Planning Process to identify, minimize, and mitigate floodplain impacts for projects located within the 100-year floodplain, where no practicable alternatives exist. FEMA would maintain all floodplain documentation in the project's administrative record. No project under this alternative would be located within the CHHA.

**Alternative 4: Permanent Installation of Pre-Fabricated Dwellings on Undeveloped Land**

Under this alternative, AHPP units would be installed on undeveloped land. To minimize potential impacts to floodplains, this alternative would adhere to the same elevation requirements and conditions as described in Alternative 3. Projects having the potential to significantly impact floodplains would require FEMA to prepare a SEA, tiered to this PEA.

**Alternative 5: Permanent Group Housing Sites on Previously Developed Group Sites**

Under this alternative, group housing would be installed on pre-existing group/commercial sites. To minimize potential impacts to floodplains, this alternative would adhere to the same elevation requirements and conditions as described in Alternative 2. Projects having the potential to significantly impact floodplains would require FEMA to prepare a SEA, tiered to this PEA.

**Alternative 6: Permanent Group Housing Sites on Undeveloped Land**

Under this alternative, group housing would be installed on undeveloped land. To minimize potential impacts to floodplains, this alternative would adhere to the same elevation requirements and conditions as described in Alternative 2. Projects having the potential to significantly impact floodplains would require FEMA to prepare a SEA, tiered to this PEA.

**Alternative 7: Demobilization of AHPP Units through Donations**

If the PNP does not require Federal or state assistance, the analysis of impacts will be limited to the donation or transfer of the unit only, as the State and FEMA would have no involvement in the project's site selection or development. The donation or transfer of the unit would not have the potential to affect floodplains. If the PNP uses Federal or state funds for site preparation or places units on public land, the proposed action and their associated impacts on floodplains would be similar to those discussed in Alternatives 3 through 6.

## 4.5 Wetlands

### 4.5.1 Affected Environment

#### *4.5.1.1 Regulatory Setting*

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 same Eight-Step Planning Process is used to evaluate the potential effects of an action on wetlands. As discussed in the CWA subsection above, formal legal protection of jurisdictional wetlands is promulgated through Section 404 of the CWA. A permit from the USACE may be required if an action has the potential to affect wetlands.

#### *4.5.1.2 Existing Conditions*

The National Wetlands Inventory is a resource provided by the USFWS which provides wetland information by digital data files. Currently, based upon the National Wetland Inventory, there

are approximately 1.7 million acres of coastal and upland wetlands within the 6-county program area (CRMP 2008).

### 4.5.2 Environmental Consequences and Mitigation Measures

**Alternative 1: No Action**

This alternative does not include any FEMA actions. Therefore, FEMA would not be required to comply with EO 11990. Alternative 1 does not have the potential to affect wetlands or waters of the U.S.

**Alternative 2: Conversion of Temporary AHPP Units on Previously Disturbed Land to Permanent AHPP Units**

Under this alternative, existing temporary units would be made permanent by replacing temporary foundations at the same location and footprint with permanent foundations. As project activities would occur within a previously disturbed area, this alternative is not anticipated to impacts wetlands or waters of the U.S. For projects having the potential to impact wetland or waters of the U.S., FEMA would delineate the proposed project site to identify the presence of jurisdictional wetlands and waters of the U.S. Should wetlands or waters of the U.S. be identified and their impacts considered unavoidable, early coordination with the regulatory section of the local USACE district, USEPA, the county NRCS, and other appropriate agencies would be completed prior to the initiation of the construction activities. Applicable CWA Section 404/401 permit procedures would be completed prior to any work in these areas and compensatory mitigation implemented, as appropriate. In a letter dated July 3, 2008, MDMR stated project activities where wetland impacts are anticipated will require consultation with MDMR and the USACE and an application form should be submitted for review of the proposed project (Appendix A). FEMA would coordinate with MDMR and USACE on projects where wetland impacts are anticipated and results would be documented in the project's administrative record.

**Alternative 3: Permanent Installation of Pre-Fabricated Dwellings on Previously Developed Land**

Potential impacts and project conditions to minimize impacts to wetlands and waters of the U.S. for Alternative 3 would be similar to those discussed in Alternative 2.

**Alternative 4: Permanent Installation of Pre-Fabricated Dwellings on Undeveloped Land**

Under Alternative 4, project activities have the potential to impacts to wetlands and waters of the U.S. Potential impacts and project conditions to minimize potential impacts to wetlands and waters of the U.S. for Alternative 4 would be similar to those discussed in Alternative 2.

**Alternative 5: Permanent Group Housing Sites on Previously Developed Group Sites**

Potential impacts and project conditions to minimize impacts to wetlands and waters of the U.S. for Alternative 5 would be similar to those discussed in Alternative 2.

**Alternative 6: Permanent Group Housing Sites on Undeveloped Land**

Under Alternative 6, project activities have the potential to impacts to wetlands and waters of the U.S. Potential impacts and project conditions to minimize potential impacts to wetlands and waters of the U.S. for Alternative 6 would be similar to those discussed in Alternative 2.

**Alternative 7: Demobilization of AHPP Units through Donations**

If the PNP does not require Federal or state assistance, the analysis of impacts will be limited to the donation or transfer of the unit only, as the State and FEMA would have no involvement in the project's site selection or development. The donation or transfer of the unit would not be anticipated to affect wetlands. If the PNP uses Federal or state funds for site preparation or places units on public land, the proposed action and their associated impacts on wetlands would be similar to those discussed in Alternatives 3 through 6.

## 4.6 Biological Resources

### 4.6.1 Affected Environment

#### *4.6.1.1 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.

#### *4.6.1.2 Existing Conditions*

Mississippi has 32 animal species and four plant species listed as Federally threatened or endangered. Table 2 provides a list of threatened and endangered species occurring in the program area (USFWS 2006).

**Table 2. Threatened and Endangered Species Occurring in the Program Area**

| Scientific Name | Common Name | Status | Counties |
|---|---|---|---|
| *Ursa americanus lutelus* | Louisiana black bear | T | Jackson, Pearl River, George, Hancock, Harrison, Stone |
| *Trichechus manatus* | West Indian manatee | E | Jackson, Hancock, Harrison |
| *Haliaeetus leucocephalus* | bald eagle | DL | Jackson, Hancock, Harrison |
| *Pelecanus occidentalis* | brown pelican | E | Jackson, Hancock, Harrison |
| *Grus canadensis pulla* | Mississippi sandhill crane | ECH | Jackson |
| *Charadrius melodius* | piping plover | TCH | Jackson, Hancock, Harrison |
| *Picoides borealis* | red-cockaded woodpecker | E | Jackson, George, Harrison, Stone |
| *Pituophis malanoleucus lodingi* | black pine snake | C | Jackson, Pearl River, George, Harrison, Stone |
| *Drymarchon corais cooperi* | Eastern indigo snake | T | Jackson, Harrison, Stone |
| *Gopherus polyphemus* | gopher tortoise | T | Jackson, Pearl River, George, Hancock, Harrison, Stone |

**Table 2, continued**

| Scientific Name | Common Name | Status | Counties |
|---|---|---|---|
| *Pseudemys alabamensis* | Alabama red-bellied turtle | E | Jackson, Harrison |
| *Chelonia mydas* | green turtle | T | Jackson, Hancock, Harrison |
| *Lepidochelys kempii* | Kemp's ridley turtle | E | Jackson, Hancock, Harrison |
| *Caretta caretta* | loggerhead turtle | T | Jackson, Hancock, Harrison |
| *Graptemys flavimaculata* | yellow-blotched map turtle | T | Jackson, George, Stone |
| *Graptemys oculifera* | ringed map turtle | T | Pearl River |
| *Rana capito sevosa* | Mississippi gopher frog | DPS | Jackson, Harrison |
| *Acipenser oxyrhynchus destoi* | gulf sturgeon | TCH | Jackson, Pearl River, George, Hancock, Harrison |
| *Percina aurora* | pearl darter | C | Jackson, George |
| *Potamilus inflatus* | inflated heelsplitter | T | Pearl River, Hancock |
| *Isoetes louisianensis* | Louisiana quillwort | E | Jackson, Pearl River, George, Hancock, Harrison, Stone |

E = endangered, T = threatened, C = candidate, DL = delisted, ECH or TCH = listed with critical habitat, DPS = distinct vertebrate population

Other biological resource centers such as Grand Bay National Estuarine Research Resource, Grand Bay National Wildlife Refuge, and Mississippi Sandhill Crane National Wildlife Refuge are located within Jackson County, the area of participation for the program.

In a letter dated May 27, 2008 was provided initial comments from USFWS in which stated that any alternative which does not change an existing footprint should not affect protected species; however, the alternatives that would alter undeveloped land, expand an existing footprint, or create a new footprint may affect protected species and would require further consultation (Appendix A). USFWS has determined that the following Federally listed species and/or their habitats should be considered when permanently installing Mississippi Cottages.

- Gopher tortoise (*Gopherus polyphemus*), threatened
- Red-cockaded woodpecker (*Picoides borealis*), endangered
- Louisiana quillwort (*Isoetes louisianensis*), endangered
- Black pine snake (*Pituophis melanoleucus* spp. *lodingi*), candidate
- Alabama red-bellied turtle (*Pseudemys alabamensis*), endangered
- Louisiana black bear (*Ursus a. luteolus*), Federally listed threatened
- Mississippi gopher frog (*Rana sevosa*), endangered
- Gulf sturgeon (*Acipenser oxyrhynchus desotoi*), threatened
- Yellow-blotched map turtle (*Graptemys oculifera*), threatened
- Brown pelican (*Pelecanus occidentalis*), endangered
- Piping plover (*Charadrius melodus*) critical habitat, threatened
- Mississippi sandhill crane (Grus canadensi pulla) and critical habitat, endangered
- Bald eagle (*Haliaeetus leucocephalus*), delisted

Alternatives 4 and 6 described in the following consequences and mitigation measures section (4.6.2) would require further consultation as noted in the May 27, 2008 USFWS letter (Appendix A).

### 4.6.2 Environmental Consequences and Mitigation Measures

**Alternative 1: No Action**

This alternative does not include any FEMA action. Therefore, FEMA would not be required to consult with USFWS, NOAA Fisheries, or MDWFP 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. Alternative 1 does not have the potential to affect sensitive biological resources.

**Alternative 2: Conversion of Temporary AHPP Units on Previously Disturbed Land to Permanent AHPP Units**

In this alternative, existing temporary Mississippi Cottages would be made permanent by replacing temporary foundations at the same location and footprint and replacing existing, above-ground utilities with in-ground utilities. These sites are previously disturbed and would not have the potential to affect sensitive biological resources. Construction on previously developed land would not impact habitats that could support migratory birds.

**Alternative 3: Permanent Installation of Pre-Fabricated Dwellings on Previously Developed Land**

Installing AHPP dwellings on previously developed land would not impact any sensitive vegetation community or protected species habitat. Construction on previously developed land would not be expected to impact habitats that could support migratory birds. FEMA would consult with USFWS and MDWFP regarding potential impacts on biological resources to identify mitigation measures that may be implemented to ensure that a project does not adversely impact sensitive biological resources.

**Alternative 4: Permanent Installation of Pre-Fabricated Dwellings on Undeveloped Land**

The site preparation and installation of pre-fabricated dwellings on undeveloped land has the potential to adversely affect sensitive biological resources. FEMA would evaluate the locations of the proposed housing site and all auxiliary facilities, such as stormwater retention ponds and WWTP facilities, to determine the potential for the project to affect threatened and endangered species or their habitats, migratory birds, natural waterways, or EFH. FEMA would consult with

USFWS and MDWFP regarding potential impacts on sensitive biological resources to identify mitigation measures that may be implemented to ensure that the project does not impact biological resources.

If FEMA determines that the project has no potential to affect threatened and endangered species or their habitats, migratory birds, natural waterways, or EFH, then the project would be in compliance with MBTA, FWCA, Sustainable Fisheries Act, and Section 7 of the ESA; and no further documentation would be required. If FEMA determines that the project has the potential to affect threatened or endangered species or their habitats, migratory birds, natural waterways, or EFH, then FEMA would consult with USFWS or NOAA Fisheries to minimize any impacts and to identify additional proposed mitigation. If USFWS or NOAA Fisheries determine that additional consultation is required under MBTA, FWCA, Sustainable Fisheries Act, or Section 7 of the ESA, the resulting consultation would be documented, and to ensure full NEPA compliance, a SEA would be developed.

**Alternative 5: Permanent Group Housing Sites on Previously Developed Group Sites**

Under Alternative 5, the sites would be previously developed and either have existing infrastructure or ground disturbance to at least the depth that these infrastructure would be installed. This action would include the construction of new roads and infrastructure. Installing AHPP units on previously developed land would not impact any sensitive vegetation community or protected species habitat. Construction on previously developed land is not expected to impact habitats that support migratory birds. FEMA would consult with USFWS and MDWFP regarding potential impacts on biological resources in efforts to identify mitigation measures that could be implemented to ensure that a project does not impact biological resources.

**Alternative 6: Permanent Group Housing Sites on Undeveloped Land**

Under Alternative 6, the sites would require full development of infrastructure (*i.e.,* roads, utilities, *etc*.). Construction of new roads and infrastructure and the site preparation and installation of permanent group housing on undeveloped land have the potential to affect sensitive biological resources. FEMA would consult with USFWS and MDWFP regarding potential impacts on biological resources to identify mitigation measures that may be implemented to ensure that the project does not adversely impact sensitive biological resources.

potential for the project to affect threatened and endangered species or their habitats, migratory birds, natural waterways, or EFH. If FEMA determines that the project would have no potential to affect threatened and endangered species or their habitats, migratory birds, natural waterways, or EFH, then the project would be in compliance with Section 7 of the ESA, MBTA, FWCA, and the Sustainable Fisheries Act, and no further documentation would be required.

It is possible that an endangered, threatened, or otherwise sensitive species could occur in the project area. However, at this time, FEMA is not sure where each AHPP site would be located. Electric substations, WWTP, septic tanks and other auxiliary facilities have the potential to impact these species if the species or critical habitat occurs within the site area. If there is a potential for a species or critical habitat to occur within an individual site, FEMA would follow the procedure described in Alternative 4.

**Alternative 7: Demobilization of AHPP Units through Donations**

If the PNP does not require Federal or state assistance, the analysis of impacts will be limited to the donation or transfer of the unit only, as the State and FEMA would have no involvement in the project's site selection or development. The donation or transfer of the unit would not have the potential to affect biological resources. If the PNP uses Federal or state funds for site preparation or places units on public land, the proposed action and their associated impacts on biological resources would be similar to those discussed in Alternatives 3 through 6.

## 4.7 Cultural Resources

### 4.7.1 Affected Environment

#### *4.7.1.1 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, Mississippi State Historic Preservation Officer (SHPO), and MEMA have executed a Programmatic Agreement (PA) to streamline the Section 106 review process. A copy of the PA for Mississippi is provided on the FEMA website site at http://www.fema.gov/plan/ehp/hp/programmatic.shtm.

#### *4.7.1.2 Existing Conditions*

FEMA has identified approximately 170 National Register Historic Districts (NRHD) in Mississippi, and identified approximately 1,200 individual structures that are registered in the National Registry for the State. The agency is working closely with the SHPO, Mississippi Department of Archives and History (MDAH) to identifying historic properties in the NRHP or eligible for the NRHP that may be affected by the AHPP housing actions.

The Mississippi Band of Choctaw Indians has historical and cultural ties to areas in the program area. FEMA would work with the Choctaw Tribe's Tribal Historic Preservation Officer (THPO) to identify religious and culturally significant properties that may be impacted by the AHPP housing actions.

### 4.7.2 Environmental Consequences and Mitigation Measures

**Alternative 1: No Action**

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.

**Alternative 2: Conversion of Temporary AHPP Units on Previously Disturbed Land to Permanent AHPP Units**

Replacing temporary foundations with permanent foundations at the same location and footprint and replacing existing above-ground utilities with in-ground utilities are not anticipated to affect cultural resources. The placement of permanent AHPP units may have the potential to visually affect nearby historic properties or districts.

To ensure compliance with Section 106 of the NHPA, FEMA would evaluate each project for the potential to affect historic structures and cultural resources. FEMA would determine if the scope of work falls under the Programmatic Allowances. Per Stipulations III through VI of the PA and in concert with Programmatic Allowances I.A., I.B. and III of the PA, FEMA has no requirement to consult with SHPO for these actions, and compliance with Section 106 of the NHPA is met with no further documentation. For those actions that do not fall within the Programmatic Allowances, FEMA would follow the procedures in Stipulation VI of the PA. If FEMA finds that an undertaking may affect a historic property, the agency would document the consultation required including stipulated mitigation measures in the project's administrative record. Projects having the potential to adversely affect historic properties would be subject to a SEA.

In the event that archeological deposits, including any Native American pottery, stone tools, or human remains, are uncovered, the project would be halted. The State would stop all work immediately in the vicinity of the discovery and take reasonable measures to avoid or minimize harm to the finds. All archeological findings would be secured and access to the sensitive area restricted. The State 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.

**Alternative 3: Permanent Installation of Pre-Fabricated Dwellings on Previously Developed Land**

Site specific projects under this alternative have the potential to affect historic properties. Projects activities may involve ground disturbing activities, including the demolition of the former housing structure, slab/foundation removal, open works construction (*e.g.,* walls, columns, piers, piles, *etc.*), and the refurbishment of existing utilities (*e.g.,* utility lines, septic systems, water wells, *etc*.). In addition, the placement of permanent AHPP units may have the potential to visually affect nearby historic properties or districts. To ensure compliance with Section 106 of the NHPA, FEMA would follow the project review process and conditions as discussed in Alternative 2.

**Alternative 4: Permanent Installation of Pre-Fabricated Dwellings on Undeveloped Land**

Site-specific projects under this alternative have the potential to affect historic properties. Projects activities would involve ground disturbing activities, including vegetation removal,

grubbing, contouring, and grading of the site, open works construction (*e.g.,* walls, columns, piers, piles, *etc.*), installation of utilities (*e.g.,* utility lines, septic systems, water wells, *etc*.) and entryways (driveways, sidewalks, *etc.*). Paved roads would be constructed for ingress and egress to and from the site and within the site for traffic circulation. In addition, the placement of permanent AHPP units may have the potential to visually affect nearby historic properties or districts. To ensure compliance with Section 106 of the NHPA, FEMA would follow the project review process as discussed in Alternative 2.

**Alternative 5: Permanent Group Housing Sites on Previously Developed Group Sites**

Projects under this alternative have the potential to affect historic properties. Project activities may involve ground disturbing activities, including the demolition of the former housing structure, slab/foundation removal, and the refurbishment of existing utilities (*e.g.,* utility lines, septic systems, water wells, *etc*.). Additionally, the placement of permanent AHPP units may have the potential to visually affect nearby historic properties or districts. To ensure compliance with Section 106 of the NHPA, FEMA would follow the project review process and conditions as discussed in Alternative 2.

**Alternative 6: Permanent Group Housing Sites on Undeveloped Land**

Projects under this alternative have the potential to affect historic properties. Project activities would involve ground disturbing activities, including vegetation removal, grubbing, contouring, and grading of the site, open works construction (*e.g.,* walls, columns, piers, piles, *etc.*), and the installation of entryways (driveways, sidewalks, *etc.*). Paved roads would be constructed for ingress and egress to and from the site and within the site for traffic circulation. New utilities would be installed on-site; which would consist of connecting electrical service, domestic water service, stormwater systems, sanitary sewer service, and telecommunication service to existing municipal infrastructure, where these exist. In addition, the placement of permanent AHPP units may have the potential to visually affect nearby historic properties or districts. To ensure compliance with Section 106 of the NHPA, FEMA will follow the project review process and conditions as discussed in Alternative 2.

**Alternative 7: Demobilization of AHPP Units through Donations**

If the PNP does not require Federal or state assistance, the analysis of impacts would be limited to the donation or transfer of the unit only, as the State and FEMA would have no involvement in the project's site selection or development. The donation or transfer of the unit would not the

potential to affect cultural resources. If the PNP uses Federal or state funds for site preparation or places units on public land, the proposed action and their associated impacts on cultural resources would be similar to those discussed in Alternatives 3 through 6.

## 4.8 Socioeconomics

### 4.8.1 Affected Environment

#### *4.8.1.1 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.

The Uniform Relocation Assistance and Real Property Acquisition Policies Act (URA) provide consistent and equitable treatment of persons displaced from their homes, businesses, or farms by Federal or Federally-assisted programs. These regulations also establish uniform and equitable land acquisition policies for Federal and Federally-assisted programs. Agencies are required to reimburse affected individuals and provide relocation planning, assistance, coordination, and advisory services to persons displaced by such programs.

#### *4.8.1.2 Existing Conditions*

As of July 2007, 120,000 travel trailers and mobile homes were provided to survivors of Hurricanes Katrina and Rita. At the current time in Mississippi, 1,284 mobile homes, 3,691 travel trailers, and 127 park model houses are occupied by hurricane displaced residents. Furthermore, 652 people are currently receiving rental assistance.

### 4.8.2 Environmental Consequences and Mitigation Measures

**Alternative 1: No Action**

Although there is no requirement for compliance with EOs 12898 and 13045 when there are no Federal actions, Alternative 1 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.

**Alternative 2: Conversion of Temporary AHPP Units on Previously Disturbed Land to Permanent AHPP Units**

In this alternative, existing, temporary Mississippi Cottages would be made permanent by replacing temporary foundations at the same location and footprint and replacing existing, above-ground utilities with buried utilities. Implementation of Alternative 2 would result in beneficial economic effects for both displaced residents (who receive subsidized housing), and for contractors who perform site work or construct auxiliary facilities, such as septic systems.

On a macroeconomic scale, conversion of temporary housing to permanent housing for displaced persons would benefit the local economy by helping to restore normal life to the community, including normalized employment patterns and commercial transactions.

No significant adverse socioeconomic impacts would result from the implementation of Alternative 2.

**Alternative 3: Permanent Installation of Pre-Fabricated Dwellings on Previously Developed Land**

Implementation of Alternative 3 would result in beneficial economic effects on both displaced residents (who receive subsidized housing), and if a property is privately owned, the property owner of the proposed permanent housing site (who receives monetary compensation for the use of vacant property). Contractors that install the dwellings and perform site work would also benefit financially.

Should eminent domain be required for the acquisition of any property, this would be done in compliance with URA, and FEMA would initiate a SEA to allow full public participation on the specific action. FEMA would ensure that displaced residents are provided permanent housing within the general vicinity of their pre-disaster places of residence. If this condition cannot be met, adverse financial impacts would be likely to occur from the inability of persons to commute to their places of employment. In that case, FEMA would evaluate these impacts and document the results in a SEA.

Establishing permanent housing for displaced persons would benefit the local economy by helping to restore normal life to the community, including normalized employment patterns and commercial transactions. However, some individual businesses that rely on a customer base living in close physical proximity to the business would likely suffer reductions in revenue if their customers are relocated out of the immediate area. It is assumed that these effects would be temporary and insignificant.

**Alternative 4: Permanent Installation of Pre-Fabricated Dwellings on Undeveloped Land**

Under Alternative 4, similar beneficial impacts to socioeconomics would occur as described in Alternative 3. Should eminent domain be required for the acquisition of any property, FEMA would follow the process as described in Alternative 3.

The AHPP would benefit the local economy unless a large portion of the customer base is relocated. Individual businesses that rely on a customer base which lives in close physical proximity to the business would likely suffer reductions in revenue if their customers are relocated out of the immediate area; however, it is assumed that these effects would be temporary and insignificant.

**Alternative 5: Permanent Group Housing Sites on Previously Developed Group Sites**

Under Alternative 5, similar beneficial impacts to socioeconomics would occur as described in Alternative 3. Should eminent domain be required for the acquisition of any property, FEMA would follow the process as described in Alternative 3.

Temporary effects would occur to local businesses because of the relocation of these individuals. FEMA would ensure that the sites selected do not pose any substantial human and environmental health issues that cannot be mitigated. If this condition cannot be met, or disproportionately high and adverse impacts on low-income and minority populations are likely to occur, then FEMA would need to evaluate these impacts and document the results in a SEA.

**Alternative 6: Permanent Group Housing Sites on Undeveloped Land**

Implementation of Alternative 6 would result in beneficial economic effects for both displaced residents (who receive subsidized housing) and, if a property is privately owned, the property owner of the proposed permanent group housing site. Contractors who install the group dwellings, and perform site work or construct auxiliary facilities (*e.g.,* WWTPs or septic systems) would also benefit financially.

Should eminent domain be required for the acquisition of any property, this would be done in compliance with URA, and FEMA would initiate a SEA to allow full public participation on the specific action. FEMA would ensure that displaced residents are provided permanent housing within the general vicinity of their pre-disaster place of residence. If this condition cannot be met, adverse financial impacts would be likely to occur from the inability of persons to commute to their places of employment. In that case, FEMA would evaluate these impacts and document the results in a SEA.

Establishing permanent group housing for displaced persons would benefit the local economy by helping to restore normal life to the community. However, some individual businesses would likely suffer reductions in revenue if a majority of their customers are relocated out of the immediate area. If FEMA determines that there are disproportionately high and the adverse impacts would affect low income or minority communities, FEMA would evaluate, document the result, and propose mitigation measures to address the issue in a SEA.

**Alternative 7: Demobilization of AHPP Units through Donations**

If the PNP does not require Federal or state assistance, the analysis of impacts will be limited to the donation or transfer of the unit only, as the State and FEMA would have no involvement in the project's site selection or development. The donation or transfer of the unit would potentially have a beneficial socioeconomic effect on the displaced residents who would receive low cost rental housing. If the PNP uses Federal or state funds for site preparation or places units on public land, the proposed action and their associated impacts on socioeconomics would be similar to those discussed in Alternatives 3 through 6.

## 4.9 Traffic and Transportation

### 4.9.1 Affected Environment

#### *4.9.1.1 Regulatory Setting*

Mississippi Department of Transportation (MDOT) is responsible for the design, construction, and maintenance of the State highway system, as well as the portion of Federal interstate highways within the State's boundaries. Arterials, connectors, rural roads, and local roads are constructed and maintained by county or city governments (MDOT 2008a).

#### *4.9.1.2 Existing Conditions*

As shown in Table 3, the 6 coastal counties have an extensive network of Federal (interstates and US highways) and state highways (MS) throughout the program area.

**Table 3. Federal and State Major Highways within the Program Area**

| Counties | Highways |
|---|---|
| George | US 98 |
| | MS 26, 57, 63, 198, 612 and 613 |
| Hancock | Interstate (I) 10, US 90 |
| | MS 45, 603, 604, 606, and 607 |
| Harrison | I 10, I 110, US 49, and US 90 |
| | MS 15, 53, 67, 601, 605, 615, 621 |
| Jackson | I 10 and US 90 |
| | MS 57, 63, 609, 611, 613, 614, 617, 618, 619 |
| Pearl River | I 59 and US 11 |
| | MS 13, 26, 43, 53 and 992 |
| Stone | US 49 |
| | MS 15, 26, 29 and 149 |

The State provides actual traffic counts in these counties along several highways for the year 2006. Traffic counts are given in units of Average Annual Daily Traffic (AADT). As seen in

Table 4, the highest of the traffic counts on Federal highways was on the interstate systems of I-10 and I 59, while US highways ranged in AADT counts from 1,400 to 64,00. State highways traffic counts were as low as 360 to as high as 30,000.

**Table 4. 2006 Program Area Traffic Counts**

| Counties | Highways | AADT (2006) |
|---|---|---|
| George | US 98 | 5,400 to 8,400 |
| | MS 26 | 1,400 to 5,500 |
| | MS 63 | 4,900 to 10,000 |
| | MS 612 | 720 to 2,200 |
| | MS 613 | 2,000 to 3,200 |
| Hancock | Interstate (I) 10 | 35,000 to 54,000 |
| | US 90 | 4,500 to 20,000 |
| | MS 43 | 6,400 to 23,000 |
| | MS 603 | 4,700 |
| | MS 607 | 3,900 to 5,400 |
| Harrison | I 10 | 49,000 to 90,000 |
| | I 110 | 14,000 to 54,000 |
| | US 49 | 15,000 to 64,000 |
| | US 90 | 1,700 to 23,000 |
| | MS 15 | 1,700 to 3,500 |
| | MS 53 | 7,000 to 7,200 |
| | MS 67 | 360 to 11,000 |
| Jackson | I 10 | 43,000 to 56,000 |
| | US 90 | 14,000 to 31,000 |
| | MS 57 | 2,800 to 13,000 |
| | MS 63 | 8,100 to 22,000 |
| | MS 613 | 2,000 to 30,000 |
| | MS 614 | 1,900 to 2,300 |
| Pearl River | I 59 | 17,000 to 28,000 |
| | US 11 | 1,400 to 10,000 |
| | MS 13 | 1,800 to 4,200 |
| | MS 26 | 1,500 to 5,700 |
| | MS 43 | 420 to 8,600 |
| | MS 53 | 3,200 to 7,000 |
| Stone | US 49 | 10,000 to 16,000 |
| | MS 15 | 660 |
| | MS 26 | 1,500 to 4,700 |
| | MS 29 | 2,900 |

Source: MDOT 2008b.

### 4.9.2 Environmental Consequences and Mitigation Measures

**Alternative 1: No Action**

At the current time in Mississippi, 1,284 mobile homes, 3,691 travel trailers, and 127 park model houses still occupied by hurricane-displaced residents. An additional 652 people are currently

receiving rental assistance. There are 190 housing units placed within group sites in Mississippi. 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.

**Alternative 2: Conversion of Temporary AHPP Units on Previously Disturbed Land to Permanent AHPP Units**

Under this alternative, no significant adverse impacts to transportation, site access, or traffic levels are anticipated. There would be a minor temporary increase in the volume of construction traffic on roads in the immediate vicinity of the proposed project site that could potentially result in a slower traffic flow for the duration of the construction phase. 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. Since the permanent housing would replace temporary housing, traffic volumes should return to pre-construction levels upon completion of construction.

The possibility exists that displaced residents without personal transportation would be housed in a location without public transportation. The State would evaluate the proposed site for access to public transportation. In those cases where the State determines that insufficient public transportation exists, the State would coordinate with the appropriate local government to increase public transportation services.

**Alternative 3: Permanent Installation of Pre-Fabricated Dwellings on Previously Developed Land**

Under this alternative, project impacts and conditions would be similar to those discussed under Alternative 2.

**Alternative 4: Permanent Installation of Pre-Fabricated Dwellings on Undeveloped Land**

Under this alternative, project impacts and conditions would be similar to those discussed under Alternative 2.

If displaced residents are without personal transportation, the State would follow the same procedures to increase public transportation outlined under Alternative 2.

**Alternative 5: Permanent Group Housing Sites on Previously Developed Group Sites**

This alternative may result in increased traffic volumes and slower traffic flow to roadways in the vicinity of the project site during and upon completion of construction. 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. Traffic devices including signal lights and/or stop signs may be installed during and upon completion of construction to mitigate minor, long-term impacts to traffic levels resulting from access to the project site.

The State would consult with the local transportation agency to determine if increased residential traffic is expected to reduce level of service (LOS) by more than 1 unit. If the local transportation agency determines that the LOS could decrease on roads surrounding the proposed permanent housing site by more than 1 unit, FEMA would perform a traffic study and document the results in a SEA.

**Alternative 6: Permanent Group Housing Sites on Undeveloped Land**

Under this alternative, project impacts and conditions would be similar to those discussed under Alternative 4.

**Alternative 7: Demobilization of AHPP Units through Donations**

If the PNP does not require Federal or state assistance, the analysis of impacts would be limited to the donation or transfer of the unit only, as the State and FEMA would have no involvement in the project's site selection or development. The donation or transfer of the unit would not have the potential to affect traffic or transportation. If the PNP uses Federal or state funds for site preparation or places units on public land, the proposed action and their associated impacts on traffic or transportation would be similar to those discussed in Alternatives 3 through 6.

## 4.10 Hazardous Waste and Materials

### 4.10.1 Affected Environment

#### *4.10.1.1 Regulatory Setting*

Hazardous wastes and materials 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 wastes and materials 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 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 may delegate this responsibility to states to implement it. Mississippi has been delegated with this responsibility. RCRA also sets forth a framework for the management of non-hazardous wastes. The 1986 amendments to RCRA enable the USEPA through MDEQ 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 the USEPA the ability to track the approximately 75,000 industrial chemicals currently produced or imported into the U.S. The USEPA repeatedly screens these chemicals, and can require reporting or testing of those chemicals that may pose an environmental or human-health hazard. The USEPA may ban the manufacture and import of those chemicals that pose an unreasonable risk. TSCA supplements other Federal statutes, including CAA and the Toxic Release Inventory under the Emergency Planning and Community-Right-to-Know Act. TSCA includes regulations regarding asbestos and polychlorinated biphenyls (PCB). CERCLA and the Superfund Amendments and Reauthorization Act also known as SARA govern the process for identifying and prioritizing the cleanup of abandoned or other sites not regulated under RCRA that are contaminated by the release of hazardous materials. The USEPA was given power to seek out those parties responsible for any release and ensure their cooperation in the cleanup.

Superfund site identification, monitoring, and response activities in states are coordinated through the state environmental protection or waste management agencies. Section 112 of the CAA requires the USEPA to develop emission standards for hazardous air pollutants. In response to this section, the USEPA published a list of hazardous air pollutants and promulgated the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations. Because lead and asbestos present a substantial risk to human health as a result of air emissions from one or more source categories, they are considered hazardous air pollutants and, thus, hazardous materials. The Asbestos NESHAP (40 CFR 61, Subpart M) addresses milling, manufacturing, and fabricating operations, demolition and renovation activities, waste disposal issues, active and inactive waste disposal sites, and asbestos conversion processes.

#### *4.10.1.2 Existing Conditions*

The State of Mississippi has 80 Superfund sites, of which four are on the National Priorities List (NPL), three have been removed from the NPL, and two have been proposed for the NPL (USEPA 2008c). Within the program area, there is currently one proposed NPL site within Harrison County in the City of Gulfport and one existing NPL site in Pearl River County near Picayune, Mississippi. The proposed NPL site name is Chemfax, Inc., and the EPA Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) ID is MSD008154486 and the existing NPL site is Picayune Wood Treating and the EPA CERCLIS ID is MSD065490930 (USEPA 2008c).

### 4.10.2 Environmental Consequences and Mitigation Measures

**Alternative 1: No Action**

Although Alternative 1 would not actively use hazardous materials or generate hazardous wastes, it may prolong the exposure of individuals to hazardous materials or wastes that may have been generated by Hurricane Katrina. Residents who find themselves without alternative housing may continue to live within an area contaminated by hazardous materials or wastes, such as petrochemicals (from ruptured storage tanks), air-borne asbestos (from damaged asbestos-containing materials), or lead-paint chips (from peeling painted surfaces). Further, temporary dormitories not typically used as shelters could contain lead-based paint or other sources of hazardous materials or wastes.

**Alternative 2: Conversion of Temporary AHPP Units on Previously Disturbed Land to Permanent AHPP Units**

Under this alternative, project activities are not anticipated to impact hazardous materials or wastes.

Ground disturbing 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. FEMA would conduct a site investigation on project areas where hazardous materials are suspected or known to existing on or adjacent to the proposed project area. FEMA would remove project sites having the potential to impact hazardous materials or wastes from program consideration. The State and FEMA would coordinate with state and local agencies, and the

USEPA, on any findings, as appropriate, and results documented in the project's administrative record.

**Alternative 3: Permanent Installation of Pre-Fabricated Dwellings on Previously Developed Land**

Under this alternative, project impacts and conditions would be similar to those discussed under Alternative 2.

**Alternative 4: Permanent Installation of Pre-Fabricated Dwellings on Undeveloped Land**

Alternative 4 project impacts and conditions would be similar to those discussed under Alternative 2.

**Alternative 5: Permanent Group Housing Sites on Previously Developed Group Sites**

Under this alternative, project impacts and conditions would be similar to those discussed under Alternative 2.

**Alternative 6: Permanent Group Housing Sites on Undeveloped Land**

Alternative 6 project impacts and conditions would be similar to those discussed under Alternative 2.

**Alternative 7: Demobilization of AHPP Units through Donations**

If the PNP does not require Federal or state assistance, the analysis of impacts will be limited to the donation or transfer of the unit only, as the State and FEMA would have no involvement in the project's site selection or development. The donation or transfer of the unit would not the potential to affect hazardous materials or waste. If the PNP uses Federal or state funds for site preparation or places units on public land, the proposed action and their associated impacts on hazardous materials or waste would be similar to those discussed in Alternatives 3 through 6.

# *SECTION 5.0*
# *LIST OF PREPARERS*

# 5.0 List of Preparers

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# *SECTION 6.0*
# *REFERENCES*

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