

FINAL

VA GULF COAST

VETERANS HEALTH CARE SYSTEM

BILOXI, MISSISSIPPI

ETHANOL-85 (E85) FUELING STATION

ENVIRONMENTAL ASSESSMENT

AND

FINDING OF NO SIGNIFICANT IMPACT (FONSI)

Prepared for

Department of Veterans Affairs
National Energy Business Center

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Prepared by

Versar, Inc.
9200 Rumsey Road
Columbia, MD 21045

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FINDING OF NO SIGNIFICANT IMPACT (FONSI)
DEPARTMENT OF VETERANS AFFAIRS
VA GULF COAST VETERANS HEALTH CARE SYSTEM
ETHANOL-85 (E85) FUELING STATION
ENVIRONMENTAL ASSESSMENT

The Department of Veterans Affairs (VA) assessed the potential impacts of installation of an E85 fueling station at the VA Gulf Coast Veterans Health Care System, 400 Veterans Avenue, Biloxi, Mississippi. A Draft Environmental Assessment (EA) was prepared to identify, analyze, and document the potential physical, environmental, cultural, and socioeconomic impacts associated with proposed project. Notice of Availability (NOA) of the EA was published in the Sun Herald, Biloxi-Gulfport, MS on 16, 18, and 22 June 2011. Preparation of the EA was required in accordance with the National Environmental Policy Act of 1969 [NEPA]; 42 United States Code [USC] 4321 *et seq.*, the Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and 38 CFR Part 26 (*Environmental Effects of the Department of Veterans Affairs Actions*).

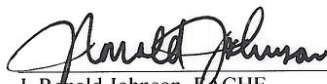
The EA examined two alternatives, the Proposed Action Alternative and the No-action Alternative. Although the No-action Alternative would not: (1) reduce the number of VA waiver requests to Department of Energy (DOE) under Section 701 of EPACT 2005, (2) enhance usage of the existing VA Flex-Fuel Vehicle fleet, nor (3) meet the sustainability goals of EO 13514, it was retained to provide a baseline against which to analyze the effects of the Proposed Action, as required under the CEQ Regulations (40 CFR 1502.14).

The purpose of the Proposed Action is to install and operate an E85 fueling station at the Biloxi VA Medical Center (VAMC). The station will consist of a 10,000 gallon, double-walled, above-ground E85 fuel storage tank, dispensing pump, and necessary supporting utilities. The station will be self-contained, skid-mounted and manufactured to hold and dispense E85 fuel. Demolition of an old equipment shed will be required, but no ground disturbance is planned. The station will be placed on an existing concrete slab central to a large paved lot. There will be no change in storm water flow or effect on Mississippi's (or Biloxi's) Storm Water Pollution Prevention Plan (SWPPP).

There would be minimal affect on solid and hazardous materials and wastes at the Biloxi VAMC under the proposed project. There will be no effect on the cultural or historic resources, socioeconomics, transportation, vegetation, wildlife, threatened and endangered species, groundwater, surface water, or wetlands. The proposed station will occupy 500 square feet, so the effect on land use will be minimal. Air quality will be slightly improved since E85 is a cleaner-burning, renewable fuel and the distance that VA employees would need to travel to obtain E85 fuel will be reduced. E85 will reduce dependence on fossil fuels.

The fuel station is expected to have an operational life of 15-20 years. During this time, the effects of climate change are not expected to have a significant effect on the Biloxi VAMC or the E85 station. Other long-term effects, including construction, would be minimally affected by the proposed action since the station will be skid-mounted and easily relocated, if required.

As a result of the analysis in the Draft EA, summarized and incorporated by reference herein, it is the conclusion of the VA that the Proposed Action would not have a significant adverse impact on human health or the environment. Therefore, the preparation of an environmental impact statement is not required.

 9/27/11
J. Ronald Johnson, FACHE Date
GEMS Committee Chair
Assistant Director

 10/6/2011
Thomas Wisniewski, MPA, FACHE Date
Director

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LIST OF ACRONYMS

ARPA	Archeological Resources Protection Act
AST	Above Ground Storage Tank
AT/FP	Antiterrorism/Force Protection
BMPs	Best Management Practices
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CWA	Clean Water Act
DOE	Department of Energy
E85	Ethanol 85 Fuel
EA	Environmental Assessment
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FFV	Flex Fuel Vehicle
MDEQ	Mississippi Department of Environmental Quality
NAAQS	National Primary and Secondary Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NHPA	National Historic Preservation Act

NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
PPA	Pollution Prevention Act
RCRA	Resource Conservation and Recovery Act
SF	Square Feet
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SPCC	Spill Prevention, Control and Countermeasure
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tank
VA	U.S. Department of Veterans Affairs
VAMC	VA Medical Center
VHA	Veterans Health Administration

1.0 PURPOSE AND NEED

1.1 INTRODUCTION

In response to recent federal initiatives, the Department of Veterans Affairs (VA) is considering alternatives for reducing the intensity of fossil fuel use at its facilities. In accordance with these initiatives, the VA proposes to install and operate ethanol-85 (E85) fueling stations at many of its VA medical centers (VAMCs). The VAMCs have most of the flex-fuel vehicles (FFVs) that are used by VA personnel such as ambulances, cars, trucks and buses. In addition, VAMCs are often near or collocated with other regional VA facilities whose personnel would also have access to an E85 station once installed. The purpose of installing E85 fuel tanks at VAMC campuses is to support the existing VHA FFV fleets that are currently underutilized owing to lack of E85 availability, and to reduce the number of Department of Energy (DOE) waivers that are currently needed by the VA to comply with Section 701 [42 U.S.C. 6374(a)(3)(E)] of the Energy Policy Act of 2005 requiring federal fleets to replace petroleum use with alternative fuels. If FFVs are eventually phased out and replaced with hybrid vehicles, any E85 tank could be used for gasoline (E10) and almost all hybrid vehicles run on gasoline. There is some interest in fueling hybrids with E85 (Flex Fuel hybrids), but they are not widely available at this time.

The Veterans Health Administration (VHA) FY2009 Minor Construction budget included \$7 million for constructing alternative fuel stations. However, that amount was insufficient to adequately fund E85 fueling stations on all VAMC campuses. To facilitate their decision-making, the VA commissioned a study to identify optimal locations for constructing fueling stations within the limits of available funding. The results of this study gave priority to 92 facilities distributed among 44 states (Versar 2009).¹ To evaluate and address the potential environmental effects of this action, a program-wide analysis has been prepared in accordance with the National Environmental Policy Act (NEPA). The *Program-wide Analysis of Environmental Impacts from E85 Alternative Fueling Facilities at Veterans Affairs Medical Centers throughout the U.S.*

¹ The VHA has acquired additional funding for the project since the 2009 study resulting in more sites being considered for E85 fueling stations than were initially identified. However, the total number of sites evaluated has not changed because some of the original candidate sites have been dropped after further consultation.

examines the potential environmental effects of installing and operating E85 fueling stations at VAMCs at the priority facilities; it is included as Appendix A of this site-specific EA.

1.2 BACKGROUND

The program-wide analysis provides an overall assessment of effects of the proposed action from a programmatic, or national, perspective and identifies the key regulatory requirements under which the NEPA process must be implemented. The program-wide analysis considers three technological alternatives for installing an E85 fueling station: (1) installation of an above ground storage tank (AST); (2) installation of an underground storage tank (UST); and (3) conversion of an existing UST to E85 fuel, as well as the No-action Alternative to not install E85 at any of the VAMCs. Given the scope of what is being proposed at each facility, the environmental resources at most VAMCs would be affected similarly, regardless of what technological alternative is used. However, for many resources, the alternatives may have different effects at the regional or local level, and these site-specific effects are addressed in each site-specific EA. In addition, each EA considers any alternative locations for siting the E85 fueling station at individual VAMCs.

This site-specific EA has been prepared in the same accord as the program-wide analysis, but it will focus on the environmental issues that are specific to the surroundings and existing environmental resources of VA Gulf Coast Veterans Health Care System beyond what is considered in the program-wide analysis. The VA Gulf Coast Veterans Health Care System has served veterans along the Gulf Coast of Mississippi, Alabama and Florida since 1932. The main facility is located at 400 Veterans Avenue in Biloxi, Mississippi, and will herein be referred to as the Biloxi VAMC. The focus of this EA is the potential effects of the Proposed Action on existing conditions related to cultural resources, aquatic resources, solid and hazardous materials and wastes, as well as terrestrial natural resources. It also identifies any mitigation that would be required to enable the installation of the E85 fueling station at the proposed site.

The Council on Environmental Quality (CEQ) develops implementation regulations and oversees the efforts of federal agencies as they implement their NEPA programs. CEQ issued NEPA implementation regulations in 1978, which are included in Title 40, Code of Federal Regulations

(CFR), Parts 1500-1508. This site-specific EA is tiered from the program-wide analysis and complies with the NEPA, CEQ regulations, and VA regulations for implementing the NEPA (38 CFR Part 26). It also addresses all applicable laws and regulations, including but not limited to the following:

- National Historic Preservation Act (NHPA)
- Archeological Resources Protection Act (ARPA)
- Clean Air Act (CAA)
- Clean Water Act (CWA)
- Endangered Species Act (ESA)
- Pollution Prevention Act (PPA)
- Resource Conservation and Recovery Act (RCRA)

The program-wide analysis is included as Appendix A of this site-specific EA. Agency coordination and comments are included in Appendix B.

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2.0 PROPOSED ACTION

Under the Proposed Action, a 10,000 gallon E85 AST alternative fueling station would be installed and operated at the Biloxi VAMC campus (Figure 2-1). Figure 2-2 shows an aerial view of the campus and surrounding area, highlighting the proposed fueling area. The proposed E85 fueling station would be located at the site of the old equipment shed in the engineering complex, which is set apart from the main campus (Figure 2-3). The footprint for a 10,000 gallon AST is approximately 500 square feet (SF). No major improvements of infrastructure would be required to accommodate access for vehicles or fuel delivery trucks. The proximity to existing electrical power, required safety setbacks from buildings and property lines, and the VA Antiterrorism/Force Protection (AT/FP) requirements were considered during the site selection process. Preference was given to collocating the E85 fueling station in the fenced engineering complex. The preferred site is accessible by existing roads, is completely paved, and has power available; an old wooden equipment shed would need to be demolished to accommodate the station.

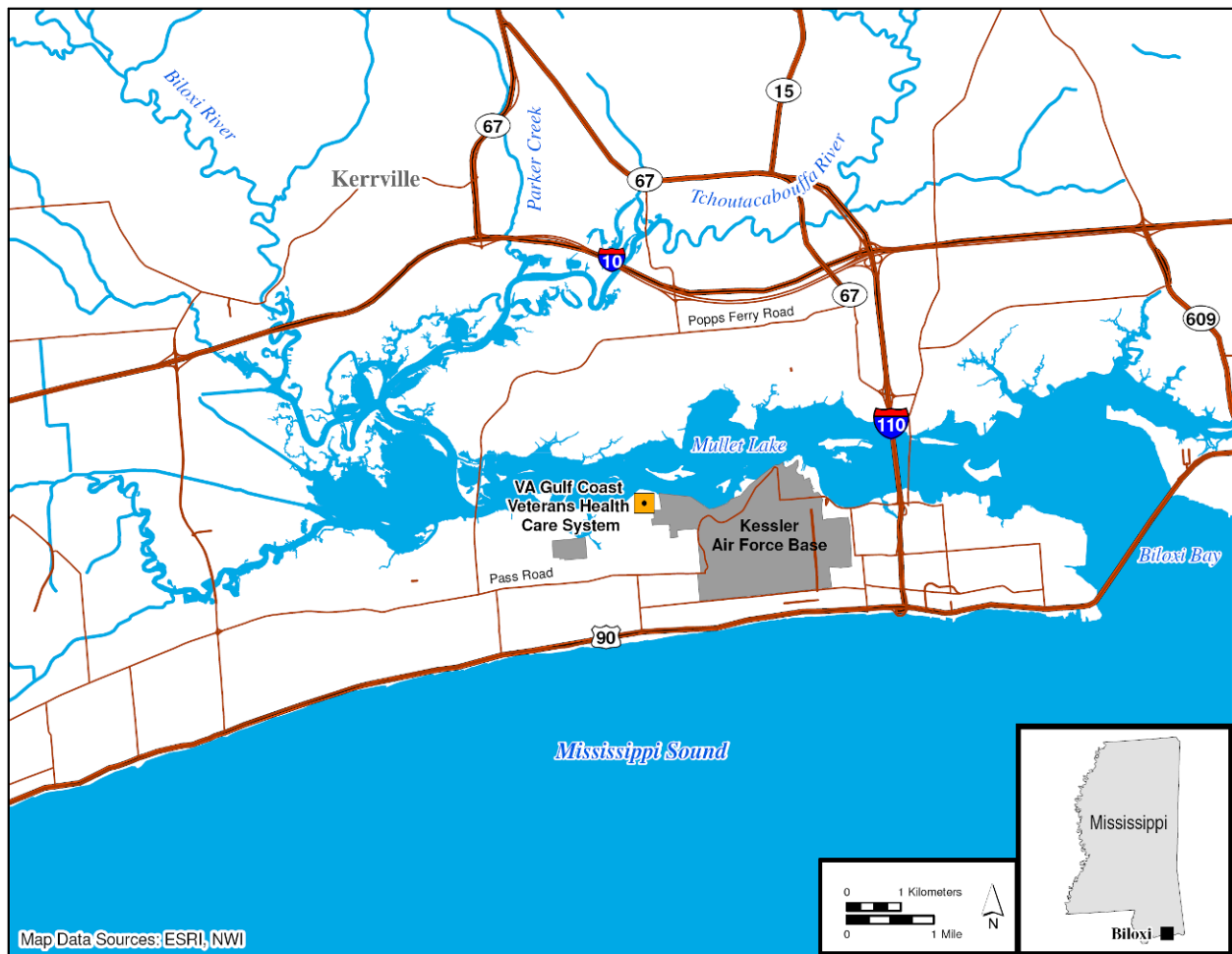


Figure 2-1. Regional map showing general location of the Biloxi VAMC



Figure 2-2. Aerial view of the Biloxi VAMC showing the layout of the campus and surrounding area

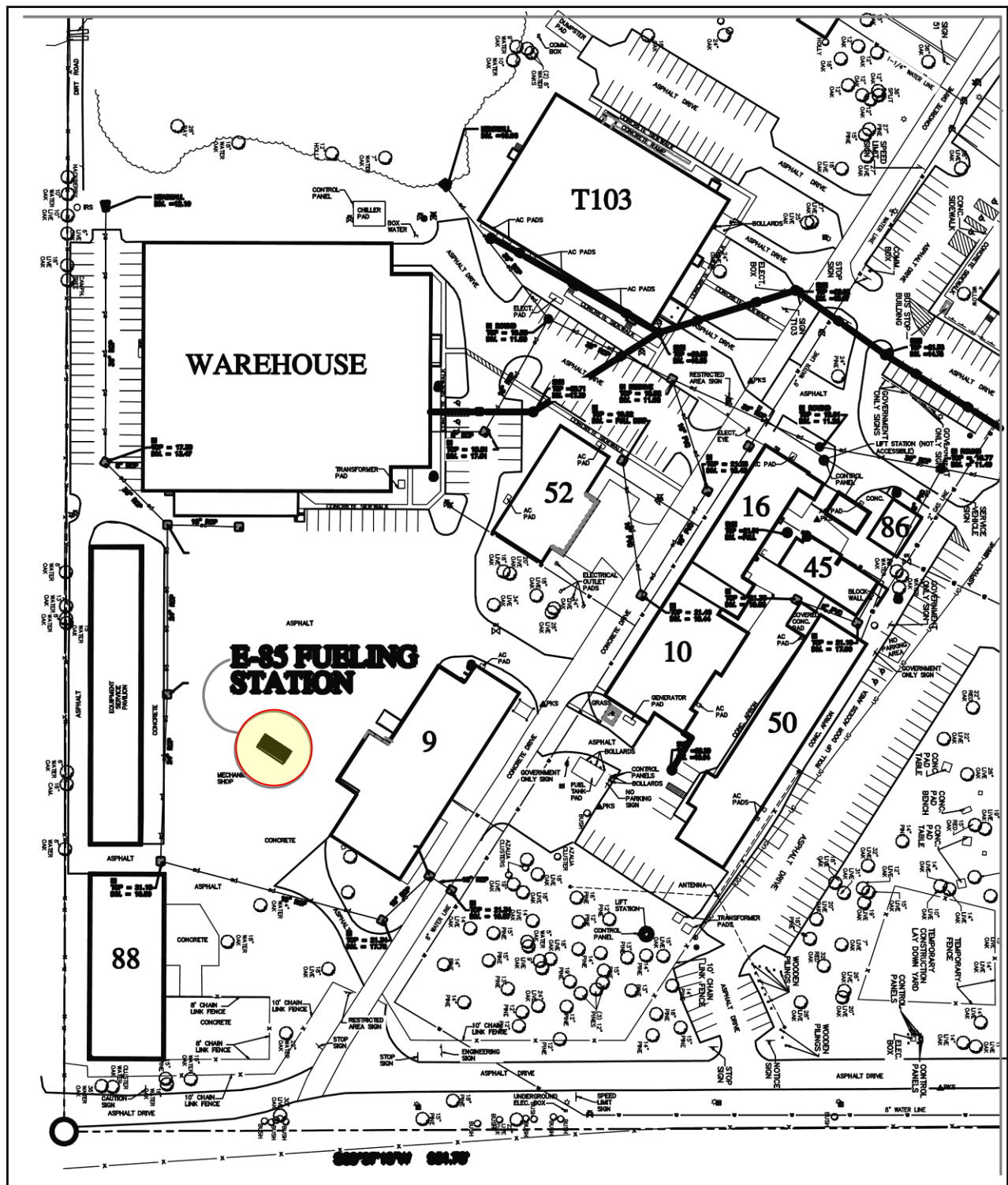


Figure 2-3. Proposed location of the E85 fueling area within the engineering complex of the Biloxi VAMC campus

3.0 ALTERNATIVES

3.1 NO-ACTION ALTERNATIVE

CEQ regulations prescribe analysis of the No-action Alternative, which serves as the benchmark against which the environmental, social, and economic effects of the Proposed Action and other reasonable alternatives can be evaluated. In this site-specific EA, the benchmark is not to install an alternative E85 fueling station on the Biloxi VAMC campus. The No-action Alternative would not support the existing VHA FFV fleets that are currently underutilized owing to lack of E85 availability, nor would it reduce the number of VA waiver requests to DOE under Section 701 of EPACT 2005. It would also not help the VA to meet the sustainability goals of EO 13514 for federal agencies, which include using vehicles that reduce the agency's total consumption of petroleum products for fleets of motor vehicles by a minimum of 2% annually through the end of fiscal year 2020, compared to the baseline of fiscal year 2005.

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4.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

4.1 NOISE

4.1.1 Affected Environment

The potential effects of noise associated with the construction and operation of an E85 fueling station are addressed in the program-wide analysis in Appendix A. The Biloxi VAMC provides hospital care and medical services to veterans and maintaining a serene environment for patients is important. Noise is generally regulated by a local ordinance that is established by a village, town, or city, or other local jurisdiction. Noise ordinances often relate to land use zoning with different maximum levels prescribed for residential, commercial, and industrial areas. Some noise ordinances impose restrictions by time of day with reduced noise levels during nighttime hours.

4.1.2 Environmental Consequences

4.1.2.1 Proposed Action

The various equipment options and related activities associated with the Proposed Action are expected to result in only minor increases in noise levels for the operation of an E85 fueling station. Short-term but measurable increases in noise levels are expected during construction. The relationship between noise level and distance from a vehicle is evaluated under a worst-case scenario in the program-wide analysis, and the traffic associated with the proposed fueling would not have a significant noise impact at any sensitive receptor. Additionally, the proposed fueling station at the Biloxi VAMC would be located with facilities operations and maintenance, which is away from any patient care buildings.

4.1.2.2 No-action Alternative

The installation and operation of an E85 fueling station at the Biloxi VAMC would not occur; therefore, there would be no effects due to noise under the No-action Alternative. All VA

personnel that currently operate FFVs at the facility would continue to use E85 fuel resources from offsite fueling stations.

4.2 AESTHETICS AND VISUAL RESOURCES

4.2.1 Affected Environment

The significance of potential effects on aesthetics and visual resources is based on the level of sensitivity in the areas affected by the Proposed Action. Visual sensitivity is defined as the degree of public interest in a visual resource and the concern over potential adverse changes in the quality of that resource. The Biloxi VAMC campus is in a scenic setting with the hospital, nursing and other medical facilities on maintained, landscaped grounds. Some areas of the campus have historically significant buildings or structures that are currently listed, or are eligible for listing, on the National Register of Historic Places, or they may be recognized by state historical preservation agencies. Cultural and historic resources at the Biloxi VAMC are discussed in Section 4.6.

4.2.2 Environmental Consequences

4.2.2.1 Proposed Action

Effects on aesthetics and visual resources as a result of the Proposed Action are not anticipated at the Biloxi VAMC. The campus currently has an existing fueling area on site and the proposed E85 station would be collocated within Engineering Compound. The surrounding view was considered when selecting the site for the fueling area.

4.2.2.2 No-action Alternative

The installation and operation of an E85 fueling station at the Biloxi VAMC would not occur; therefore, there would be no effects on aesthetics and visual resources under the No-action Alternative. All VA personnel that currently operate FFVs at the facility would continue to use E85 fuel resources from offsite fueling stations.

4.3 AIR QUALITY

4.3.1 Affected Environment

Federal law designates six air pollutants as criteria contaminants and requires special measures to limit their presence in the nation's air: sulfur dioxide; nitrogen dioxide; ozone; carbon monoxide; particulate matter (fine particles less than 2.5 microns in size as PM_{2.5} and coarser particles up to 10 microns in size as PM₁₀); and lead. The U.S. Environmental Protection Agency (EPA) sets the National Ambient Air Quality Standards (NAAQS) for air pollutants as required under the Clean Air Act (CAA), last amended in 1990 (40 CFR part 50). Parts of the country where the air quality standards are exceeded for one or more of the criteria pollutants are designated as non-attainment areas. The EPA requires each state government to adopt a State Implementation Plan (SIP) that prescribes control strategies to reduce air pollution in nonattainment areas and to evaluate periodically the effectiveness of the strategies prescribed in its SIP. The Biloxi VAMC is located in Harrison County, Mississippi, which is not designated as a non-attainment area for any of the six criteria contaminants.

4.3.2 Environmental Consequences

4.3.2.1 Proposed Action

Potential emissions due to the operation of an E85 fueling station are described in detail in the program-wide analysis. The CAA requires some gasoline dispensing facilities located in areas classified as extreme, severe, serious or moderate nonattainment of the 1-hour ozone standard, to have Stage II vapor recovery systems in place and operational depending on tank size and throughput requirements which vary by state. Since the majority of E85 fuel capable vehicles have onboard refueling vapor recovery systems installed, the U.S. EPA will allow states flexibility to exempt E85 refueling equipment from Stage II vapor recovery requirements, consistent with its December 12, 2006, memorandum (U.S. EPA 2006). However, the state makes the final decision in their SIP. Air emission requirements for Mississippi are listed in Appendix B of the program-wide analysis.

No significant effects on air quality are anticipated from the Proposed Action. The VA FFVs would need to access E85 whether or not it is available at the Biloxi VAMC. Having the E85 station located on site would reduce the distance VA employees would need to travel to refuel. Since model year 2000, fuel tank venting has been controlled by onboard refueling vapor recovery devices installed in all cars running on E85 or gasoline. Evaporative emissions from fuel or vapor leaks are less prevalent due to ongoing improvements in leak-resistant materials and fittings.

4.3.2.2 No-action Alternative

The installation and operation of an E85 fueling station at the Biloxi VAMC would not occur; therefore, there would be no effects on air quality under the No-action Alternative. All VA personnel that currently operate FFVs at the facility would continue to use E85 fuel resources from offsite fueling stations.

4.4 SOCIOECONOMICS

4.4.1 Affected Environment

The program-wide analysis defines socioeconomic aspects of the environment, including those pertaining to environmental justice and disproportionate risks to children, and identified laws and regulations affecting these resources. In brief, socioeconomics comprises the basic attributes and resources associated with the human environment, particularly population and economic activity. Economic activity typically encompasses employment, personal income, and economic growth. Factors that affect these fundamental socioeconomic components also influence other issues such as housing availability and the provision of public services. The Biloxi VAMC is located immediately west of Keesler Air Force Base, to the west of Biloxi, Mississippi.

Biloxi is located in Harrison County, Mississippi. Biloxi is the smaller of two principal cities of the Gulfport-Biloxi, Mississippi Metropolitan Statistical Area, which is included in the Gulfport-Biloxi-Pascagoula Combined Statistical Area. As of the census of 2000, there were 50,644 people, 19,588 households, and 12,379 families residing in the city. The population

density was 1,331.8/sq mi (514.2/km²). There were 22,115 housing units at an average density of 581.6/sq mi (224.5/km²). The racial makeup of the city was 71.43% White, 19.04% African American, 0.49% Native American, 5.11% Asian, 0.11% Pacific Islander, 1.43% from other races, and 2.38% from two or more races. 3.65% of the population is Hispanic or Latino of any race.

There were 19,588 households, out of which 31.4% have children under the age of 18 living with them, 44.6% were married couples living together, 14.0% had a female householder with no husband present, and 36.8% are non-families. 30.1% of all households were made up of individuals and 10.6% had someone living alone who is 65 years of age or older. The average household size was 2.42 and the average family size is 3.02.

In the city the population dispersal was 24.2% under the age of 18, 14.3% from 18 to 24, 30.3% from 25 to 44, 19.2% from 45 to 64, and 12.0% who were 65 years of age or older. The median age was 32 years. For every 100 females there were 101.9 males. For every 100 females age 18 and over, there were 101.6 males. The median income for a household in the city was \$34,106, and the median income for a family was \$40,685. Males had a median income of \$28,046 versus \$21,267 for females. The per capita income for the city was \$17,809. 14.6% of the population and 11.2% of families lived below the poverty line. Out of the total population, 19.6% of those under the age of 18 and 11.7% of those 65 and older were living below the poverty line.

Biloxi is served by Gulfport, Mississippi's Gulfport-Biloxi International Airport (http://en.wikipedia.org/wiki/Biloxi,_Mississippi).

4.4.2 Environmental Consequences

4.4.2.1 Proposed Action

The installation and operation of an E85 fueling station at the Biloxi VAMC would not significantly impact socioeconomic conditions in the surrounding area. If anything, employment and economic conditions within the region of influence would realize short-term, beneficial effects from the additional labor needed to construct the E85 fueling station and install the AST.

The benefits would be short-term as existing facilities management personnel would be responsible for maintaining the E85 fueling station once it is operational; the addition of full-time personnel at the VAMC is not anticipated. Because of its location and enclosed campus-like setting, the addition of an E85 fueling station to the VAMC would not be likely to adversely affect minority or low-income populations, nor would it pose any additional environmental risk to the health and safety of children. In summary, no significant effects on socioeconomic conditions would result from implementing the Proposed Action other than potentially short-term beneficial effects during the construction and installation of the E85 fueling station.

4.4.2.2 No-action Alternative

The installation and operation of a 10,000 gallon AST E85 fueling station at the Biloxi VAMC would not occur; therefore, there would be no effects on socioeconomics under the No-action Alternative. All VAMC personnel that currently operate FFVs would continue to use E85 fuel resources from offsite fueling stations. In addition, there would be no potentially short-term, beneficial effects on employment and economic conditions from the installation of an E85 fueling station.

4.5 TRANSPORTATION

4.5.1 Affected Environment

The Biloxi VAMC is located on a campus that is convenient to the surrounding community. The campus has a network of roadways accessible through multiple entry points and parking areas distributed around the hospital and other medical facilities. The campus is located within easy access to I-110. Campus facilities providing infrastructure support are set apart from other facilities. The VAMC currently maintains a boiler plant, emergency generators, and already receives regularly scheduled fuel deliveries.

4.5.2 Environmental Consequences

4.5.2.1 Proposed Action

The installation and operation of the E85 fueling station requires adequate area for infrastructure and setbacks from buildings and other properties. The proposed site for the fueling station at the Biloxi VAMC is appropriate for such use, and has adequate space for fueling FFVs as well as accommodating fuel delivery trucks. No effects on transportation or traffic patterns are anticipated including any additional influx of FFVs from other federal fleets that might use the alternative fueling station.

4.5.2.2 No-action Alternative

The installation and operation of an E85 fueling station at the Biloxi VAMC would not occur; therefore, there would be no effects on transportation under the No-action Alternative. All VA personnel that currently operate FFVs at the facility would continue to use E85 fuel resources from offsite fueling stations.

4.6 CULTURAL AND HISTORIC RESOURCES

4.6.1 Affected Environment

The program-wide analysis provides definitions of cultural and historic resources, and in general terms, describes the federal and state regulatory frameworks that are responsible for managing and protecting these resources. As noted in the program-wide analysis, the National Historic Preservation Act of 1966 (NHPA) is the primary federal law that implements regulations affecting cultural and historic resources, and encourages states to develop programs supporting historic preservation. The Mississippi Department of Archives and History is the State Historic Preservation Office (SHPO) that manages cultural and historic resources in the state, and is responsible for reviewing potential effects on these resources from any new federal projects (<http://mdah.state.ms.us/hpres/sec106faq.php>).

As part of the review process for this site-specific EA, a consultation letter will be sent to the SHPO to ascertain whether there are any cultural and historic resources of concern in the vicinity of the proposed project area. The Biloxi VAMC is located in western Biloxi, Mississippi, where it is surrounded by residential communities, several businesses, and Keesler Air Force Base to the east; open water is north of the facility as part of Biloxi Bay system. Listed by the NRHP since 2002, elements of the Biloxi Veterans Administration Medical Center were constructed in 1933 in the Colonial Revival architecture style. The locations of other culturally significant properties, as well as important archeological sites, will be identified pending SHPO review of the project.

As evidenced above, some VAMCs built in the early 20th Century have historically significant buildings or structures that are currently listed, or are eligible for listing, on the NRHP, or they may be recognized by the SHPO. However, VAMCs generally have areas developed for facility infrastructure, such as boiler plants and storage areas, which are usually set apart from hospital and other patient care buildings. Because of their reliance on emergency transportation and other transportation needs of hospital staff, many VAMCs already maintain their own fueling stations, which have existing ASTs and USTs. Although the Biloxi VAMC currently does not provide conventional fueling services to its personnel, it does maintain fuel storage tanks for generator and boiler plant operations. The site proposed for the installation of an E85 fueling station is within the engineering complex of the campus which hosts many of the campus support facilities.

4.6.2 Environmental Consequences

4.6.2.1 Proposed Action

The installation and operation of an E85 fueling station at the Biloxi VAMC would not significantly impact cultural and historic resources. The proposed location for the E85 AST is within the engineering complex of the VAMC, which already possesses fuel storage tanks for facilities operations. A recently completed study of the historical context of the Biloxi VAMC (Panamerican Consultants, Inc. 2010) identified historic properties within the engineering complex; however, a new E85 station would not change the character of the site no effects on listed NRHP properties are anticipated. At present, there are no known archeological resources in

the vicinity of the project. The installation of an AST would result in minimal ground disturbance that could potentially affect archeological resources if present. Coordination with the SHPO will identify areas of concern for archaeological resources as well as other buildings and structures at the Biloxi VAMC that may be considered eligible for listing on the NRHP.

4.6.2.2 No-action Alternative

The installation and operation of an E85 fueling station at the Biloxi VAMC would not occur; therefore, there would be no effects on cultural and historic resources under the No-action Alternative. All VA personnel that currently operate FFVs at the facility would continue to use E85 fuel resources from offsite fueling stations.

4.7 GEOLOGY AND SOILS

4.7.1 Affected Environment

The program-wide analysis provides a definition of geological resources including soils, and discussed how these resources are usually characterized. Geological resources typically consist of surface and subsurface materials and their inherent properties. Soil structure, elasticity, strength, shrink-swell potential, and erodibility all determine the suitability of the ground to support buildings and structures. With respect to construction, soils are typically described in terms of their type, slope, physical characteristics, and relative compatibility or limitations with regard to particular construction activities and types of land use. Areas with predominantly wet or unstable soils (e.g., organic soils and certain clays and sands) were not considered for E85 tank installation because these areas could be in regulated wetlands or may not meet certain structural engineering requirements for installing an AST. The area of the Biloxi VAMC proposed for E85 AST installation is paved and used to support facility engineering and grounds maintenance.

4.7.2 Environmental Consequences

4.7.2.1 Proposed Action

The installation and operation of a 10,000 gallon AST E85 fueling station at the Biloxi VAMC would not significantly affect geological resources and soils. The area where the tank will be situated is completely paved, has existing power, and no excavation is anticipated. Furthermore, the station will be a new commercially built, self-contained, skid-mounted unit. In the event that any excavation or ground disturbance is required, state and local regulations and in accordance with best management practices (BMPs) for controlling sediment and erosion would be followed and permits for earthwork and development would be obtained prior to construction at the facility

4.7.2.2 No-action Alternative

The installation and operation of a 10,000 gallon AST E85 fueling station at the Biloxi VAMC would not occur; therefore, there would be no effects on geology and soils under the No-action Alternative. All VA personnel that currently operate FFVs at the facility would continue to use E85 fuel resources from offsite fueling stations.

4.8 GROUNDWATER AND WATER QUALITY

4.8.1 Affected Environment

The program-wide analysis provides a definition of groundwater resources and water quality, and in general terms, describes the state and federal regulatory authorities responsible for administering these resources. In Mississippi, the Department of Environmental Quality, Groundwater Planning and Protection Division (DEQ) manages and regulates groundwater issues (http://www.deq.state.ms.us/mdeq.nsf/page/GPB_GroundwaterPlanningBranch?OpenDocument). Most groundwater protection programs within the DEQ focus on the protection of the quality and quantity of Mississippi's groundwater resources.

The Biloxi VAMC is located on the Back Bay of Biloxi, about two miles north of the Gulf of Mexico. Aquifers carrying ground water flow towards the east. Surface water flows north into Back Bay Biloxi.

4.8.2 Environmental Consequences

4.8.2.1 Proposed Action

The installation and operation of a 10,000 gallon AST E85 fueling station at the Biloxi VAMC would not have significant effects on groundwater resources and water quality. As described in the program-wide analysis, potential effects on groundwater resources and water quality from E85 AST are not likely because the site already has existing fueling facilities in an area that is used for similar purposes. Provided the E85 tank is sited properly and the Biloxi VAMC Spill Prevention, Control and Countermeasure (SPCC) Plan (HGS Engineering, March 2011) is followed, there would be no effects on groundwater resources and water quality.

4.8.2.2 No-action Alternative

The installation and operation of a 10,000 gallon AST E85 fueling station at the Biloxi VAMC would not occur; therefore, there would be no effects on groundwater and water quality under the No-action Alternative. All VA personnel that currently operate FFVs at the facility would attempt to use E85 fuel resources from offsite fueling stations.

4.9 WETLANDS, FLOODPLAINS, AND SURFACE WATERS

4.9.1 Affected Environment

The program-wide analysis provides definitions of wetlands, floodplains and surface waters, and in general terms, describes the state and federal regulatory authorities responsible for administering these resources. The coast of Mississippi is regulated under the Mississippi Coastal Program Coastal Zone Management Plan and the state does enforce wetlands and Clean Water Act regulations through the Mississippi Department of Environmental Quality (MDEQ); Mississippi Department of Marine Resources, MDEQ; Office of Land and Water Resources, MDEQ; Office of

pollution Control, Surface Water Division; and the Mobile District, U.S. Army Corps of Engineers is responsible for federal regulation of wetlands in this region, under Section 404 of the federal Clean Water Act.

According to National Wetland Inventory (NWI) mapping, there is one parcel of estuarine emergent wetlands (designated as E2EM1P) on the northern-most part of the Biloxi VAMC facility, adjacent to the Back Bay of Biloxi. Two other parcels of estuarine emergent wetlands (designated as E2EM1P) are also located offsite to the east and the west of the VAMC on the Back Bay of Biloxi (Figure 4-1). According to floodplain maps issued by the Federal Emergency Management Agency (FEMA), the Biloxi VAMC is surrounded on its northern, eastern, and western sides by an AE 100-year flood zone (Figure 4-2). The AE is defined as an area inundated by 100-year flooding, for which Base Flood Elevations (BFE) have been determined. The BFE is the regulatory requirement for the elevation or flood-proofing of structures. The relationship between the BFE and a structure's elevation determines the flood insurance premium (http://www.fema.gov/plan/prevent/floodplain/nfipkeywords/base_flood_elevation.shtm#0).

4.9.2 Environmental Consequences

4.9.2.1 Proposed Action

The Proposed Action is located outside of the AE flood zone, at an elevation of 22 feet above mean seal level, as mapped by FEMA. Provided the 10,000 gallon AST for E85 fuel is sited as proposed, all local, state, and federal permit conditions are followed, and the Biloxi VAMC SPCC Plan is followed, there would be no adverse effects on these resources.

4.9.2.2 No-action Alternative

The installation and operation of a 10,000 gallon AST E85 fueling station at the Biloxi VAMC would not occur; therefore, there would be no effects on wetlands, floodplains, or surface waters under the No-action Alternative. All VA personnel that currently operate FFVs at the facility would continue to use E85 fuel resources from offsite fueling stations.

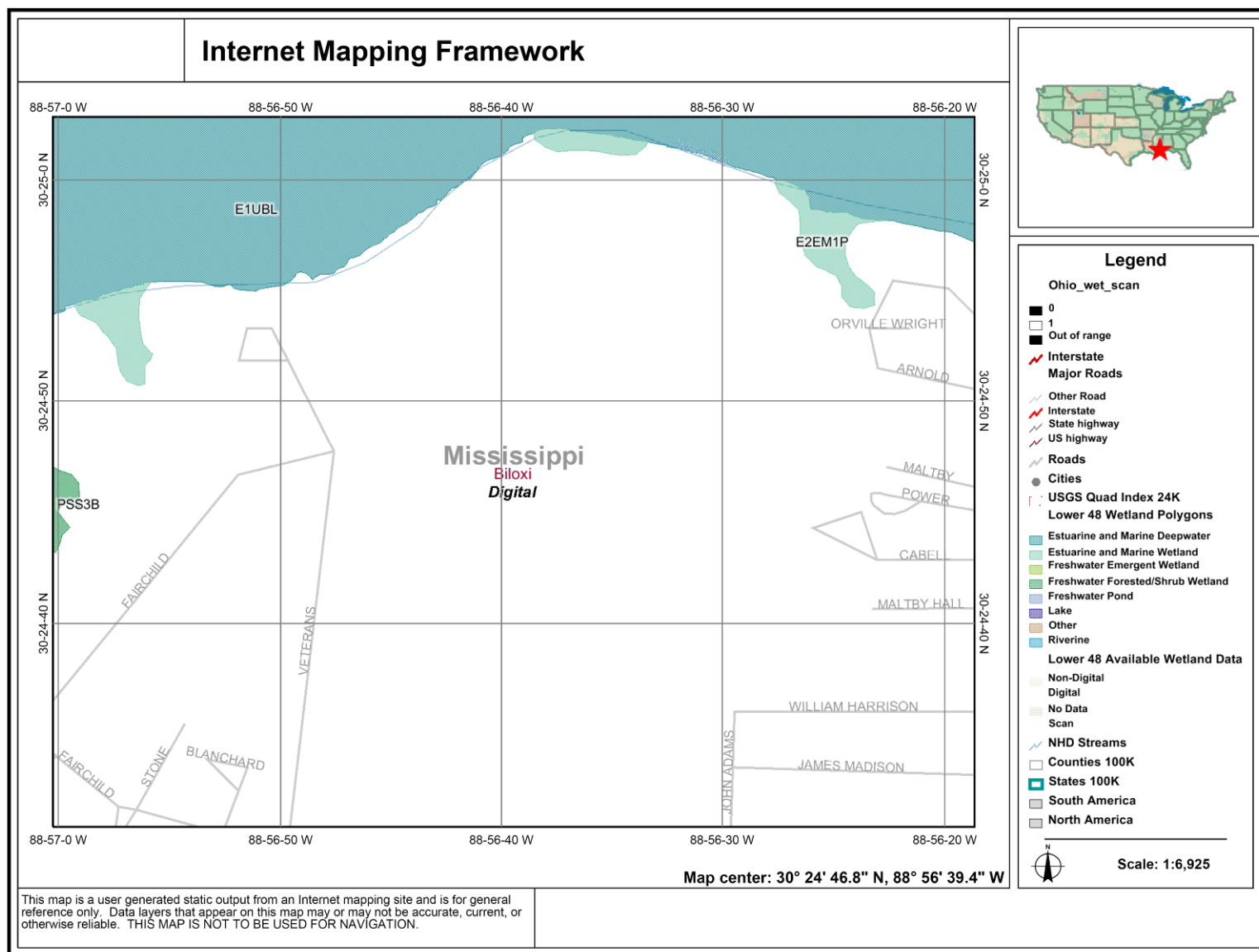


Figure 4-1. Mapped wetlands in the immediate vicinity of the Biloxi VAMC, MS facility, according to the U.S. Fish and Wildlife Service National Wetland Inventory mapping.