

ENVIRONMENTAL ASSESSMENT
GAUTIER WATER TREATMENT PLANT EXPANSION PROJECT

City of Gautier, Jackson County, Mississippi



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August 2021

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Acronyms and Abbreviations

APE	Area of Potential Effect
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Register
EA	Environmental Assessment
EDR	Environmental Data Resource
EFH	Essential Fish Habitat
EO	Executive Order
ESA	Endangered Species Act
F	Fahrenheit
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
HCD	Habitat Conservation Division
HTRW	Hazardous Toxic Radioactive Waste
MDAH	Mississippi Department of Archives and History
Mgd	Million Gallon Per Day
MSDH	Mississippi State Department of Health
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NMFS	National Marine Fisheries Service
NRCS	Natural Resource Conservation Service
NWR	National Wildlife Refuge
SFHA	Special Flood Hazard Area
TCMU	Town Center Mixed Use
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WRDA	Water Resource Development Act

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1 INTRODUCTION

The U.S. Army Corps of Engineers (USACE), Mobile District proposes to design and construct the City of Gautier’s water treatment plant by adding a nanofiltration unit as a treatment alternative to the existing Ion Exchange Plant. This Environmental Assessment (EA) addresses the potential impacts that could result from those improvements undertaken by USACE. This project, located within the city limits of Gautier, Mississippi is a component of an overall plan to improve the City’s water and wastewater system (**Figure 1**).

The purpose of this EA is to determine whether the proposed action has the potential for creating significant impacts to the environment and would thereby warrant an Environmental Impact Statement which would involve a more detailed study on possible impacts, possible mitigation, and alternative courses of action.

1.1 Project Authorization

Pursuant to Section 219(c)(5) of the Water Resources Development Act of 1992, Public Law 102-580, as amended, the City of Gautier requested that USACE, Mobile District design and construct a nanofiltration treatment unit that will treat the water using newer technology than the existing Ion Exchange Plant.

The authorization of appropriations for construction assistance is provided in Section 219(e)(1), as amended by Section 504 of WRDA 1996; technical corrections in Public Law 106-109; Section 5158, and Section 352 as follows: “AUTHORIZATION OF APPROPRIATIONS FOR CONSTRUCTION ASSISTANCE. – It is authorized to be appropriated for providing construction assistance under this section – (1) \$57,500,000 for the project described in subsection (c)(5).” Federal funds have been secured through the Fiscal Year 2020 work plan under Public Law 116-94, FURTHER CONSOLIDATED APPROPRIATIONS ACT, 2020.

2 NATIONAL ENVIRONMENTAL POLICY ACT CONSIDERATIONS

This EA has been prepared in accordance with the National Environmental Policy Act (NEPA). The NEPA and Title 40 of the Code of Federal Regulations (CFR), Parts 1500-1508; 1515-1518 (40 CFR 1500-1508; 1515-1518) require Federal agencies to consider the potential environmental consequences of proposed actions and alternatives. The Council on Environmental Quality (CEQ) published its Final Rule: Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA) in the Federal Register July 16, 2020 (40 CFR §1500-1508, 2020). The new CEQ NEPA Regulations went into effect September 14,

2020. As such, this EA has been prepared in accordance with the NEPA and the CEQ 2020 regulations.

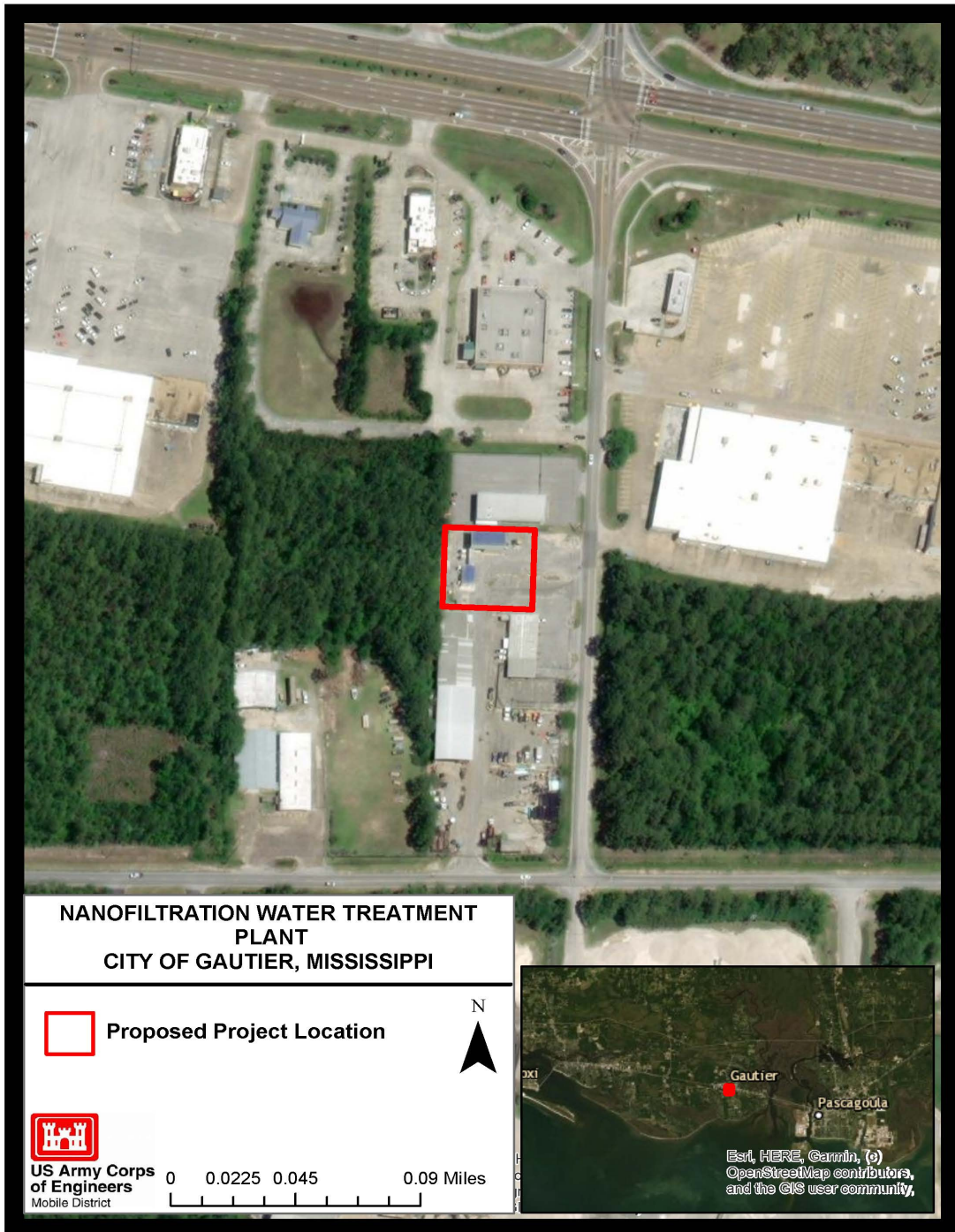


Figure 1: Project Location Map

3 PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of the proposed action is to upgrade the water treatment plant by installing a new nanofiltration system to improve the quality of the drinking water for the City of Gautier, Mississippi, the Non-Federal Sponsor for this project. The City is responsible for operation and maintenance of the water system and providing a continually safe and adequate drinking water supply that is compliant with the Safe Drinking Water Act. The City has an existing Ion Exchange Water Treatment Plant that is capable of treating 1 million gallons per day (MGD) of water and is located at the public works department on Vanleave Road. However, approximately 4 hours or more per day, the treated water from the Ion Exchange Plant has a brown discoloration. Therefore, the need for the proposed action is to improve the quality of the drinking water for citizens and stakeholders in Gautier. As part of the improvements, expanding the city's treatment options to eliminate the color in the Gautier's drinking water is a priority for the City. Pursuant to Section 219(c)(5) of the Water Resources Development Act of 1992, Public Law 102-580, as amended, the City of Gautier requested that USACE, Mobile District design and construct a nanofiltration treatment unit that will treat the water using newer technology than the existing Ion Exchange Plant.

The City recently adopted a Capital Improvements Plan for improvements to the water and wastewater systems. As recommended by the plan, city officials have authorized the design of certain water distribution system improvements in the city's southeast sector (the Proposed Action), which includes a 3 MGD color-removal nanofiltration water treatment facility. Nanofiltration is often used to filter water with low amounts of total dissolved solids, to remove organic matter and soften water. Because it is a "looser membrane", nanofiltration membranes are less likely to foul or scale and require less pretreatment than reverse osmosis systems.

4 PROJECT DESCRIPTION

The proposed action consists of the construction of a nanofiltration water treatment plant to effectively remove discoloration from the City of Gautier's water supply. Nanofiltration is a relatively new technology for potable water generation that uses a membrane filtration process to remove harmful contaminants. The City of Gautier has an existing Ion Exchange Water Treatment Plant that is capable of treating 1 MGD of water. USACE, Mobile District proposes to add a nanofiltration unit as a treatment alternative to the ion exchange system. The nanofiltration water treatment plant actions will consist of the installation of four water treatment trains (skids), construction of underground piping, building enclosures, concrete pad, and a clean-in-place system on less than one acre of disturbed area on the public works site. Additional actions will include the installation of a sodium hypochlorite system (disinfection) and the electrical components necessary to run the nanofiltration treatment trains (**Figure 2**).

The underground piping will connect the new nanofiltration units to the raw water line feeding the existing ion exchange system. The nanofiltration skids and the clean-in-place equipment, which backwashes the nanofiltration filters, will be located onsite and

housed in a new 48'x82' metal building made of a pre-engineered structural steel frame with metal walls and roof panels including gutters and downspouts on a 250x250x9 concrete slab for protection of the equipment. The membrane reject (discolored water) will be piped to the ion exchange plant lift station for disposal. The new hypochlorination dosing system will disinfect the filtered water prior to entry into the distribution system. The four nanofiltration skids will allow for three of the units to be in operation while allowing one unit to be offline for backwashing and simultaneously providing 3 MGD of treated water to the distribution system. The nanofiltration water treatment plant will operate automatically and unattended, 24 hours per day/365 days per year, at maximum capacity. The installation of the nanofiltration water treatment plant will not impact or interrupt service to the public.

Nanofiltration Water Treatment Plant

City of Gautier, Mississippi

Mar 2021

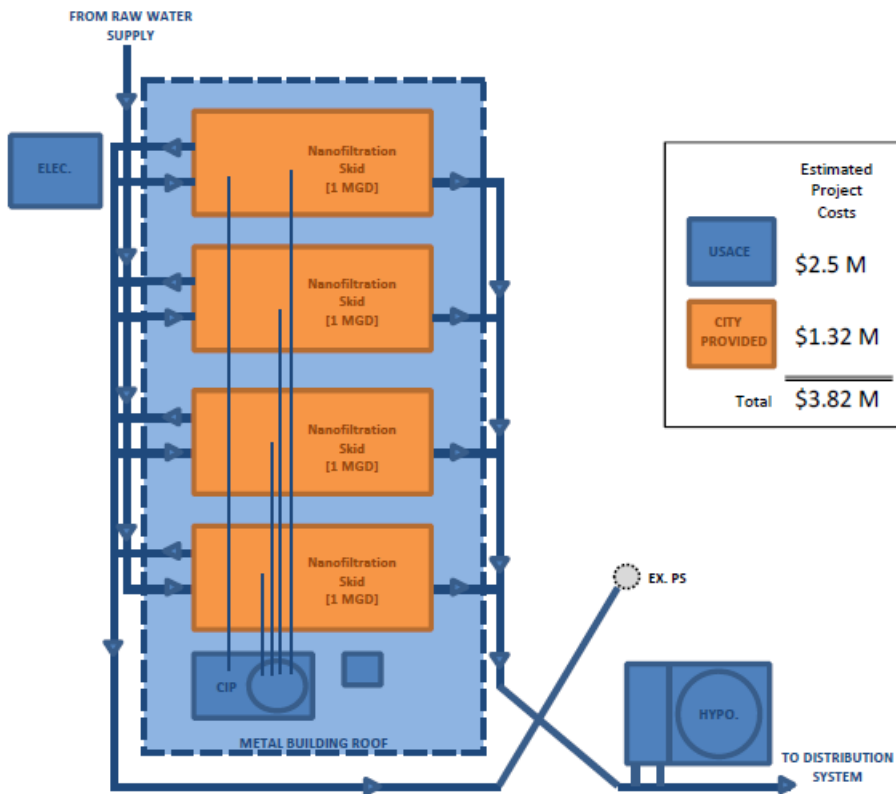


Figure 2: Nanofiltration Water Treatment Plant

5 ALTERNATIVE TO THE PROPOSED ACTION

5.1 No Action Alternative

Alternative 1: NEPA defines a No Action as the continuation of existing conditions in the affected environment without the implementation, or in the absence of the proposed action. Inclusion of the No Action alternative is prescribed by the CEQ regulations as the benchmark against which Federal actions are to be evaluated. The implementation of the No Action alternative would result in the City of Gautier operating the water system inefficiently by periodically exhibiting discoloration. Project abandonment would result in inefficiency of the water system and jeopardize the local community with inadequate drinking water.

5.2 Preferred Alternative

The proposed action is the preferred alternative as described in Section 4.

6 GENERAL SETTINGS

6.1 Environment

The project area is located in a developed urbanized area in Gautier, Mississippi at the Department of Public Works (**Figure 3**). The project footprint is located on a concrete slab adjacent to the Ion Exchange Plant. The natural environment of the surrounding area, outside of the site, includes trees, wetlands, and bayous. Due to industrial production and urbanization, the immediate project footprint is incapable of supporting a natural habitat.

6.2 Climate

The project area is located in a humid subtropical climate region, characterized by temperate winters, warm summers, and rainfall that is fairly evenly distributed throughout the year. Per information from the Natural Resources Conservation Service (NRCS), the prevailing wind is from the north with the average relative humidity in mid-afternoon of 69 percent, higher at night, and at dawn approximately 88 percent. In winter, the average temperature is 52 degrees Fahrenheit (F) and the average daily minimum temperature is 43 degrees. In summer, the average temperature is 81.0 degrees and the average daily maximum temperature is 89.0 degrees. The average annual total precipitation is about 66 inches. Of this, approximately 51 inches or 77 percent, usually falls in March through November (NRCS, 1995).

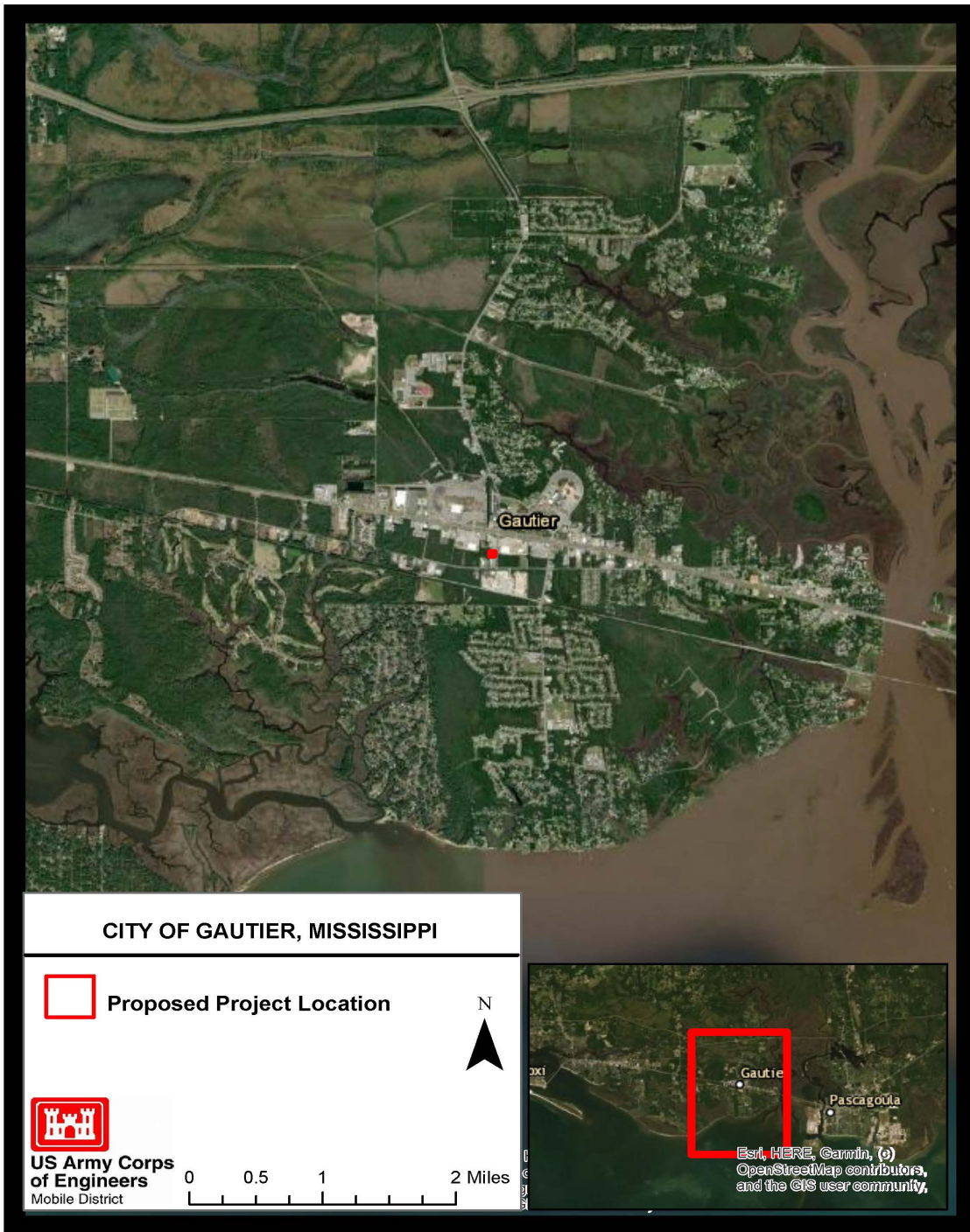


Figure 3: Project Aerial Vicinity Map

6.3 Topography, Geology, and Soils

The project lies entirely in the Gulf coastal plain physiographic province and is located in the Coastal Meadow topographic unit (NRCS, 1995). The unit is underlain by sands, gravels, clays, and silts of Holocene- and Pleistocene age. The topography of the Jackson County ranges from hilly and moderately dissected uplands in the northwestern part of the county to flat to gently rolling terraces near the coast and along the rivers. The highest elevation is slightly over 200 feet in the extreme northwest corner of the county. Elevation decreases to sea level along the coastline (NRCS, 1995).

The stratigraphic units exposed in Jackson County are Miocene, Pliocene, Pleistocene, and recent marine and continental sediments. These formations include, from oldest to youngest, the Pascagoula Formation, Graham Ferry Formation, Citronelle Formation, Terrace Deposits, Coastal Deposits, Alluvium, and Salt Marshes (Harvey, Golden, and Jeffery, 1965).

The Bayou series is the dominant soil type in the project site location. These soils consist of poorly drained soils that have a loamy surface layer, a loamy subsoil and somewhat poorly drained soils that have a loamy surface layer and a clayey subsoil. Slopes range from 0 to 2 percent. The secondary soil type in the area is the Atmore series, which consists of very deep, poorly drained, moderately permeable soils in depressions and interstream divides. Slopes typically range from 0 to 8 percent, and form in sandy and loamy marine deposits (NRCS, 1995).

6.4 Hydrology Water Resources

The project site is located within the Pascagoula River watershed, which discharges into the Mississippi Sound. Portions of 20 counties in southeast Mississippi are drained by tributaries associated with the Pascagoula River, making it Mississippi's second largest river basin. The river forms the eastern border of the City of Gautier, providing the community with a wealth of fishing and other water-based recreation opportunities. The primary source of drinking water in the Gautier area is from eight deep groundwater wells, which extract groundwater from the Lower Graham Ferry and Upper Pascagoula aquifer formations (NRCS, 1995). These aquifer formations have an abundant supply of freshwater and are large enough that the City's water demand has negligible adverse effects on the formations due to drawdown. The eight wells are rated to be able to provide the City with 3,580 gallons per minute or 5.2 MGD (Ferrill, 2020).

7 AFFECTED ENVIRONMENT

The proposed project is located in an urbanized and developed area of the City of Gautier, in Jackson County, Mississippi. The project area is primarily of commercial use with a nonexistence use for habitat. Gautier is a Mississippi Gulf Coast community, bordered to the east by Pascagoula, to the west partially by Ocean Springs, and to the north by the community of Vancleave. The city covers thirty-three square miles and is

part of the Pascagoula Metropolitan Statistical Area. The population was 18,572 at the time of the 2010 Census and decreased to 18,490 at the 2019 census (US Census Bureau, 2010-2019).

7.1 Water Quality

The project sites are located within the Pascagoula River watershed, which discharges into the Mississippi Sound. An annual inspection of the drinking water supply is conducted by the MSDH. The latest inspection conducted on August 18, 2020, indicated the water system appeared to be well maintained and operating properly and is currently serving 94.5% of the customers that it was designed to serve (Ferrill, 2020).

The City monitors for coliform/microbial and non-microbial contaminants in the distribution system as regulated by the MSDH (Ferrill, 2020). A review of coliform/microbial data indicated a presence of coliform in August of 2020. Additional sampling was taken upstream and downstream of the site as required within 24 hours of noncompliance. The resampling of coliform was >1/100ml. Non microbial test results in 2021 indicated Sodium samples were reported as negligible. Nitrate results in 2021 reported values of 0.1 mg/L, 0.08 mg/L, and 0.02 mg/L and were considered less than the indicator. Therefore, sample results were compliant with drinking water standards.

7.2 Air Quality

The Clean Air Act (CAA) requires the U.S. Environmental Protection Agency (USEPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. NAAQS include two types of air quality standards. Primary standards protect public health, including the health of sensitive populations, such as asthmatics, children, and the elderly. Secondary standards protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. USEPA has established NAAQS for six principal pollutants, which are called “criteria pollutants.” Criteria pollutants include carbon monoxide, lead, nitrogen dioxide, particulate matter, ozone, and sulfur dioxide. Areas that meet the air quality standard for the criteria pollutants are designated as being “in attainment.” Areas that do not meet the air quality standard for one of the criteria pollutants may be subject to the formal rule-making process and designated as being “in non-attainment” for that standard.

Jackson County is in attainment with the NAAQS of the CAA. Therefore, the County is meeting air quality standards for all criteria pollutants (EPA, 2021).

7.3 Hazardous, Toxic, Radioactive Waste

A records search of pertinent and available listings of potential environmental concerns on or within a 0.5-mile radius distance of the site was conducted. A search on the Environmental Data Resources (EDR) database provided the listing of potential Hazardous Toxic Radioactive Waste (HTRW) sites from a review of standard Federal

environmental records including: The National Priority List, Comprehensive Environmental Response Compensation and Liability Information, and the Resource Conservation and Recovery Act of 1976 (RCRA). State records included in the EDR encompass the Underground Storage Tank, Leaking Underground Storage Tank and State Hazardous Waste Sites lists.

The records search indicated the City Hall property has three listings in the EPA database; however, it appears that the listings refer to a permit issued for the ion exchange water treatment plant that is located at the Public Works Department on Gautier-Vancleave Road. There is one RCRA site located within a 0.25-mile radius from the Public Works Department, which is listed as a Penske Auto Center (EDR Radius Map Report, October 2019).

7.4 Floodplain

Projects which are subject to NEPA review as a result of actions by Federal agencies or projects that receive Federal funding, must minimize the impact to and modification of floodplains (Web Mapping Page, 2020). Projects that are sited in the 100-year floodplain must consider alternatives to avoid adverse effects and incompatible development in the floodplain. The City of Gautier participates in the Federal Emergency Management Agency's (FEMA), the National Flood Insurance Program (NFIP) and enforces a flood damage prevention ordinance to minimize public and private losses due to development in the Special Flood Hazard Area (SFHA). The City of Gautier uses Flood Insurance Rate Maps (FIRM) to determine if a property is in the SFHA. The FIRMs (28059C0319G, March 15, 2009) indicated the project is located within designated Zone X, defined as moderate flood hazard, between the limits of the 100-and 500-year floods. See **Figure 3**.

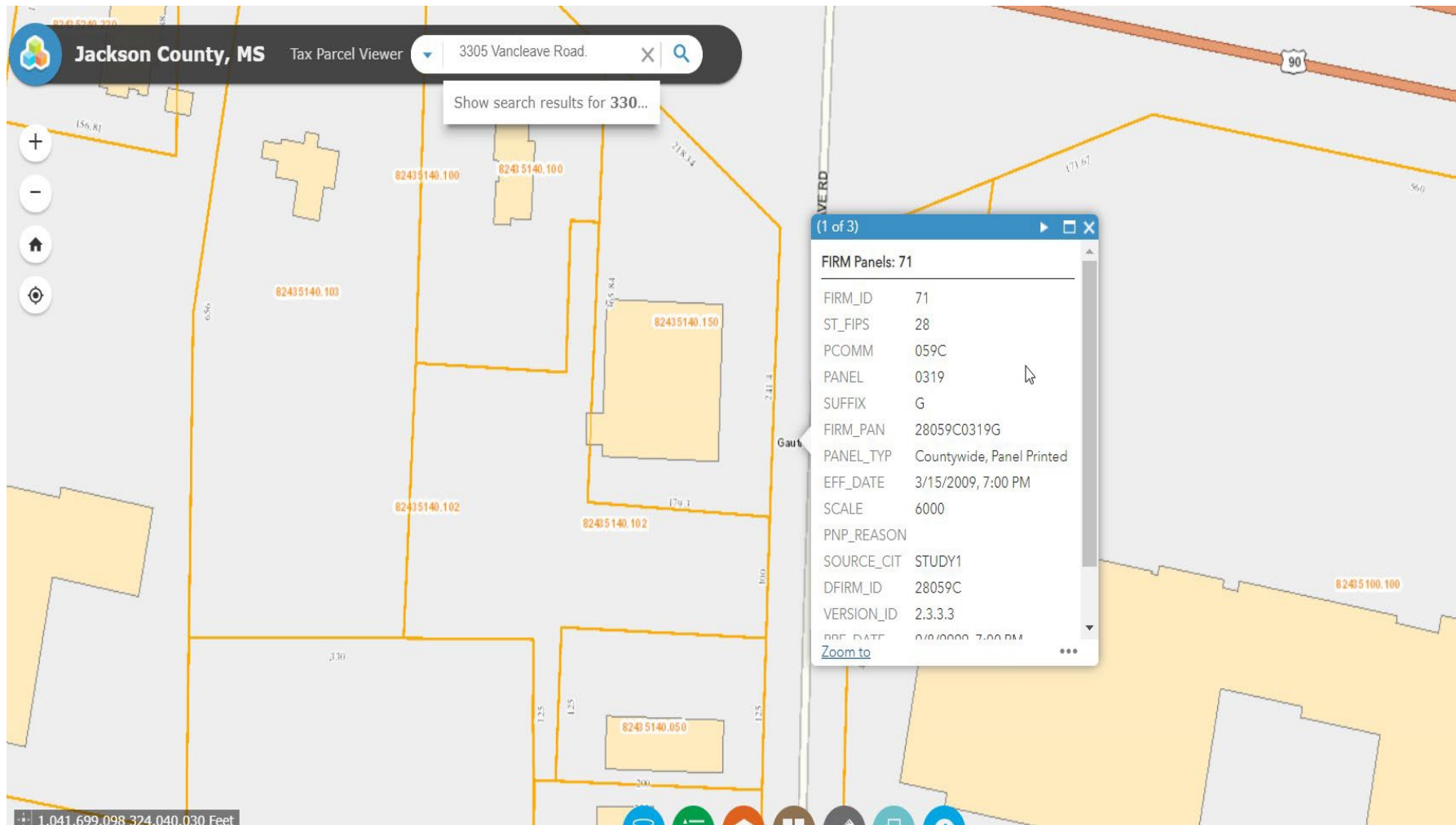


Figure 4: Flood Insurance Rate Map, FEMA (2009)

7.5 Biological Resources

7.5.1 Wetlands

There are no wetlands located in the project area's footprint, as the project area is urbanized and developed on a concrete slab. However, wetlands closest to the project site are freshwater forested/shrub habitats that are approximately 0.05-miles from the project footprint (**Figure 4**).

The project site does not directly border a surface water body or waterway, but untreated runoff from the site is conveyed by the drainage collection system to Graveline Bayou, 2.5-miles northwest of the project site, which ultimately drains to the Mississippi Sound.

7.5.2 Essential Fish Habitat

Essential Fish Habitat (EFH) is defined in the Magnuson-Stevens Fishery Conservation and Management Act as... "those waters and substrates necessary to fish for spawning, breeding, feeding or growth to maturity." The designation and conservation of EFH seek to minimize adverse effects on habitat caused by fishing and non-fishing activities. The National Marine Fisheries Service (NMFS), Habitat Conservation Division (HCD) has identified EFH habitats for the Gulf of Mexico in its Fishery Management Plan Amendments (Table 1).

Although, the region provides habitat for many waterfowl, shorebirds, and fish species, the project is located within a developed urban area which is considered a poor habitat for species due to the amount of developed properties and proximity to human activity. Therefore, there is no EFH affected.



Figure 5: National Wetlands Inventory Mapping

7.5.2.1 Threatened and Endangered Species

Table 1 provides the species listed for Jackson County by the U.S. Fish and Wildlife Service (USFWS) as either threatened, or endangered.

Species	Scientific Name	Status
Alabama Red-bellied turtle	<i>Pseudemys alabamensis</i>	E
Loggerhead sea turtle	<i>Caretta caretta</i>	T
Green sea turtle	<i>Chelonia mydas</i>	T
Leatherback sea turtle	<i>Dermochelys coriacea</i>	E
Hawksbill sea turtle	<i>Eretmochelys imbricate</i>	E
Kemp's ridley sea turtle	<i>Lepidochelys kempii</i>	E
Yellow blotched map turtle	<i>Graptemys flavimaculata</i>	T
Black pine snake	<i>Pituophis melanoleucus lodingi</i>	T
Gopher tortoise	<i>Gopherus polyphemus</i>	T
Piping plover	<i>Charadrius melodus</i>	T
Red knot bird	<i>Calidris canutus rufa</i>	T
Mississippi sandhill crane	<i>Grus canadensis pulla</i>	E
Wood stork	<i>Mycteria Americana</i>	T
Red cockaded woodpecker	<i>Picoides borealis</i>	E
Eastern black rail	<i>Laterallus jamaicensis ssp. Jamaicensis</i>	T
Dusky gopher frog	<i>Rana sevosa</i>	E
West Indian manatee	<i>Trichechus manatus latirostris</i>	T
Gulf sturgeon	<i>Acipenser oxyrinchus (=oxyrhynchus) desotoi</i>	T
Pearl Darter	<i>Percina aurora</i>	T
Louisiana Quillwort	<i>Percina aurora</i>	E

Table 1: Threatened and Endangered Species listed by USFWS

The project site is located on city property and within city right-of-way, with no natural habitat. A request for a review of threatened and endangered species in the area was submitted to the USFWS by the City and was determined that the project site does not contain any suitable habitats for species that are protected under the Endangered Species Act (ESA). Therefore, it is determined that impacts to ESA is unlikely due to the location of the proposed action.

7.5.3 Terrestrial Wildlife

The region provides habitat for many waterfowl, shorebirds, and a variety of fish species. However, the project area is located within a developed urban area which is considered an unlikely habitat for wildlife due to the nature of the project activities.

7.6. Cultural Resources

The project area is urbanized and will be constructed on an existing, developed concrete slab in a previously disturbed area. According to the Mississippi Department of Archives and History (MDAH) Historic Resources Inventory Database there are no recorded historic properties within the project Area of Potential Effect (APE). Consultation with the Mississippi State Historic Preservation Officer (SHPO) and the appropriate federally recognized tribes will be conducted.

7.7 Aesthetics

The City of Gautier's eastern border is the Pascagoula River, which offers water recreation, fishing, and eco-tourism opportunities. This river is also known as the Singing River. Gautier enjoys one of the highest elevations on the Gulf Coast, with both sprawling bluffs and low-lying fishing villages within its 33 square miles. More than 70 miles of waterfront line Gautier, as it's nestled between bayous, barrier islands, and the only unimpeded waterway in the United States, the eco-rich Pascagoula River (City of Gautier, 2017). The aesthetics of the Gulf Coast makes the area a popular destination for travel and fishing. However, there are no natural aesthetics within the immediate project footprint.

7.8 Social Economic Environment

7.8.1 Economic Activity

In 2018, Gautier had a population of 18.6 thousand people with a median age of 37.1 and a median household income of \$47,492. Between 2017 and 2018 the population of Gautier grew from 18,555 to 18,563, a 0.0431% increase and its median household income declined from \$49,784 to \$47,492, a -4.6% decrease.

The economy of Gautier employs approximately 7.8 thousand people. The largest industries are manufacturing (1,521 employees), health care and social assistance (1,030 employees) and accommodation and food services (786 employees), with the highest salaried industries are utilities (\$70,795/year), manufacturing (\$46,047/year), and construction (\$42,253/year) (Data USA Profile, 2018).

7.8.2 Land Use

The project site is located within the southeast region of Jackson County that has a land area of 439,860 acres. Population and development are concentrated primarily in the southern portion of the County. Over one-half of all the land in Jackson County is undeveloped or in agricultural use. Much of the undeveloped land is not suitable for

development because of environmental or regulatory constraints. Industrial and commercial activities occupy less than 1% of land in Jackson County's unincorporated areas (Jackson County Comprehensive Plan, 2009).

The project area is currently zoned as Town Center Mixed Use (TCMU). The TCMU District encourages the development of commercial and residential facilities that will continue to better serve the residents and visitors of the City of Gautier. The land use adjacent to the project site is for commercial use and nearby jurisdictional wetland habitat.

7.9 Recreation

Gautier Mississippi located on the beautiful Gulf Coast is known as "Nature's Playground". The city has outdoor recreations and tourists can enjoy eco-tours through the bayous and view egrets and white pelicans as well as nearby coastal beaches. Shepard State Park located in the southeast area of the city has 395 acres abounding with trees and wildflowers, bike and nature trails, and 28 developed campsites. The park is near Singing River (Pascagoula River) with amenities and activities including hiking, birding, disc golf, a dog park, boat launch, and a competition-level archery range (City of Gautier, 2017).

Mississippi Sandhill Crane National Wildlife Refuge (NWR), a wet pine savanna, is also in the vicinity of the area. The Sandhill Crane (NWR) is part of the Gulf Coast Refuge Complex, which includes Grand Bay NWR and Bon Secour NWR (**Figure 5**). The NWR, Shepard State Park, local beaches, and various fishing piers are in close proximity to the project area. There is no recreation located within the project footprint.

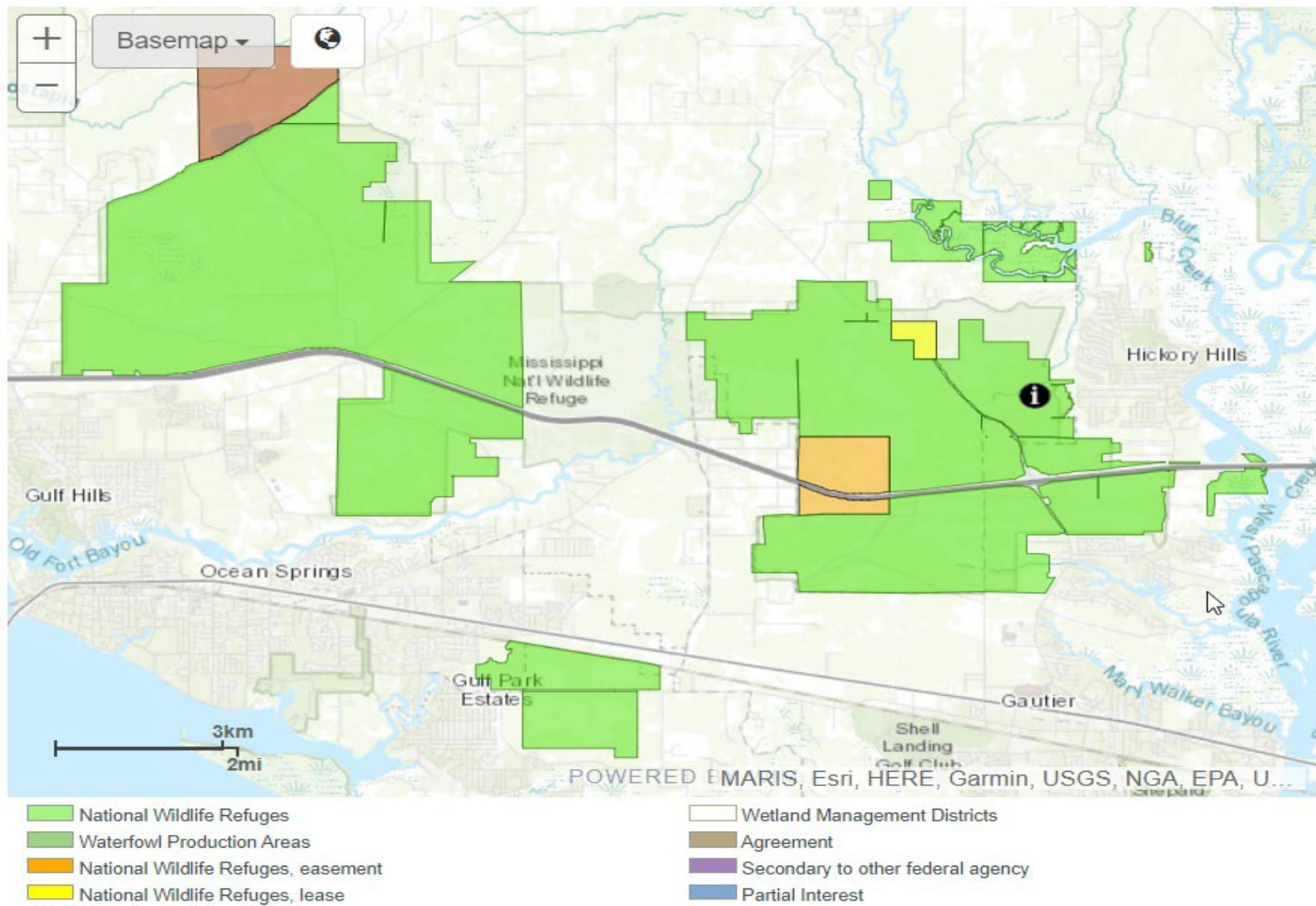


Figure 6: USFWS- Mississippi Sandhill Crane National Wildlife Refuge

7.10 Noise

Noise levels in the area are typical of urban areas, motor vehicles, construction, and railroad. Noise levels could fluctuate with the highest levels usually occurring during the spring and summer months due to increased construction, travel, and coastal beach activities.

8 ENVIRONMENTAL IMPACTS

Performing an evaluation of environmental impacts for proposed Federal actions is a requirement of Federal law (40 CFR §1500-1508, 1515-1518). An impact analysis must be compared to a significance threshold to determine whether a potential consequence of an alternative is considered a significant impact. If the impact is significant, it may be mitigated (i.e., measures are available to reduce the level of impact, so it is no longer significant) or unmitigated.

Environmental impacts to the preferred alternative, the proposed action, are nonexistent. The construction of a water treatment plant to utilize a nanofiltration system to effectively remove discolored water and installation of a sodium hypochlorite system (disinfection) and the electrical components necessary to run the nanofiltration treatment trains from the City's water supply is essential for adequate drinking water.

8.1 Hazardous, Toxic, Radioactive, Waste

Preferred Alternative: There are no foreseen impacts from any of the HTRW sites. Based on the EDR, there is one RCRA site located within a 0.25- mile radius from the Public Works Department, which is listed as a Penske Auto Center (EDR Radius Map Report, October 2019). The project area will not be impacted by the proposed action.

No Action Alternative: Implementation of the no action alternative would not cause any long-term adverse impacts to HTRW sites.

8.2 Floodplain

Preferred Alternative: No impacts to flooding are anticipated. The FIRMs (28059C0319G, March 15, 2009) indicated the project is located within designated Zone X, defined as moderate flood hazard. The proposed action would not promote development that would impact or alter the designated flood hazard areas.

No Action Alternative: Implementation of the no action alternative would not cause any long-term adverse impacts to flood hazard areas.

8.3 Biological Resources

8.3.1 Wetlands

Preferred Alternative: No impacts to wetlands would occur from the improvements to the City's water treatment plant. There are no jurisdictional wetlands located within the project area. Therefore, no impacts will occur due to proposed action.

No Action Alternative: Implementation of the no action alternative would not cause any long-term adverse impacts to adjacent wetlands.

8.3.2 Water Quality

Preferred Alternative: No adverse impacts to water quality are anticipated. The benefits of the nanofiltration treatment trains are expected to enhance the quality of the drinking water by removing discoloration. However, any potential impacts are expected to be temporary or minimal. In order to minimize potential impacts to water quality as a result of construction activities, USACE will employ Best Management Practices (BMPs) such as placing silt fencing, baled hay or straw erosion checks for the retention of soil along the toe of fill slopes, around inlets, swale areas, and other areas as directed by the Engineer around disturbed areas. Potential stormwater impacts from construction will be identified and the necessary BMPs will be implemented to limit runoff from the site into the storm drainage. USACE will restore all disturbed areas to the original condition. All BMPs would be maintained until the proposed activity is complete.

No Action Alternative: The No Action alternative would cause any long-term adverse impacts to water quality. The city's water supply is susceptible to loss of service to customers if one or more of the existing wells becomes inoperative.

8.3.3 Essential Fish Habitat

Preferred Alternative: The proposed action does not contain any coastal habitat identified as EFH in the project area.

No Action Alternative: Implementation of the no action alternative would not cause any long-term adverse impacts to EFH.

8.3.4 Terrestrial Wildlife

Preferred Alternative: No significant impacts to terrestrial wildlife are anticipated. Terrestrial wildlife is located within the region; however, the project area is located in an urban developed area with no natural habitat and in close proximity to human activity.

No Action Alternative: Implementation of the no action alternative would not cause any long-term adverse impacts to terrestrial wildlife.

8.4 Cultural Resources

Preferred Alternative: According to the Mississippi Department of Archives and History (MDAH) Historic Resources Inventory Database there are no recorded historic properties within the project APE. The proposed action will have no effects to historic properties.

No Action Alternative: Implementation of the no action alternative would not cause any impacts to historic properties.

8.5 Aesthetics

Preferred Alternative: Access to the project area would be restricted during construction operations. Aesthetics will be temporarily impacted in the immediate vicinity of the proposed project area. Therefore, no significant long-term impacts are likely to occur.

No Action Alternative: Implementation of the no action alternative would result in no impacts to any aspect of aesthetics.

8.6 Social Economic Environment

8.6.1 Economic Activity

Preferred Alternative: No significant impacts to the economic activity in the project vicinity were identified in this evaluation. The proposed action will benefit the local economy by ensuring a safe and operational water treatment system that would accommodate increased growth of the city's population.

No Action Alternative: Implementation of the no action alternative would result in no improvements to the treatment system; therefore, would impact the economic activity of the city by depriving the local community with inadequate drinking water.

8.6.2 Land Use

Preferred Alternative: There are no new impacts being proposed to the land; therefore, it is not anticipated to have any adverse impacts.

No Action Alternative: Implementation of the no action alternative would result in no impacts to any aspect of the surrounding land use.

8.7 Recreation

Preferred Alternative: No significant impacts to recreation as a result of the proposed actions. There are no recreational facilities within proximity of the project area.

No Action Alternative: Implementation of the no action alternative would result in no impacts to recreation.

8.8 Noise

Preferred Alternative: Noise from the construction equipment is expected to increase during the proposed operations in the project vicinity. Noise levels will resume to prior conditions once the construction is complete. No long-term increase in noise will occur in or around the project area.

No Action Alternative: Implementation of the no action alternative would result in no impacts to any aspect of noise in the project area.

8.9 Reasonably Foreseeable Impacts

The proposed action covers a small area, less than an acre, at the Public Works Department facility of Gautier, Jackson County. The proposed construction activity will occur within a 12 months' time frame. Any similar projects in the foreseeable future are not expected to cause adverse effects to water quality, biological, historic, and fishery resources.

This proposed action has the potential to improve the efficiency of the treatment system and adequate drinking water for the City of Gautier.

9 OTHER PERTINENT ENVIRONMENTAL LAWS AND REGULATIONS

9.1 Clean Water Act

Based on the nature and location of the project within a developed urban area that is not tidally influenced, State Water Quality Certification and Coastal Zone Consistency reviews are not required. Excavation of the construction area is less than acre, therefore, the City of Gautier is exempt from the Storm Water Construction General permit.

9.2 Protection of Children

Executive Order (EO) 13045, the Protection of Children from Environmental Health Risks and Safety Risks, was issued April 23, 1997. EO 13045 applies to significant regulatory actions that concern an environmental health or safety risk that could disproportionately adversely affect children.

Environmental health risks or safety risks refer to risks to health or to safety that are attributable to products or substances that the child is likely to encounter or ingest. The proposed action would not impact the health and safety of children. Barriers, site workman, and other measures would be implemented to provide protection to non-project workers.

9.3 Environmental Justice

EO 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations (February 11, 1994), requires that Federal agencies conduct their programs, policies, and activities that substantially affect human health or the environment in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including

populations) to discrimination under such programs, policies, and activities because of their race, color, or national origin. The proposed project is not designed to create a benefit for any group or individuals. The proposed activities do not create disproportionately high or adverse human health or environmental impacts on any low-income populations of the surrounding area. Review and evaluation of the proposed project have not disclosed the existence of identifiable minority or low-income communities that will be adversely affected by the proposed project.

The Environmental Justice Screening and Mapping Tool (EJSCREEN) on EPA's website was used to determine the environmental and demographic indicators for the project area.

10 COORDINATION

The EA will be made available to Federal, state, local agencies, and interested persons via 30-day public notice. Any comments on the action will be addressed in the EA.

11 CONCLUSION

Based on the above discussion, implementation of the proposed action, construction activities are not projected to have any adverse effects. The EA will be made available for public review. A Findings of No Significant Impacts (FONSI) will be prepared, and upon finalization, the FONSI, shall be signed by the District Commander.

12 LIST OF PREPARERS

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13 REFERENCES

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