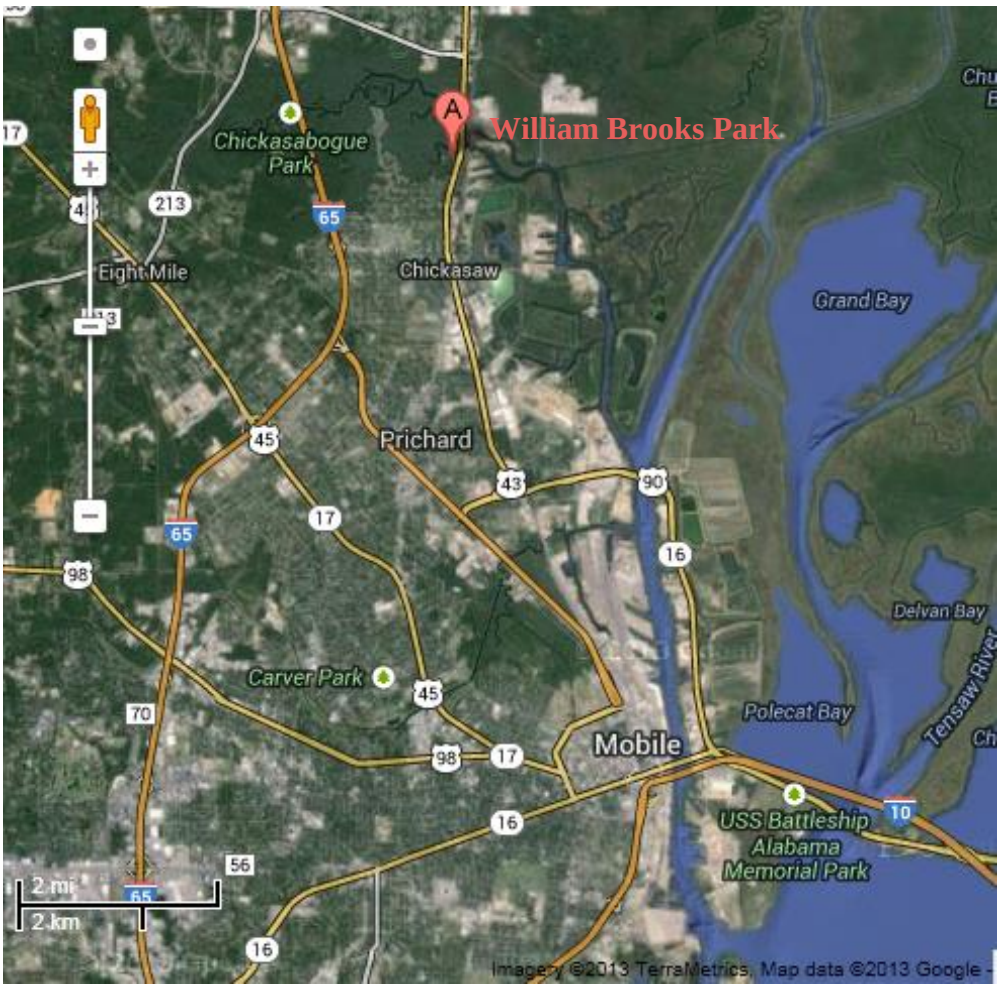
FINAL ENVIRONMENTAL ASSESSMENT **January 2014**

William Brooks Park Boardwalk Extension and Bird Observation Tower

Chickasaw, Alabama



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1.0 INTRODUCTION

The Alabama Coastal Area Management Program (ACAMP) is a federal-state partnership between the National Oceanic and Atmospheric Administration's (NOAA's) Office of Ocean and Coastal Resource Management (OCRM) and the Alabama Department of Conservation and Natural Resources (ADCNR). ACAMP was approved by NOAA under the Coastal Zone Management Act (CZMA) in 1979. In accordance with the CZMA, NOAA provides funding to approved state coastal zone management programs that can be used for a number of purposes, including program administration (under Section 306 of the CZMA) and low-cost construction projects (under Section 306A of the CZMA) to provide or enhance public access to coastal areas, among other purposes.

NOAA proposes to provide half the funding, through ACAMP, to enable construction of a two-level bird observation tower at William Brooks Park, in the City of Chickasaw, Alabama, and a 450-foot extension of an existing elevated boardwalk to connect it to the observation tower. Chickasaw is in Mobile County, Alabama, and it is approximately 5 miles north of the City of Mobile. The City of Chickasaw is less than 4 square miles in size. Creeks and bayous shape the geography of the area. Brooks Park offers a variety of recreational opportunities and is located at 599 North Craft Highway (U.S. Highway 43), north of Bellwood Lane and south of Chickasaw Creek. An approximately 11-acre park was first established in 1975. Acquisition of an adjacent 2.5-acre peninsula-shaped parcel along Chickasaw Creek and public access enhancements to it were proposed by 2007, in a Conceptual Master Plan for Brooks Park. In 2012, the City acquired and incorporated into Brooks Park this parcel in the northwest corner of the park, north of Bellwood Lane, which includes approximately 1,000 feet of shoreline along Chickasaw Creek. If funded by NOAA, ACAMP, and the City of Chickasaw, the proposed project would allow the City to extend its boardwalk system into the recently-acquired area to provide safe access for visitors and erect a bird viewing tower that would provide a sheltered place, with wide viewing angles, from which visitors could observe riparian and wetland settings, as well as wildlife. This project would address the final improvements suggested in the 2007 Conceptual Master Plan and would improve accessibility, visitor safety, and opportunities to observe the natural environment.

This Environmental Assessment (EA) will assess the impacts associated with providing federal funding for the proposed public access improvements at William Brooks Park and a No Action alternative. This EA document has been prepared in conformance with requirements for implementation of the National Environmental Policy Act (NEPA) and NOAA Administrative Order 216-6, Environmental Review Procedures for Implementing the NEPA, and analyzes the potential for significant environmental impacts to the human environment by the proposed action, along with the No Action alternative.

1.1 Background

Brooks Park accommodates approximately 5,000 visitors per year (A. Gohres, ACAMP, personal communication, July 18, 2013). It is a popular destination for a variety of recreational activities, including picnicking, walking, boating, fishing, bird watching, geocaching, and nature education. Along with two fishing piers, the park currently offers such amenities as boat

launching facilities, picnic facilities, gazebos, restrooms, boardwalks, trails, and benches from which visitors can observe the natural environment and wildlife. It is one of only a few public parks in the Mobile area that provides visitors direct access to Chickasaw Creek, part of the Mobile-Tensaw River watershed, upstream of Mobile Bay (City of Chickasaw, 2013, Chapter 6). The park is a stop along both Mobile County's Ron Jones Paddle Trail and the Alabama Coastal Birding Trail (A. Gohres, personal communication, July 18, 2013; Alabama Coastal Birding Trail, 2012). During the annual Alabama Coastal Birding Fest, tours stop at Brooks Park (see http://www.alabamacoastalbirdfest.com). Currently, there are no observation towers within Brooks Park or covered pavilions over the open water of Chickasaw Creek. Figure 1 is an aerial photograph of Brooks Park (see Appendix A, which contains all the figures).

For the past approximately 15 years, the City of Chickasaw has leveraged resources and partnerships to improve recreational opportunities at Brooks Park and enhance multiple uses of the waterfront. A Conceptual Master Plan for Brooks Park (see Figure 2) was developed in 2007, partly with NOAA funding provided through ACAMP. Recommended enhancements identified in the plan that have already been made include projects to clean up the park, plant native species and remove invasive species, expand the upland trail system, repair an existing fishing pier and restrooms, build a new pier, install a boardwalk, and erect new signs (A. Gohres, personal communication, July 3, 2013). In 2012, the City of Chickasaw acquired 2.5 acres of land along Chickasaw Creek, northwest of Bellwood Lane, and incorporated this land into Brooks Park (A. Gohres, personal communication, September 27, 2013). This land is in the northwestern portion of the park and appears in both Figure 2 (because the land acquisition was already envisioned when the Conceptual Master Plan was finalized) and Figure 3 (which shows the boundaries of the land acquired in 2012). Currently, the park is approximately 13.5 acres and includes approximately 3,500 linear feet of boardwalks and an additional 800 linear feet of trails (C. Stallman, for the City of Chickasaw, personal communication, January 2, 2014). The City is developing a *Comprehensive Plan 2030* that outlines goals and visions for the community's future, including a few potential improvements to Brooks Park. A draft of this plan was released for public comment in December 2013, giving City residents an opportunity to comment on strategies to potentially implement at Brooks Park in the future, as well as other planning and development issues (City of Chickasaw, 2013).

1.2 Summary of Proposed Action and Alternatives

NOAA's OCRM proposes to provide $20,000 in CZMA funding to ACAMP to extend an existing 8-foot wide elevated boardwalk by approximately 450 linear feet, ending at a new observation tower over Chickasaw Creek. This funding would cover half the cost of the project; the other half would come from match provided by the City of Chickasaw. These infrastructure improvements would give visitors access to the 2.5 acres added to Brooks Park in 2012, northwest of most existing park land and infrastructure. The new boardwalk segment would connect existing boardwalks to the proposed bird observation tower. The tower would be 24 feet wide by 24 feet long and suitable for groups. Visitors could ascend to an upper viewing area (8 feet above the lower viewing area) via ten stairs, and there would be a metal roof above the upper viewing area. The total height of the tower would be approximately 20 feet. ACAMP would contract with the City of Chickasaw to carry out the work. Both the new segment of boardwalk and the tower would be elevated on pilings 3 feet above wetlands and open water,

respectively. This infrastructure would provide a safe route to the northwestern portion of the park for all individuals (including those with disabilities) and new vantage points from which they could view riparian and wetland settings, as well as wildlife.

The proposed project is consistent with the 2007 Conceptual Master Plan, although there has been one minor modification to the project design. Specifically, the original proposal for the observation tower, shown in the plan, was to build the tower above wetlands. To reduce possible impacts on habitats (particularly from shading by the tower), the Alabama Department of Environmental Management (ADEM) recommended the tower be placed over Chickasaw Creek, at least 3 feet from where the wetlands at the edge of the creek interface with open water. ACAMP and the City of Chickasaw adopted this recommendation; the originally-proposed configuration for the project was an alternative they eliminated after their consultation with ADEM. See Figure 4 (Appendix A) for a diagram of the proposed project and Figure 5 for a photograph of the point off of which the observation tower would be sited.

Partial funding of the proposed observation tower and boardwalk is the preferred alternative. NOAA also considered and analyzed a No Action alternative, which would involve NOAA not contributing funding for any elements of the proposed project. Since there are no known alternative sources of funding at this time, under the No Action scenario, the two elements of the project would not be carried out. NOAA did not consider any other alternative configurations for the proposed project, as minor changes to the proposed design would not be functionally different or have measurably different impacts (because other configurations that still meet the objectives of the project partners would require a very similar design and footprint).

1.3 Findings

The proposed project would have a number of beneficial impacts to the environment, accessibility, and visitors' recreational and educational experiences. The elevated design for the boardwalk and observation tower is anticipated to reduce the potential for environmental impacts to nearby habitats and species. The boardwalk would allow visitors to pass over wetland areas to reach Chickasaw Creek and proposed tower, without treading directly through wetlands, which can be slippery, making the area more accessible, including to those with disabilities. The observation tower would give visitors, including groups present for educational purposes, a new vantage point from which to observe Chickasaw Creek, neighboring wetlands, and wildlife.

The No Action alternative would have no impacts. A few minor adverse impacts to the natural environment could result from implementing the proposed project. There could be minor soil compaction from driving in the pilings to support the boardwalks and bird viewing tower, but this work will be done by hand, using a jet pump, in a discrete area. Constructing a boardwalk segment and an observation tower would result in some shading of plants beneath the new infrastructure. The spacing of the boards along the boardwalk will allow some light penetration. Also, to reduce potential impacts to plants and animals in the area where construction is proposed, the boardwalk extension and observation tower would be elevated on pilings by 3 feet. The City plans to try to carry out construction early in the year (between January and April, if at all possible), before prime growing, nesting, spawning, and migration seasons for many species (P. Hinesley, ACAMP, personal communication, January 3, 2014). Manatees were reported at

Brooks Park once and nearby on a separate occasion, during the primary seasonal manatee use period in Alabama, from June to December. A second endangered species, the Alabama Red-Belly turtle, was reported within a few miles of Brooks Park in the 1990s. The U.S. Fish and Wildlife Service (USFWS) offered a recommendation for the time of year when it would be preferable to carry out construction, between January and April. USFWS specified four other best management practices for the project partners to follow, which relate to construction techniques and actions personnel involved in construction should take if manatees are sighted during construction. NOAA's provision of funding for the project is conditioned on adherence to the four required best management practices. The City of Chickasaw plans to comply with the USFWS' recommended timeframe to the maximum extent possible (P. Hinesley, ACAMP, personal communication, January 3, 2014). USFWS indicated that adherence to the other best management practices would be adequately protective of endangered species and that, in light of the low-impact methods of construction planned, the proposed project would not be anticipated to negatively affect endangered species, even if some construction activities extend beyond April (D. Ingram, USFWS, personal communication, January 8, 2014). Not only would the project not significantly negatively affect endangered species, it would also not significantly impact any other species. Overall, any adverse environmental impacts would be minimal and are not significant. The proposed project is compatible with all applicable laws and regulations. No historic properties would be affected, and aesthetics will not be impaired. Because of the anticipated beneficial impacts described in the preceding paragraph and because significant individual and cumulative environmental effects would not result from implementing the proposed action, the preferred alternative is to partially fund the project, and preparation of a Finding of No Significant Impact for this action is warranted.

2.0 PURPOSE AND NEED

2.1 Purpose

NOAA's National Coastal Zone Management Program works to preserve, protect, develop and, where possible, restore and enhance coastal zone resources. Its goals and those of ACAMP are closely aligned. One of ACAMP's five primary goals is to protect, restore, and enhance public access to coastal resources. ACAMP proposes allocating $20,000 in funding from NOAA through a CZMA cooperative agreement (award number NA12NOS4190173) to the City of Chickasaw to advance this goal by enabling construction of a boardwalk segment and observation tower in the northwestern portion of Brooks Park. The City of Chickasaw would provide an equal amount of matching funds. NOAA evaluates projects coastal states and territories propose to carry out with CZMA funding individually to ensure they meet applicable federal requirements. Low-cost construction projects are subject to guidelines under Section 306A of the CZMA, among other requirements. After fully evaluating each proposed low-cost construction project, NOAA determines whether or not to approve it. Thus, NOAA's purpose is to evaluate and make a decision in response to ACAMP's request to support the proposed project through the OCRM-ACAMP cooperative agreement. As part of evaluating the project, OCRM obtained further documentation, including information related to compliance with environmental and administrative review requirements.

2.2 Need

OCRM received a request from ACAMP to partially support, through a cooperative agreement, construction of the observation tower and boardwalk extension at Brooks Park. Under Section 306A of the CZMA, NOAA must respond to this request for funding. In accordance with NOAA Administrative Order 216-6, NEPA, and other statutory and legal requirements, NOAA reviewed documentation related to the proposed project and prepared this EA to facilitate its decision-making.

3.0 ALTERNATIVES

3.1 Preferred Alternative

NOAA proposes to provide $20,000 in federal funding to ACAMP, which would contract with the City of Chickasaw, to construct: (1) a 24-foot by 24-foot observation tower over Chickasaw Creek, which would be two-level, roofed, approximately 20 feet high, and elevated approximately 3 feet above wetlands, on pilings; and (2) a 450-linear-foot segment of 8-foot wide boardwalk, which would also be elevated and would connect the observation tower to existing boardwalks. The new boardwalk segment would be similar in appearance to the existing boardwalk shown in Figure 6. Contributing funding for the proposed project is NOAA's preferred alternative. The boardwalk and the bottom level of the observation tower would enable access for people with disabilities and in strollers to parts of the park they could not otherwise experience. The new infrastructure would provide new vantage points from which visitors could see the species and habitats within and along Chickasaw Creek. Visitors, including groups, would have a sheltered place from which to observe the area if the roofed observation tower were constructed. While the tower is sometimes described as a bird observation tower because birds are frequently found along wetlands and waterways, there are also many other types of wildlife (some of which are listed in Section 4.2) that the tower would enable visitors to view.

The tower would be 24 feet wide by 24 feet long, and it would be built over Chickasaw Creek at least 3 feet from the point where the wetlands at the edge of the creek interface with open water. This placement of the tower, rather than constructing it over adjacent wetlands, was recommended by ADEM as more advantageous to the natural environment, especially wetland species. Including its roof, the tower would be approximately 20 feet high. The boardwalk segment would be 8 feet wide, 450 feet long, and to the west of existing boardwalks. The boardwalk segment and tower would both be elevated approximately 3 feet on pilings to reduce shading of species in the wetlands and creek below them. The proposed project conforms to U.S. Army Corps of Engineers (USACE) Alabama general permits. Most of the project will be constructed by hand. For example, the pilings will be installed using a jet pump (A. Gohres, ACAMP, personal communication, July 17, 2013). To the greatest extent possible, the City will carry out construction early in the year (between January and April), avoiding peak growing, spawning, migration and nesting seasons for most species. The boardwalks would be made of wood that has been pressure-treated, a process that introduces chemicals to ward off insects, microorganisms, and decay (A. Gohres, ACAMP, personal communication, July 17, 2013).

3.2 No Action Alternative

Under the No Action alternative, NOAA would not provide funding for the proposed project, and ACAMP and the City of Chickasaw would take no action to extend the boardwalk and build an observation tower. Access to the northwestern portion of Brooks Park would continue to be limited to only those in boats and a small number of people (if any) who walk directly through wetlands and habitat areas (see Figure 7) to reach the unimproved portion of the park and adjacent parts of Chickasaw Creek. Walking through wetlands or along Chickasaw Creek can be unsafe under certain conditions and would impact nearby flora and fauna.

3.3 Alternatives Considered but Eliminated by the Project Partners

When the Conceptual Master Plan for Brooks Park was developed in 2007, it was envisioned that the observation tower would be built over wetlands, but that design was eliminated by the City of Chickasaw and ACAMP after they consulted with ADEM about the project in late 2012. ADEM expressed concern about the potential shading impacts on wetlands species if the observation tower were built over wetlands (J. S. Brown, ADEM, personal communication, November 12, 2012). ADEM recommended that the tower be built over Chickasaw Creek, at least 3 feet from its interface with wetlands, instead, and the project partners adopted this recommendation. This EA does not further consider potential placement of the tower over wetlands since that possibility was eliminated by ACAMP and the City of Chickasaw.

NOAA did not consider additional potential configurations for the observation tower and boardwalk because minor changes to the proposed design that still meet the objectives of the project partners (e.g., providing access to the recently-acquired portion of Brooks Park and constructing an observation tower) would not be functionally different from the proposed project or have measurably different impacts. An alternative arrangement would require a very similar design and footprint, leading to impacts that would not differ measurably from those of the preferred alternative.

4.0 AFFECTED ENVIRONMENT

This section presents a description of the environment at the proposed project site, including some of its physical, biological, cultural, and socioeconomic characteristics.

4.1 Physical Environment

Chickasaw Creek is approximately 32 miles long. It begins near the city of Citronelle, Alabama, and discharges to the Mobile River southeast of the City of Chickasaw. The Chickasaw Creek watershed extends throughout various towns in Mobile County, and it is part of the Mobile Bay estuarine system. Although it receives freshwater stream flow from upstream areas, Chickasaw Creek is tidally-influenced in the vicinity of Brooks Park. In this vicinity, Chickasaw Creek is a brackish environment, with a salinity greater than that of freshwater, but less than that of seawater. More specifically, the term “brackish” refers to environments with a salinity that is not more than 25 parts per thousand (ppt); “tidal freshwater” environments are a subset of brackish

environments where the salinity is above zero, but not more than 0.5 ppt. Salinities at any given time and place can vary greatly because of variation in tidal range, sample depth, amount of mixing of freshwater and saltwater within the water column, amount of rainfall (and hence the amount of freshwater being carried downstream from the upper parts of the watershed), and other meteorological factors, including winds. While precipitation can occur year-round in coastal Alabama, rainfall patterns vary seasonally. Winter and spring usher in the rainy season, and the most rainfall occurs during those seasons or in early summer. The least rainfall occurs in the late summer and autumn. On average, total annual rainfall in the Chickasaw Creek watershed is unusually high (67 inches per year in the City of Chickasaw), among the highest in the continental United States (ADEM, 1997; City of Chickasaw, 2013, Chapter 1).

Over the past approximately 35 years, ADEM periodically analyzed water samples from Chickasaw Creek where it is crossed by the bridge across Highway 43, just east of Brooks Park. NOAA reviewed ADEM's salinity sample database, as well as a few samples collected near Brooks Park by the U.S. Environmental Protection Agency (USEPA). All the salinities were within the brackish range. Most samples reflected tidal freshwater conditions, especially samples collected during the winter, spring, and early summer. During the months of August to November, the salinity was sometimes in the tidal freshwater range, but often a little higher in the brackish range, mostly between 0.5 to 5 ppt (ADEM, 2013; USEPA, 2013b). These data indicate that tidal freshwater conditions prevail in Chickasaw Creek near Brooks Park, and this conclusion is supported by the types of vegetation that grow in the freshwater forested/shrub wetlands along it.

NOAA's Center for Operational Oceanographic Products and Services (CO-OPS) installed a water-level monitoring station in Chickasaw Creek adjacent to Brooks Park in April 2011. Since January 2012, water level depth measurements at the station have ranged between 23 and 30 feet; the monthly mean depth has been between 23.4 feet and 26.2 feet. Were precipitation not a factor, the tidal range would be less than 2.5 feet at the Brooks Park monitoring station. On days with a lot of precipitation, the range in water level heights can be up to 4 feet (NOAA CO-OPS, 2013). The depth of the water in Chickasaw Creek near Brooks Park helps explain why boat launches and marina facilities at the park are so popular with recreational boaters. Alongside the Highway 43 bridge, there are other bridges immediately to the east, which could impede navigation by large vessels to the Brooks Park area (west of the Highway 43 bridge).

Topographically, most of Brooks Park is close to level, with slopes under 1%. In most areas, the soils are poorly drained and are typical of the Dorovan-Levy association, which is sometimes found in Mobile County adjacent to streams and in floodplains. Dorovan soils are primarily mucky peat, and Levy soils are typically silty clay loam near the surface, underlain by clay. In the southeast corner of Brooks Park, near the intersection of Bellwood Lane and Highway 43, the land slopes are 8% to 12% and the soils represented are mainly from the Troup-Urban Land complex. Troup soils generally contain loamy sand near the surface, where areas are not paved or otherwise altered (the developed areas with impervious surfaces are classified as Urban Land). More information about the soils present at Brooks Park is incorporated by reference from a Custom Soil Resource Report for Brooks Park created for ACAMP from Natural Resource Conservation Service data (Natural Resource Conservation Service, 2013).

Existing boardwalks and other public access infrastructure within Brooks Park pass through upland areas, forested bottomlands, and wetlands, and some of the existing infrastructure extends into Chickasaw Creek, such as a fishing pier. The proposed project would allow the City of Chickasaw to extend an existing boardwalk into wetland areas within the recently-acquired northwest corner of the park and would enable an observation tower to be constructed in Chickasaw Creek, a few feet from where it interfaces with the adjacent wetlands. The wetland type adjacent to the creek within Brooks Park is described as freshwater forested/shrub. The project area is also within a floodplain, in the zone designated as AE by the Federal Emergency Management Agency (A. Gohres, ACAMP, personal communication, July 18, 2013).

4.2 Biological Environment

4.2.1 Water Quality and Sediment

Alabama has designated the segment of Chickasaw Creek downstream of Highway 43 a "limited warmwater fishery," which means that it is generally suitable for fishing and the propagation of fish, wildlife, and other aquatic life, among other purposes. However, between the months of May through November, the best uses of the water are for agricultural and industrial purposes, not fishing, recreational activities that involve contacting the water, bathing, or drinking water. Alabama has assigned a different water use classification to the area north of Highway 43, beginning at the limit of tidal influence and extending as far as the University of Mobile. That area has been designated as suitable for fish and wildlife use (i.e., fishing and the propagation of fish, wildlife, and other aquatic life) and a variety of other uses other than drinking water; the fish and wildlife classification states that waters are not suitable for swimming and water-contact sports, but ADEM recognizes that activities involving incidental water contact and recreation do occur during June through September (ADEM Administrative Code 335-6-11-.02). For reporting year 2010 (the most recent year for which USEPA posted data), both segments were designated as impaired for fishing because of elevated mercury levels, probably from atmospheric deposition (USEPA, 2013a).

Water quality degradation (e.g., nitrogen and phosphorous loading) and hypoxia were historically reported along stretches of Chickasaw Creek near the City of Chickasaw. Citizens also complained about some fish kills, which ADEM indicates intermittently occur during periods of low stream flows and in the summer (ADEM, 1997). To track and address water quality, ADEM monitored water temperature, turbidity, dissolved oxygen, biochemical oxygen demand, suspended and dissolved solids, nitrate, phosphate, fecal coliform, and other parameters approximately monthly from 1978 through 1998 in Chickasaw Creek, among other locations. One of the locations sampled, referred to as CS-1, was adjacent to Brooks Park, where Chickasaw Creek runs under the Highway 43 bridge. In 1997, ADEM prepared a report, funded in part by OCRM, summarizing the characteristics of the Chickasaw Creek watershed. The data from this report, summarizing 1996 and 1997 samples from CS-1, concluded that water quality was "fairly good" overall, sufficient to support fish and wildlife. In 1996 and 1997, dissolved oxygen levels were greater than 5 parts per million (ppm), generally sufficient to support healthy aquatic life, although the tolerance of different species to low dissolved oxygen levels varies (ADEM, 1997). Dissolved oxygen levels can vary due to a number of factors, including water temperature, salinity, depth, and the amount of activity by organisms that use oxygen to

decompose organic matter. Low dissolved levels often occur in the late summer, when temperatures are highest (NOAA NOS, 2008). Looking across 20 years of sampling data provided by ADEM, dissolved oxygen levels were less than 5 ppm in approximately 26% of the samples, and these low levels only were detected in some of the samples collected during the summer or early fall. Levels of dissolved oxygen were less than 3 ppm in approximately 4% of samples. (For detailed sampling data from 1996 and 1997, see ADEM, 1997, pp. 39-49. For other samples collected by ADEM in prior years, see ADEM, 2013.) Some data were collected in subsequent years on a less regular schedule; for those data, see ADEM, 2013, or USEPA, 2013b.

In 1996, ADEM collected sediment samples from a location approximately 0.25 miles upstream of the bridge over Highway 43, from a depth of 5 meters. The 1996 samples were analyzed for 10 metals. Metals can be naturally present in the environment but also can enter environmental media, including wastewater, from a variety of consumer, industrial, and agricultural products, as well as mining and manufacturing processes, including from the paint and other coatings used on some ships (ADEM, 1991). In 1996, concentrations of such metals as copper and lead in the sediment were above expected natural ranges, likely as a result of metals deriving from urban stormwater runoff, according to ADEM. The copper level was below levels considered toxic to aquatic life, and the lead level was below levels known to be potentially harmful to amphipods, shrimp, and numerous other aquatic species at that time (ADEM, 1997). For detailed sampling data, see ADEM, 1997, pp. 50-58.

Additional sediment samples were collected from station CS-1 once per year in 1998, 1999, and 2000 and analyzed for 12 metals, including arsenic (which was not among the analytes in 1996). Natural concentrations of arsenic in sediments are usually below 10 ppm, although the amount of naturally-occurring arsenic present in soil and sediment varies in different places (Mandal and Suzuki, 2002). The concentrations measured in the 1998, 1999, and 2000 sediment samples were below 10 ppm (ADEM, 2013). The concentrations of most other metals detected in those three samples were of similar orders of magnitude as had been detected throughout Chickasaw Creek in 1996. Of note is the fact that the level of mercury detected in 2000 was 1.2 ppm. Only two other sediment samples from the same approximate location had been analyzed for mercury, and in both, the concentration was not high enough to be detectable (ADEM, 2007, 2013). By comparison, in a 1991 ADEM report that included data on the levels of metals in sediment at more than 50 locations in coastal Alabama, fewer than 10% of samples contained mercury levels above 1 part per million (ADEM, 1991). While so few data points do not paint a full picture, the elevated level of mercury detected at station CS-1 in 2000 is consistent with the fact that USEPA designated the segments of Chickasaw Creek upstream and downstream from CS-1 as impaired for fishing because of elevated mercury levels (USEPA, 2013a).

4.2.2 Plants

No biological assessments have been prepared specifically for Brooks Park. No plant species or natural communities of conservation concern to the State of Alabama have been reported within 5 kilometers (approximately 3 miles) of Brooks Park (M. Barbour, ALNHP, personal communication, July 19, 2013).

In a 1997 report, ADEM characterized biological conditions and species typically found in different parts of the Chickasaw Creek watershed. In the lower part of the watershed, forested wetlands such as those found in Brooks Park typically contain canopy species such as swamp tupelo, red maple, sweet gum, and bald cypress. Understory species commonly found in forested wetlands in this area include wax myrtle, yaupon, groundsel trees, marsh elder, St. John's wort, and pepper bush. Stresses on the species and habitats in the lower reaches of Chickasaw Creek include a variable salinity regime, periodic flooding, exposure when tides or flows are low, and periods when there are low concentrations of dissolved oxygen, which can contribute to hypoxia. In this area, the growing season lasts from around March to late November (ADEM, 1997).

4.2.3 Fish, Shellfish, and Benthic Invertebrates

While NOAA did not identify information about the specific fish found in Chickasaw Creek where it runs along Brooks Park, data exist for other locations along Chickasaw Creek. In 2004, the Geological Survey of Alabama (in cooperation with ADCNR) studied fish in a variety of locations in coastal watersheds, including Chickasaw Creek. The purpose of the study was to better understand the distribution of fish of potential conservation concern in coastal rivers and streams. As part of the project, two locations were sampled within Chickasaw Creek near Chickasabogue Park (which is within 2 miles of Brooks Park, to its west) and a third location was sampled within a tributary to or branch of Chickasaw Creek approximately 1 mile northwest of Brooks Park. In each of these locations, fish were collected from an electrofishing boat. The fish species detected in one or more of the three Chickasaw Creek locations are listed in Table 1 (O'Neil et al., 2004).

Table 1: Fish Species Detected in Chickasaw Creek Locations in 2004

Fish Family	Fish Species (common name)
Achiridae	hogchoker
Amiidae	bowfin
Atherinopsidae	brook silverside
Catostomidae	blacktail redhorse, sharpfin chubsucker, spotted sucker
Centrarchidae	black crappie, bluespotted sunfish, bluegill, largemouth bass, longear sunfish, redear sunfish, redspotted sunfish, warmouth
Cyprinidae	blacktail shiner, pugnose minnow, taillight shiner, weed shiner
Elassomatidae	banded pygmy sunfish
Esocidae	chain pickerel
Fundulidae	bayou topminnow, blackspotted topminnow
Ictaluridae	channel catfish
Lepisosteidae	longnose gar, spotted gar
Mugilidae	striped mullet
Poeciliidae	eastern mosquitofish
Sciaenidae	freshwater drum

One provision of Alabama's Regulation 220-2-.26 requires any person who catches any species of sturgeon to return the sturgeon to the waters where it was caught (Alabama Division of

Wildlife and Freshwater Fisheries (ADWFF), 2012). During the 2004 study conducted by the Geological Survey of Alabama, no sturgeon were collected from the Chickasaw Creek area. Alabama's Regulation 220-2-.92, its Nongame Species Regulation, affords protection to certain other fish species, but not to any of the species found during the Geological Survey of Alabama's 2004 sampling effort (ADCNR, 2008; O'Neil, et al., 2004). In Mobile County, Gulf sturgeon (a subspecies of Atlantic sturgeon) are listed as threatened under the Endangered Species Act (ESA). At the time Gulf sturgeon were listed, a special rule was created that allowed taking of the subspecies for purposes consistent with the ESA, such as education, science research, enhancing its propagation or survival, and other conservation purposes (NOAA and FWS 1991). Gulf sturgeon are anadromous fish, and they can be found in coastal rivers in certain Gulf Coast states during the warmer months. In cooler months, they inhabit the Gulf of Mexico, some of its estuaries, and some of its bays (NOAA NMFS, 2013). For example, in Mobile County, Gulf sturgeon utilize habitats near the barrier islands in Mississippi Sound (USFWS and NOAA, 2003). Neither Chickasaw Creek nor any waters within the Mobile River watershed have been federally-designated as critical habitat for the Gulf sturgeon (USFWS and NOAA, 2003).

A 1992 NOAA report on fish and invertebrate distribution and abundance in Gulf of Mexico estuaries (Nelson (ed.), 1992) and an associated NOAA database do not indicate that Gulf sturgeon utilize Mobile Bay or its tributaries during any life stage (NOAA NOS, 2000). However, one instance of a Gulf sturgeon sighting in the Mobile River near Mobile Bay in 1992 has been reported. A Gulf sturgeon was also reportedly caught in a shrimp trawl in the Mobile River in the mid-1980s (USFWS and Gulf States Marine Fisheries Commission, 1995). In an effort to collect and analyze contemporary data, the Geological Survey of Alabama published a report summarizing data compiled from 2000 to 2008 on the presence of Gulf sturgeon in the Mobile and Perdido Basins. Data came from tagged sturgeon, 21 sturgeon collected in coastal Alabama, other government agencies, anglers, and efforts to find sturgeon eggs. The report concluded that Gulf sturgeon are rare in Alabama waters, but two were collected during the study period on the eastern side of Mobile Bay, near Fairhope, Alabama, well downstream of the Mobile River (Mettee et al., 2009). These data suggest Gulf sturgeon would be very unlikely to be found in Chickasaw Creek and align with the decision made by federal agencies not to designate the Mobile River basin as critical habitat for Gulf sturgeon because of "limited data to substantiate the presence of sustainable, reproducing populations" (O'Neil, et al., 2004).

The 1992 NOAA report on the distribution and abundance of fishes and invertebrates in the estuaries of the Gulf of Mexico provided data tables listing species potentially found in tidal freshwater systems (with salinities of 0-0.5 ppt) near Mobile. These species are listed in Table 2 (Nelson (ed.), 1992). Since data for Chickasaw Creek are limited, this table gives an indication of species that may be present in tidal waterways with similar characteristics. However, it is important to realize that there may be times when the salinity of Chickasaw Creek exceeds 0.5 ppt (primarily between August and November, and less frequently during others months, depending on flow conditions and water depth, among other factors). Since the City plans to carry out most or all of the proposed work at Brooks Park is early in the year (preferably between January and April), when tidal freshwater conditions would prevail, this table focuses on data from tidal freshwater environments. For data on species potentially present in parts of the Mobile Bay estuarine system with higher salinities, see Nelson (ed.), 1992, Table 4, pp. 20-60.

Table 2: Fish and Shellfish Potentially Present in Tidal Freshwater Areas Near Mobile Bay

Common, abundant, and highly abundant species	Rare species
Atlantic croaker	Alabama shad
Bay anchovy	Black drum
Blue crab	Grass shrimp
Brown shrimp	Gray snapper
Bull shark	Pinfish
Common rangia	Red drum
Gizzard shad	Silver perch
Gulf killifish	Spot
Gulf menhaden	Spotted seatrout
Hardhead catfish	
Sand seatrout	
Sheepshead minnow	
Sheepshead	
Silversides (multiple species)	
Southern flounder	
Striped mullet	
White shrimp	

Shrimp are the most valuable commercially harvested seafood species in the Gulf of Mexico. Four species of shrimp in Gulf of Mexico waters and its estuaries are managed by the Gulf of Mexico Fishery Management Council (GMFMC) pursuant to the Magnuson-Stevens Fishery Conservation and Management Act, as amended and reauthorized by the Sustainable Fisheries Act (GMFMC, 2005). This legislation calls for fishery management councils to designate essential fish habitat (EFH)—the aquatic habitat where fish spawn, breed, feed, or grow to maturity—for each federally managed species. EFH for white shrimp extends to tidal creeks like Chickasaw Creek within the influence of Mobile Bay that seasonally have subsurface salinities of at least 1 part per thousand (ppt) (M. Thompson, NMFS, personal communication, August 2, 2013).

In tidal tributaries of the Upper Mobile Bay and Lower Mobile River, such as Chickasaw Creek, juvenile white shrimp can be abundant (Nelson (ed.), 1992). Data gathered by NOAA's Estuarine Living Marine Resources Program indicate in which months different marine and estuarine species at different life stages have been identified in certain Gulf of Mexico estuaries. In areas within the Mobile Bay estuary where the salinity is up to 0.5 ppt, juvenile white shrimp are commonly found during the months of June, July, and August (but are rare during other months of the year). The same dataset indicates that, in areas within the Mobile Bay estuary with salinities of 0.5 to 5 ppt and higher, juvenile white shrimp can be common or abundant during all months of the year. Adult white shrimp are rare within the Mobile Bay estuary at salinities from 0 to 5 ppt, but common or abundant at higher salinities. White shrimp spawning would not occur near Brooks Park; spawning occurs in saltwater environments with salinities of 25 ppt or higher (NOAA NOS, 2000).

In 1997, ADEM conducted benthic invertebrate sampling in the Chickasaw Creek watershed. One of the locations sampled was adjacent to Brooks Park, where Chickasaw Creek runs under Highway 43. The types of invertebrates identified included worms, mollusks, amphipods, and midges (see ADEM, 1997, p. 69, Table 11d).

4.2.4 Other Wildlife

Although there is no state law in Alabama comparable to the ESA, the State has regulations governing hunting, fishing, and animal possession. Alabama's Regulation 220-2-.92 identifies non-game species that are illegal to capture, kill, sell, or otherwise possess without a permit. These include approximately nine types of mammals (mostly rodents and bats), 22 types of amphibians and reptiles, 19 types of birds, and more than 30 types of fish species (ADCNR 2008). For a complete list, see Alabama Regulation 220-2-.92.

The Alabama Natural Heritage Program (ALNHP) collects and manages data about the status and distribution of species and ecosystems of conservation concern in Alabama and tracks where the species have been recorded. A variety of species and natural communities on the ALNHP inventory are found in Mobile County. At NOAA's request, ALNHP generated lists of species and natural communities of conservation concern in Alabama that have been identified within 5 kilometers of Brooks Park (M. Barbour, ALNHP, personal communication, July 19, 2013). The list is included as Appendix B. Table 3 summarizes protected species identified at or near Brooks Park and is derived from ALNHP data (as of July 2013), supplemented by information on manatee sightings from Dauphin Island Sea Laboratory (as of October 2013). As noted below, inventories of some types of animals observed in the vicinity of Brooks Park, such as amphibians and birds, are incomplete; this table draws on the best available information.

Table 3: Protected Animal Species Reported in the Vicinity of Brooks Park

Species Name	Conservation Status	Location(s) Documented
West Indian manatee	federally endangered, state protected	Brooks Park and within 5 km
Northern Yellow bat	state protected	within 5 km of Brooks Park
Alabama Red-Belly turtle	federally endangered, state protected	within 5 km of Brooks Park (near Chickasabogue Park)
Alligator Snapping turtle	state protected	within 5 km of Brooks Park
Delta Map turtle	state protected	within 5 km of Brooks Park
One-toed amphiuma	state protected	within 5 km of Brooks Park

Florida manatees, a subspecies of West Indian manatees, are coastal mammals that inhabit freshwater, brackish, and marine habitats, feeding on aquatic vegetation. Because they require warm water habitats (and cannot survive long in water temperatures that are 68 degrees Fahrenheit or less), manatees migrate seasonally in response to changing water temperatures. While found primarily in Florida in the winter, during the warmer months, Florida manatees migrate long distances to other states along the Atlantic and Gulf of Mexico coasts. Typically found in waters between 5 and 20 feet deep, manatees often seek out quiet portions of canals,

creeks, rivers, and estuaries, which can provide habitat for feeding, resting, playing, mating, and calving. They grow to an average of 9-10 feet long, as adults (USFWS, 2013a, b, c). Manatees typically move slowly and often are described as gentle and curious (Mississippi-Alabama Sea Grant Program and Dauphin Island Sea Lab, 2008).

Florida manatees are listed as endangered under the ESA and are also protected from harassment, hunting, capture, and other types of "take" under the Marine Mammal Protection Act. USFWS has jurisdiction to evaluate the impacts of development on manatees and their habitat. Manatee sightings in Alabama waters (and a variety of other areas) are reported to the Manatee Sighting Network at Dauphin Island Sea Lab (DISL). The Marine Ecology Research Laboratory at DISL maps and tracks manatee movements in the northern Gulf of Mexico and has also mapped all historic reports of manatees in Alabama waters, through 2012 (see Figure 8 and http://merl.disl.org/datasets.htm). This figure shows that it is not unusual for Florida manatees to be reported in tributaries north of Mobile Bay. Only two manatee sightings have been reported in the vicinity of Brooks Park, both within the past 3 years (Carmichael, et al., unpublished data, 2013; DISL Manatee Sighting Network data as of October 31, 2013). In August of 2011, DISL received one report of a manatee sighted at Brooks Park (E. Hieb, DISL, personal communication, November 1, 2013). In September of 2013, a manatee was photographed in Greenwood Bayou, which is a tributary to Chickasaw Creek more than 2 miles to the southeast of Brooks Park (R. Carmichael, DISL, personal communication, November 1, 2013).

In addition, ADEM has reported a variety of reptiles and amphibians sometimes found throughout the Chickasaw Creek watershed, including certain types of turtles, snakes, frogs, salamanders, skinks, and – potentially – alligators. That information is incorporated by reference (ADEM, 1997). Alabama Red-Belly turtles have been identified by the State of Alabama as critically imperiled and have been designated as endangered under the ESA. In general, the current range of the species is limited to Baldwin and Mobile Counties, near Mobile Bay and along its tributaries (NatureServe, 2013). These turtles are usually less than a foot long, as adults, and they are most abundant in quiet, backwater areas of Upper Mobile Bay and its tributaries, in water that is 3 to 7 feet deep. The species uses freshwater and brackish streams, rivers, and shallow bays; aquatic vegetation provides cover and food. Alabama Red-Belly turtles often inhabit areas where the water is slow-moving, with dense beds of aquatic vegetation, and the turtles travel through open water rivers and tributaries (NatureServe, 2013). Nesting occurs from May through July. Females excavate shallow nests before laying eggs and most commonly select sand spoil sites or other locations along riverbanks for nesting, though some nests have been found along sandy beaches, levees, and sites used by humans (S. Detwiler, USFWS, personal communication, November 13, 2013; NatureServe, 2013; Nelson, et al., 2009). Most hatchlings emerge approximately 3-4 months after eggs are laid, and some clutches of eggs "overwinter," meaning the hatchlings do not emerge until the following spring, in March or April (Nelson, et al., 2009).

There is no federally-designated critical habitat for Alabama Red-Belly turtles. While this species has been seen in the Chickasaw area, within 5 kilometers (approximately 3 miles) of Brooks Park, Alabama Red-Belly turtles have not been reported to ALNHP within the park itself (A. Gohres, ACAMP, personal communication, October 28, 2013; see also the ALNHP data in Appendix B). One of the herpetologists in southern Alabama most familiar with this species

indicated that Alabama Red-Belly turtles have been trapped along Chickasaw Creek near Chickasabogue Park, approximately 2 miles west of Brooks Park (R. Clay, ADWFF, personal communication, November 25, 2013).

While a complete inventory of animal species found at Brooks Park has been prepared, the park could potentially host a number of birds and small mammals that live in or visit the types of habitats it contains. ADEM's 1997 report describes bird species that could take advantage of the habitats along Chickasaw Creek, which provide places to rest, feed, nest, and take shelter. It provides a list of year-round resident bird species, such as raptors; possible winter residents, such as waterfowl, shorebirds, and songbirds; and migratory birds that sometimes stop in the Chickasaw Creek watershed. ADEM's report also lists mammals that can be found in the Chickasaw Creek watershed. The lists from this report are incorporated by reference (ADEM, 1997, pp. 23-28). A few bird species sometimes found in Brooks Park in the summer that are highlighted in promotional materials for the Alabama Coastal Birding Trail include osprey, waterfowl, and wading birds near Chickasaw Creek, as well as, in the summer, prothonotary warbler, common yellowthroat, summer tanager, and red-winged blackbird (Alabama Coastal Birding Trail 2012).

4.3 Cultural and Socioeconomic Environment

The City of Chickasaw is located approximately 5 miles north of Mobile. Currently, its area is approximately 4 square miles. The city (originally a village) was developed during the 20th century.

4.3.1 History of Chickasaw

Native Americans had called the creek running through the area Chickasha Bogue, and the name was later Anglicized to Chickasaw Bogue or Chickasaw Creek (sometimes also referred to as Chickasabogue Creek). Apalachee and Chocktaw Indians were said to be among the residents of the area, and farming and settlements in the area led to its becoming a trading post. Jean-Baptiste Le Moyne de Bienville, the French governor of the area, deeded the land now within Chickasaw to a friend in the early 1700s. The English arrived in 1763. At the beginning of the 20th century, there were farms in the area, as well as a mill that was later converted to manufacture furniture and wooden equipment (City of Chickasaw, n.d.a., 2013).

Anticipating the onset of World War I, the Tennessee Coal and Iron Company (a division of U.S. Steel) bought a large tract of land, including Chickasaw, because of its potential for use as an area for shipbuilding. Chickasaw Creek is naturally deep. The cypress swamp adjacent to it was drained, and dikes and pumps were installed by the newly-established Chickasaw Shipbuilding and Car Company. Funds from the U.S. Navy helped develop the shipyard. At the same time, the company planned and built a village with homes, a school, a health clinic, water and sewer service, and stores for shipyard workers and their families. No ships were built before the armistice ending World War I was declared, but the Chickasaw Shipbuilding and Car Company built more than a dozen cargo ships before it closed around 1921. In 1940, the village and shipyard were sold to Gulf Shipbuilding Corporation. Leading up to and during World War II, the shipyard became active again, additional improvements were made to the village and

additional housing was built nearby by the federal government. More than 75 ships were built in Chickasaw by the Gulf Shipbuilding Corporation, including minesweepers, destroyers, dock landing ships, and cargo ships. After the end of the war, an investment company purchased the entire company village and allowed individuals to buy property. Chickasaw became an incorporated town in 1946 and then a city. The shipyard was reactivated in 1979, but only operated through 1983, and it has since been converted to a small general cargo facility (City of Chickasaw, n.d.a; Creative Commons Corporation, 2012).

4.3.2 Chickasaw Community Characteristics

At the time of the 1960 census, Chickasaw's population was just over 10,000. With the end of shipbuilding in Chickasaw, the total size of the City's population has slowly declined. For the past approximately 25 years, the city has had approximately 6,000 residents (City of Chickasaw, 2013, Chapter 2). In 2010, the population was 6,106. As of 2010, almost 30% of the population was aged 19 or under and approximately 20% of the population was between the ages of 20 and 34. Approximately 25% the population was between the ages of 35 and 54. Those between 55 and 69 comprised 15% of the population, and remaining 10% of the population was aged 65 and over (U.S. Census Bureau, 2011). The racial and ethnic composition of the City's population is diverse. In 2010, 63% of residents identified themselves as White, just over one-third of residents were African-American, and another 3% represented other racial or ethnic minorities. Approximately 2% of the population identified as Hispanic or Latino (U.S. Census Bureau, 2011).

There is a higher poverty rate in Chickasaw than in Mobile County as a whole. Approximately one-quarter of City residents (26%) lived below the poverty line for the 2007-2011 period. By comparison, the percentage of Mobile County residents living below the poverty line for the same period was 19% (U.S. Census Bureau, 2012b). The median household income in Chickasaw for 2007-2011 was just over $30,200, and the mean household income was just over $40,200. The City's per capita income was $17,315 (U.S. Census Bureau, 2012a). Of the approximately 4,500 residents over age 16, almost 2,800 were in the labor force and 1,700 were not in the labor force. Approximately 6% of the civilian labor force reported being unemployed. The largest employment sectors were retail trade (17% of those employed) and educational services, health care, and social assistance (22%). In addition, three other sectors employed 10% to 11% of the employed population each: the construction sector; professional, scientific, management, administrative, and/or waste management fields; and the arts, entertainment, recreation, accommodation and/or food services sector. The remainder of workers had other types of employment, including in the manufacturing sector, among others (U.S. Census Bureau, 2012a).

According to a recent small town design initiative poster, Chickasaw is primarily "a bedroom community that today attracts families and retirees seeking a strong sense of community and a great location" (Auburn University School of Architecture, 2009-2010). The City touts itself as "managed like a well-run business" and "a great place to live" (City of Chickasaw, n.d.a.). City officials are committed to providing a variety of community services and amenities to enhance the quality of life for residents and visitors, including various opportunities to come into contact with the natural environment at Brooks Park. Early in 2013, as part of its comprehensive

planning process, the City of Chickasaw distributed a survey to assess the wants and needs of City residents, as well as their vision for the future. More than 420 households (approximately 16%) completed the survey. Of particular note was the fact that, when presented with an open-ended question asking about their three favorite places in Chickasaw, the most common response, selected by 24% of respondents, was the City's parks and trails; the second most common response (17%) was Brooks Landing, the boat launch at Brooks Park. Others said their favorite places in Chickasaw were Chickasaw Creek, "areas by the water," "the waterfront park," and a variety of other locations. An open-ended question about what improvements were needed along Highway 43 did not garner any responses related to the amenities at Brooks Park. The detailed summary of survey responses reveals no evidence of opposition to improvements completed or proposed at Brooks Park, although a number of respondents requested the City improve tennis courts, ball fields, and public play areas for children. One person mentioned that it would be helpful to improve attractions for school field trips (City of Chickasaw, 2013, Appendix A). The proposed observation tower would be able to accommodate small school groups.

In December 2013, the City released its draft *Comprehensive Plan 2030* to give residents an opportunity to comment on its goals and recommendations related to possible future growth, development, conservation efforts, and related planning issues. This gives residents an opportunity to comment further on the City's proposals for the next approximately 20 years, including some related to Brooks Park described below. Overall, the City's recommendations and goals included (among many others): conserving natural resources; promoting events that take advantage of natural resources and help boost the City's economy, such as those focused on birding, fishing, and boating; improving the appearance of Highway 43; designing and developing a centralized, walkable downtown business district and a waterfront district for fishing, boating, retail and residential uses; revitalizing the City's economy, buildings, and streets; creating businesses and job opportunities; establishing a museum, potentially on the waterfront; improving public safety (e.g., by installing security cameras at parks); and providing services and facilities for all age groups (City of Chickasaw, 2013).

4.3.3 Visitor Use of Brooks Park

Brooks Park is a popular with visitors. Approximately 5,000 people, on average, visit the park each year. Some of them visit for special events, including the Alabama Coastal Birding Fest, held in the fall when migratory birds frequently visit the Mobile Bay estuarine system. The park is also listed as part of the Alabama Coastal Birding Trail, established in the 1990s to promote both birding and tourism (Alabama Coastal Birding Trail 2012). Along with visiting Brooks Park for its bird-watching opportunities, numerous tourists and local residents visit the park for fishing, boating, hiking, and other recreational and educational purposes.

Brooks Park provides the only public access to Chickasaw Creek in the City. The Ron Jones Paddle Trail (part of the Alabama Scenic River Trail) runs through 2 miles of Chickasaw Creek between Chickasabogue Park (in the adjacent town of Eight Mile) and Brooks Park. At Brooks Landing, visitors can launch canoes, kayaks, and powerboats. There are picnic tables, pavilions, and existing boardwalk segments (e.g., see Figure 6) within the park, as well as a fishing pier. Many of these facilities have been developed since 2007, when a Conceptual Master Plan for the

park was developed. Other projects at the park have included removal of invasive species, planting native species, removal of trash, and sign installation. The City charges a small fee for visitors to use the boat launch and fishing pier, respectively (A. Gohres, ACAMP, personal communication, July 18, 2013; City of Chickasaw, n.d.b, 2013). There are four existing trailheads at Brooks Park, and the four trails that emanate from them are spaced apart, with a boardwalk connecting them near Chickasaw Creek, in a design reminiscent of the spokes and rim of a wheel (see Figure 2). Only one other park in Chickasaw offers walking trails.

As shown by the public opinion survey results described above, Brooks Park is among the favorite places of a substantial proportion of City residents. The draft Comprehensive Plan mentions the recent construction of part of the boardwalk system through wetlands and that future improvements at Brooks Park will include constructing a bird observation tower, as well as pavilions with benches near the fishing area. Other immediate plans (within the next 5 years) call for installing trash cans and security cameras at Brooks Park, as well as increasing officer patrols. The plan also recommends the development of a facility that would allow visitors to rent kayaks, canoes, and paddleboards at Brooks Park in the next 11-15 years. Planning for boat rental facilities is estimated to occur in 6-10 years, and no funding sources to construct or operate it were identified in the draft plan. Developing additional trails within the City is a goal also set for the 6-10 year horizon. Whether additional trails or recreational facilities might be built (given resource limitations) and where exactly they might be located are uncertain (City of Chickasaw, 2013, Chapter 6 and Appendix C). ACAMP is not aware of any opposition to past improvements completed at Brooks Park (P. Hinesley, ACAMP, personal communication, December 19, 2013). The ongoing comprehensive planning process gives the public an opportunity to provide feedback on potential future improvements at the park.

4.3.4 Other Local Land and Water Use

Approximately 40% of the land area in the City of Chickasaw is classified as wetlands. This partly explains the fact that 42% of Chickasaw is undeveloped; most of the undeveloped lands are low-lying wetlands, according to the draft *Comprehesive Plan 2030*. Single-family residential property makes up 29% of the land in Chickasaw, with other residential land use types making up another 3%. Industrial properties represent 11% of the land area in the City, and commercial property another 4%. Another 8% of the City is institutional or governmental property. Parks and recreational lands account for 3% of the City (City of Chickasaw, 2013, Chapters 1 and 5).

Brooks Park is along the central portion of the City's northern boundary, west of Highway 43. Most of the residential areas in Chickasaw are south of Brooks Park, on the western side of the highway. The riparian industrial complexes, including the former shipbuilding facility, were east of Highway 43 and south of Brooks Park. Brooks Park is in an area zoned for parks and recreation. There are both residential and commercial properties south of Brooks Park, along Highway 43. While there are some commercial properties along Highway 43 due north of Brooks Park, the wetlands to the northwest of Brooks Park, across the creek from the proposed location for the observation tower, are undeveloped. Approximately 250 acres of undeveloped wetlands are located northwest of Brooks Park, between it and a residential area to its west that is accessible from Baratara Drive (City of Chickasaw, 2013, Chapter 5). There are historic sites in

the City of Chickasaw, but the historic districts comprising the original residential structures in the village and the original shipbuilding area are approximately 1 km (two-thirds of a mile) or more south of the park.

The U.S. Army Corps of Engineers is authorized to maintain a 250-foot wide navigation channel in Chickasaw Creek from where it meets Shell Bayou to where it empties into the Mobile River; this navigation channel is more than a mile downstream from Brooks Park. While the Corps is authorized to conduct dredging to maintain a depth of at least 17 feet in the channel, it was reported in 1997 that maintenance dredging had been unnecessary in recent years to keep the channel at least that deep (ADEM, 1997).

Downstream of Brooks Park, Chickasaw's port is Alabama's furthest north, deepwater port. Its facilities can support vessels up to 600 feet long, and cargo can be transferred to railcars or trucks. It is the second largest port in Alabama. Along with the loading terminal, there are another ten industrial businesses in the port area, including chemical manufacturing, barge construction, and fuel distribution facilities. Several trucking companies are based near the port. A number of industrial facilities are also located in the City of Chickasaw and adjacent communities. Historical and current industrial facilities in the area include pulp and paper operations, municipal wastewater treatment facilities, and manufacturing plants (ADEM, 1997; Chickasaw Chamber of Commerce, n.d., 2013). Along with offering these and other industries, civic and religious institutions, retail and service establishments, and access to transportation corridors, Chickasaw also possesses a good deal of waterfront, some of which is being considered for redevelopment (Auburn University School of Architecture, 2009-2010).

The Chickasaw Creek watershed is part of the Mobile Bay estuary, where freshwater from inland areas mixes with saltwater from the Gulf of Mexico. The estuary includes waters within Baldwin and Mobile Counties, as well as Mobile Bay itself. The Mobile Bay National Estuary Program (MBNEP) was created in 1995 to promote wise stewardship of the water quality characteristics and living resource base of the Mobile Bay estuarine system. The MBNEP service area includes Alabama waters in Mobile Bay and the north central Gulf of Mexico, as well as all of Mobile and Baldwin Counties, including the City of Chickasaw. Although established under the Clean Water Act and administered by USEPA, National Estuary Programs are non-regulatory; they encourage local communities to take responsibility for managing their own estuaries. MBNEP works in partnership with local, state, and federal government agencies, businesses and other industries, conservation and environmental organizations, academic institutions, and citizens to develop and implement a blueprint for conserving the Mobile Bay estuarine system, known as a Comprehensive Conservation Management Plan (CCMP). The original CCMP for MBNEP dates from 2002; a revised CCMP is under development (MBNEP, 2013a, b).

MBNEP, partner agencies, and other experts and volunteers have collaborated on assessments of water quality, living resources, habitats, and community growth, as well as on other projects. Some of the data compiled has been mapped and is accessible from http://habitats.disl.org (MBNEP, n.d.). MBNEP, its Coastal Habitats Coordinating Team, and their partners (including NOAA and The Nature Conservancy) used a stakeholder involvement process to identify priority habitats for conservation and restoration, which culminated in the December 2009 publication,

Prioritization Guide for Coastal Habitat Protection and Restoration in Mobile and Baldwin Counties, Alabama. Wetland areas within Brooks Park were not identified as priority wetland habitats as part of that process (MBNEP, 2012; The Nature Conservancy, 2009). However, when contacted about the project NOAA proposes to fund through ACAMP, the Executive Director of MBNEP commented that Brooks Park represents similar ecosystems and is well-situated for educating visitors about the value of wetlands and for ecotourism. She also noted that, as part of its efforts to enhance educational opportunities related to outdoor recreation within its service area, MBNEP helped develop interpretive signage for the Ron Jones Paddle Trail, and two of the signs were erected at Brooks Park (R. Swann, MBNEP, personal communication, October 31, 2013).

5.0 ENVIRONMENTAL CONSEQUENCES

This section outlines likely environmental consequences of the No Action alternative and the preferred alternative, which involves partially funding the installation of a boardwalk segment and a bird observation tower in the northwestern portion of Brooks Park, acquired in 2012. This section also addresses planned methods to mitigate a few of the potential impacts (i.e., mitigation measures). In sum, the below analyses indicate that all anticipated consequences of both alternatives are expected to be minor, and many of the anticipated impacts of the preferred alternative would be beneficial, including improvements to accessibility, visitors' recreational and educational experiences, and the natural environment. Neither the proposed project nor the No Action alternative is anticipated to have any significant impacts.

5.1 Physical Environment

No major physical alterations of the landscape are part of the preferred alternative or the No Action alternative. The proposed small-scale, low-impact construction that is part of the preferred alternative is not intended to alter floodplains or soils. The primary impacts would come from driving pilings into wetlands and Chickasaw Creek to support the boardwalk segment and observation tower. Table 4 summarizes anticipated consequences to the physical environment.

Table 4: Anticipated Consequences to Physical Environmental Resources

Physical Resource	Preferred Alternative	No Action Alternative
Hydrology	The boardwalk and observation tower will be elevated 3 feet and pile-supported; only eight pilings would be needed to support the tower. While the proposed project would be constructed in the floodplain, it is authorized by USACE general permits ALG05-2011 and ALG06-2011 (discussed in more detail in subsequent sections of this EA), and USACE concluded that activities authorized under those general permits should not adversely affect any floodplain. While pilings can change the flow of water immediately around them and potentially local sedimentation patterns, most research about changes to flow patterns have been done in ocean settings, not in streams with low flow rates	No impacts.

Physical Resource	Preferred Alternative	No Action Alternative
	(Kelty and Bliven, 2003). Impacts to flow and local sedimentation can also be caused by boat traffic, along with currents and other factors. While some changes to local flow patterns in Chickasaw Creek might be possible, they would be minor, considering the limited size of the area potentially impacted compared to the size of Chickasaw Creek (including more than 1,000 feet of shoreline along the land recently added to Brooks Park alone). The Alabama general permits do not authorize any wetland or stream impacts; USACE's analysis indicates that activities authorized under the two general permits applicable to the proposed project will not affect flow regimes and "there should be no adverse impacts on . . . flood hazards, floodplain values, [and] shore erosion and accretion . . ." (USACE, 2011a, b). Thus, no significant impacts to hydrology would be anticipated.	
Soil/ Sediment	In the short term, some compaction could occur during the construction phase. The boardwalk will be approximately 450 feet long, with pilings supporting it on either side. The applicable Alabama general permits specify that no heavy equipment may be used within wetlands. Thus, pilings will be installed manually. Soil or sediment would be displaced only where the pilings are installed. The footprint of the tower will be 24 feet by 24 feet, and it will be supported by 8 pilings installed using a jet pump. The area affected by construction is less than 0.1 acres, of the 2.5 acres in the recently-acquired portion of the park. Although there will be some minor soil displacement by pilings, overall impacts would not be significant because of the small area affected. Once completed, the proposed project could have minor beneficial impacts to soils if there are any visitors to Brooks Park (e.g., bird-watchers) who would otherwise (under the No Action alternative) walk directly on the ground and through wetlands to access the northwestern part of the park.	No impacts.

5.2 Biological Environment

By endeavoring to construct the project between January and April, the City of Chickasaw will try to reduce impacts during key times of year, such as prime growing, nesting, spawning, and migration seasons for many species. Although there are a few federally-listed endangered or threatened species that could be found within Mobile County, only one endangered species has been reported at Brooks Park itself, the manatee reported in August of 2011. On October 18, 2012, ACAMP consulted USFWS about its original design proposal, which would have entailed constructing both the boardwalk and the observation tower in wetland areas in the 2.5 acre portion of the park acquired in 2012, but no infrastructure within Chickasaw Creek. At that time, USFWS did not think the project would have significant impacts on fish and wildlife resources. In 2013, NOAA and ACAMP provided information to USFWS indicating that the project partners were recommending revising the project design to construct the observation tower over Chickasaw Creek, at least 3 feet from its interface with wetlands, consistent with an ADEM recommendation. USFWS commented on the revised project proposal in a letter dated November 13, 2013, in particular noting that West Indian manatees and Alabama Red-Belly

turtles have been seen at or near Brooks Park (S. Detwiler, USFWS, personal communication, November 13, 2013; see Appendix C).

In particular, in its 2013 letter, USFWS noted that both species can move through tributaries and commonly use quiet, backwater areas with dense, submerged vegetation. It also noted that, in Alabama, the primary seasonal manatee use period is between June and December (S. Detwiler, USFWS, personal communication, November 13, 2013). When queried, the Marine Ecology Research Laboratory at DISL shared similar information, indicating that it is unlikely that manatees would be seen in the vicinity of Brooks Park in January and February and that manatee presence in March, April, and May is possible, but infrequent (R. Carmichael, DISL, personal communication, November 1, 2013). This may be related to water temperatures and food supply in Chickasaw Creek early in the year, two factors that influence where manatees migrate (USFWS, 2013c).

In addition, USFWS indicated that Alabama Red-Belly turtles nest from May through July (S. Detwiler, USFWS, personal communication, November 13, 2013). In general, any adult turtles that might be basking or feeding near human-induced construction noise, such as installation of infrastructure at Brooks Park, would likely move away from the noise (R. Clay, ADWFF, November 25, 2013, citing a personal communication from D. Nelson, University of South Alabama). Although Alabama Red-Belly turtles were trapped near Brooks Park in the 1990s, they have not been reported in more recent years, and no turtle nests have been reported at or near Brooks Park.

USFWS also outlined best management practices that would prevent negative impacts to any endangered animals at Brooks Park during construction. For example, USFWS identified practices to use if boats, siltation barriers, or turbidity barriers are used for any of the construction activities; see Appendix C for details. The USFWS letter also outlined practices to apply if manatees are seen within 100 yards of in-water construction activities (including not operating any equipment within 50 feet of a manatee and waiting to resume construction until any manatees present leave the area of their own volition) and a requirement for any inadvertent collisions with or injuries to manatees to be reported to USFWS and DISL's Manatee Sighting Network. USFWS indicated that it would be preferable for construction activities to Brooks Park to occur between January and April, if possible (preceding the primary seasonal manatee use period in Alabama and Alabama Red-Belly turtle nesting season). If that is not possible, as long as the other best management practices are followed, the methods of construction are sufficiently low-impact that adverse effects to endangered species are not anticipated, according to USFWS (D. Ingram, USFWS, personal communication, January 8, 2014). Based on all available information, including this input from USFWS and commitments from ACAMP and the City of Chickasaw outlined below, NOAA concluded the proposed project would not significantly affect manatees or Alabama Red-Belly turtles.

Although they are uncertain whether it would be possible to complete all construction between January and April, ACAMP and the City of Chickasaw aim to do so and have committed to adhering to the other best management practices (P. Hinesley, ACAMP, personal communication, January 3, 2014; C. Stallman, for the City of Chickasaw, personal communication, January 2, 2013). NOAA shared this information with USFWS, along with

information about the proposed manual construction methods. In short, USFWS indicated that endangered species may be present, but no negative impacts to these species are anticipated from the proposed project as long as it is carried out in accordance with the best management practices outlined related to the use of boats and siltation/turbidity barriers during construction and requirements that apply if manatees are present during construction, the project is carried out as described to USFWS, and no new information comes to light about potential effects on listed species in a manner or to an extent not previously considered (S. Detwiler, USFWS, personal communication, November 13, 2013; D. Ingram, USFWS, personal communication, January 8, 2014). Thus, NOAA's conclusion is that the project may affect, but is not likely to adversely affect, endangered species, and USFWS concurred. Also of note is the fact that the 2013 USFWS letter conveyed support for the project because it provides the public with improved opportunities to come into contact with fish and wildlife resources.

Table 5 summarizes the potential consequences to biological resources of the alternatives considered. The infrastructure improvements would occur in a small area, relative to the size of the park, Chickasaw Creek, and adjacent wetland areas. Specifically, the boardwalk extension would extend over less than 0.1 acres of the 2.5 acres of land recently added to Brooks Park, and the tower would extend over only 24 linear feet of a parcel with approximately 1,000 feet of Chickasaw Creek shoreline. As discussed below, the preferred alternative would be anticipated to have only minor, de minimus adverse impacts to water quality, wetlands, plants, and animal species, most of which would be temporary. These types of impacts would primarily be associated with the installation of pilings. While the boardwalk and tower would result in some shading, they will be elevated 3 feet on pilings to allow some light to reach plants beneath the boardwalk and observation tower from the sides, and USACE requires there to be at least three-quarters of an inch between the decking boards along the boardwalk to allow for light penetration (USACE, 2011c). The proposed project would potentially have a number of beneficial impacts to habitats by providing elevated, accessible infrastructure for people to use and by providing shade, shelter, and substrate on and adjacent to the new infrastructure that some species, including aquatic organisms, could use.

In 2011, USACE prepared two separate reviews associated with the proposed issuance of two Alabama general permits, known as ALG05-2011 (for "Construction and Modification of Piers, Wharves, and their Normal Appurtenances such as Stairways and Walkways") and ALG06-2011 (for "Construction and Modification of Boat Shelters, Gazebos, Hoists, Etc."). As described in Section 6.0 of this EA, USACE determined that the proposed project is authorized under these two general permits. Each review included an environmental assessment, Clean Water Act Section 401(B)(1) analysis, statement of findings (finding of no significant impact), and decision document (USACE, 2011a, b). USACE concluded that construction of structures authorized by ALG06-2011, such as gazebos and the bird observation tower, could lead to temporary and localized turbidity increases (which would be minimized by using best management practices during construction); that pilings could cause loss of substrate habitat or biological function in localized areas limited to the diameter of the pilings; that some species using the impacted area could migrate to similar areas adjacent to the site; and that the activities associated with the installation of pilings could temporarily increase suspended and dissolved solids in the water (USACE, 2011b).

In USACE's review associated with the issuance of ALG05-2011, which covers the modification of piers, wharves, and walkways, it reached similar conclusions to those related to ALG06-2011 because in both cases the permits authorize pilings to be placed in wetlands and waterways. While this review also commented on the possibility of temporary degradation of water quality in the immediate area of pilings as a result of the chemicals with which pilings had been pretreated leaching out of marine construction materials, it concluded that any chemicals that leach into the water would quickly dissipate. This is consistent with the conclusions reached in a NOAA analysis of the environmental impacts of small docks and piers in the southeastern United State, which indicates that 99% of leaching occurs within 90 days of piling installation (Kelty and Bliven, 2003). In addition, the USACE analysis of the environmental impact of ALG05-2011 noted that, while shading from walkways and piers would reduce some photosynthetic activity in a small area and pilings would displace a small amount of substrate habitat, the types of projects covered by ALG05-2011 could have beneficial effects resulting from providing shade, shelter, and substrate for aquatic organisms and could also potentially increase overall species diversity. ALG05-2011 requires that boardwalks, piers, and other authorized structures be designed with at least three-quarters of an inch between boards to allow for light penetration. USACE indicated that, individually and cumulatively, minor disturbances and loss of substrate habitat from activities authorized by ALG05-2011 are de minimus on the scale of total estuarine habitat. ALG05-2011 is only applicable to projects that meet a list of criteria, including attached conditions similar to those attached to ALG06-2011 (USACE, 2011a).

ADEM reviewed the general permits for Alabama for consistency with the state's enforceable policies and issued a conditional concurrence. Attached to all these general permits are conditions related to ADEM water quality certification (under Section 401 of the Clean Water Act), conditions to ensure compliance with the ACAMP, and other general and special conditions to protect navigation, threatened and endangered species, archaeological and historic sites, Wild and Scenic Rivers, etc. (USACE, 2011c). See below, under Section 6.0, for more information about compliance with Clean Water Act, CZMA, and other requirements. The general permits for Alabama also reference the State of Alabama's requirement that project proponents notify the State Lands Division of ADCNR about projects that impact public submerged lands under its jurisdiction (land below mean high tide and the bottoms of navigable rivers and creeks). Alabama Regulation 220-4-.09 governs piers and other improvements on submerged lands; among its requirements are that that projects minimize or eliminate adverse impacts on fish and wildlife habitat (ADCNR Administrative Code 220-4-.09 (4)(b)(9)). A representative of the Alabama State Lands Division sent the Mayor of Chickasaw a letter on April 2, 2013, authorizing the proposed project at Brooks Park to impact submerged lands beneath Chickasaw Creek, providing that it complies with all the conditions identified in the letter and the provisions of Regulation 220-4-.09, which is the City's and ACAMP's intent.

Table 5: Anticipated Consequences to Biological Environmental Resources

Biological Resources	**Preferred Alternative**	**No Action Alternative**
Water Quality	In the short-term, during construction, installing pilings could lead to localized turbidity increases and temporarily increase suspended and dissolved solids in the water column, impacts that will be minimized by using best management practices and adhering to conditions associated	No impacts.

Biological Resources	Preferred Alternative	No Action Alternative
	with USACE general permits. In the long-term, impacts would not be significant. Also, wood used for the pilings and tower would be treated with chemicals to resist decay, microorganisms, and insects. Minor amounts of chemical contaminants could leach from the wood, but in such small quantities and in such localized areas that effects would be insignificant. Tidal flushing would be anticipated to dilute and flush any contaminants added to the water column fairly quickly after the pilings are installed (Kelty and Bliven, 2003; USACE, 2011a).	
Wetlands	Construction could cause minor, temporary impacts. The boardwalk would cross through wetlands and would be elevated by 3 feet on pilings. The decking boards would have space between them, which will reduce the potential for shading impacts, but there could be minor impacts to habitat/biological function at the locations of the pilings for the boardwalk. The tower will be constructed at least 3 feet from the edge of nearby wetlands to reduce impacts to wetlands, but shading of some nearby wetlands during a portion of the day would be expected. Anticipated effects on wetlands would not be significant because shading would affect only a very small percentage of the 2.5-acre parcel comprised primarily or entirely of wetlands. Long-term beneficial impacts of the proposed project include providing a pathway for people, including those with disabilities, to access the area recently added to Brooks Park without walking directly through and disturbing wetlands.	No impacts.
Plants	Impacts would be minor, and most would be temporary (during construction). Installing pilings might sever some plant rhizomes or compress plants, but most affected plants would recover. Where there are pilings, some habitat (and, potentially, biological function) at the bottom of Chickasaw Creek (i.e., substrate habitat) will be lost, but only in a very small proportion of the creek bed. Shading could reduce photosynthetic activity in small areas, but leaving space between the boards along the boardwalk and elevating the infrastructure by 3 feet on pilings would reduce shading by allowing light to reach most vegetation during certain parts of the day. When consulted, the National Marine Fisheries Service (NMFS) did not provide any EFH conservation recommendations for white shrimp habitat, and any impacts to it are anticipated to be de minimus (M. Thompson, NMFS, personal communication, August 2, 2013).	No impacts.
Fish, Shellfish, and Benthic Invertebrates	During construction of both components of the project, minor, short-term impacts could occur. Installing pilings in wetlands and Chickasaw Creek might harm, kill, or push deeper a limited number of small aquatic species (e.g., benthic invertebrates) at the locations of the pilings. Motile species could move elsewhere until construction is complete. Once constructed, some shading will result from the observation tower, which was sited above Chickasaw Creek to reduce impacts on species that live in adjacent wetlands. In the long-term, while a small amount of substrate habitat or biological function could be lost where there are pilings, the project could have beneficial impacts. For example, the pilings could create new habitat (substrate) for certain aquatic species, such as mollusks. Some species might find food, shelter, and/or shade on or adjacent to the new	No impacts.

Biological Resources	Preferred Alternative	No Action Alternative
	infrastructure after construction is complete. In the long-term, if motile aquatic animal species prefer, they could avoid the very small areas where the tower creates shading or where there are pilings. Overall, there could be both positive and negative minor long-term impacts of the tower and pilings that are hard to predict due to predator-prey interactions and other factors.	
Other Wildlife	Consultations with other agencies (primarily USFWS) support the conclusion that no significant impacts are anticipated. Minor, short-term impacts could occur during construction. While the brief periods of construction activity might disturb certain birds, mammals, or other wildlife in localized areas, construction will be carried out by hand, and most affected species could move elsewhere during that time. The City will strive to construct the project outside the primary seasonal manatee use period in Alabama and before nesting season for Alabama Red-Belly turtles and a number of other species. Even if it cannot, it will follow the other best management practices to protect endangered species, and USFWS does not anticipate negative impacts to these species (D. Ingram, USFWS, personal communication, January 8, 2014). The new observation platform could make it easier to spot manatees and turtles in Chickasaw Creek, allowing bystanders to inform boaters, other users in the area, City staff, and/or biologists of their presence. This could reduce the likelihood of inadvertent impacts from human activities to endangered species. The USFWS Alabama Ecological Field Services Office indicated that, as long as the best management practices it outlined are followed and no new information comes to light, no adverse impacts to endangered species or critical habitat would be anticipated. In the long term, new opportunities for animals to feed, shelter, travel, or rest on or adjacent to new infrastructure could be created, which could result in minor positive or negative impacts that are hard to predict due to predator-prey interactions and other factors.	No impacts.

5.3 Cultural and Socioeconomic Environment

Both the proposed project and the No Action alternative are anticipated to have no impact on cultural or historical artifacts or resources. NOAA determined that the proposed project would have no adverse effect on historic properties and submitted this finding to the Alabama Historical Commission, which concurred on June 21, 2013 (see Appendix E).

No changes to land uses or development patterns will result from the proposed project, which is consistent with local zoning. Minor changes to visitor use of the park are anticipated from the proposed project and are described in Table 6. The preferred alternative is expected to have a minor beneficial impact on the socioeconomic environment, including accessibility, visitor safety, and the recreational and educational experiences for visitors, who would have additional vantage points from which to view wildlife, Chickasaw Creek, riparian settings, and wetlands. Small groups could assemble at the tower, meeting a need identified through the City's public opinion survey for additional venues for school groups to visit on field trips (City of Chickasaw,

2013, Appendix A). The No Action alternative would result in individuals, including some with disabilities, continuing not to be able to access the northwestern portion of Brooks Park.

Table 6: Anticipated Consequences to Cultural and Socioeconomic Resources

Resources	Preferred Alternative	No Action Alternative
Recreational Uses	Minor beneficial impacts would result from construction of a boardwalk extension and observation tower. Access to and vantage points from which to observe habitats and species in the area at the bend of Chickasaw Creek, where additional land for Brooks Park was recently acquired, would be improved, especially for individuals with disabilities and small groups. The observation tower would also provide shade and shelter for visitors. In addition, the project would improve visitor safety to the extent it discourages walking directly through wetland areas.	No impacts. Individuals, including some with disabilities, would continue to be unable to access the northwestern portion of the park.

5.4 Other Environmental Consequences

During construction, there will likely be minor environmental consequences associated with equipment use, noise and other minor disruptions. Potential consequences of the proposed project not discussed in the preceding subsections are outlined below. These types of consequences would not occur from the No Action alternative.

Air Quality Impacts

No long-term air quality impacts are anticipated at the site or in the surrounding environment because all construction will occur without heavy machinery. For example, installation of the pilings would be accomplished with a jet pump.

Aesthetics and Visual Impacts

The only aesthetics impacts anticipated from the proposed project would be considered beneficial, overall. Since natural colors and materials will be used, and the boardwalk style will be consistent with boardwalks in other parts of Brooks Park, the boardwalks and tower will blend in with other park settings. The infrastructure will improve visitor access to scenic resources and provide wide viewing angles and additional vantage points for those interested in observing Chickasaw Creek and adjacent areas in the northwestern portion of the park. Thus, the project would have beneficial impacts to scenic vistas.

Noise Impacts

There would be a minor increase in noise levels within the park at the project sites during the construction phase of the project. These impacts are expected to be short-term and limited to active periods of construction. Construction would be carried out by hand, and the pilings for the observation tower would be installed using a jet pump. Within a mile of Brooks Park, there are

several churches and an elementary school, but no hospitals or nursing homes. The elementary school is approximately three-quarters of a mile away, off of Highway 43. The nearest churches are also off of Highway 43, which is used by trucks, as well as other vehicles. The speed limit on Highway 43 is 40 miles per hour close to Brooks Park. There are also industrial facilities in the vicinity. Vehicles traveling past facilities near Brooks Park used by special populations, including children, likely create more noise than would be audible from construction activities at Brooks Park, given the distance the noise from construction activities would have to travel before reaching sensitive populations (P. Hinesley, ACAMP, personal communication, December 19, 2013). Therefore, any short-term noise impacts from the proposed project would not be anticipated to adversely affect sensitive populations.

Cumulative Impacts

The Conceptual Master Plan for Brooks Park does not recommend any additional modifications to the park beyond those proposed as part of this project and those already completed. Projects already carried out in other portions of Brooks Park include site clean-up; invasive plant removal; landscaping with native plants; repair of an existing fishing pier and restrooms; construction of an additional pier, boardwalks, and trails; resurfacing the parking area with a permeable surface; and installation of picnic areas and new signs. The draft *Comprehensive Plan 2030* indicates that, within the next 5 years, the City of Chickasaw anticipates placing waste receptacles and security cameras at Brooks Park, as well as constructing pavilions with benches near the fishing area. The draft of this plan recommends that, in general, additional sidewalks, pedestrian trails, and bike routes be developed within the City in 6-10 years, potentially to link up with trails at Brooks Park (see City of Chickasaw, 2013, Figure 5.2). In addition, in the next 11-15 years, the draft plan recommends the creation of a facility that would allow visitors to rent canoes, kayaks, and paddleboards along Chickasaw Creek, near the existing boat launch (City of Chickasaw, 2013, Chapter 6 and Appendix C). As with any long-term community planning process, it is uncertain whether, when, and how individual recommendations might be implemented, given the large number of recommendations the City is considering and fact that available funding is limited, among other factors. The proposed project does not set a precedent that suggests that ACAMP or federal funding would be available for any future projects at Brooks Park. ACAMP and NOAA evaluate proposed CZMA projects individually every year.

Existing boardwalks at Brooks Park extend 3,800 linear feet (a little more than two-thirds of a mile), and there are another approximately 800 linear feet of gravel paths in upland areas (C. Stallman, City of Chickasaw, personal communication, January 2, 2014). The proposed project would add approximately 450 feet of boardwalk, resulting in there being just over 5,000 linear feet of trails and boardwalks at Brooks Park. Since they are 8 feet wide, that means there would be approximately 40,000 square feet or 0.9 acres of boardwalks and trails, including the proposed boardwalk extension. In all, Brooks Park extends across approximately 13.5 acres, so the complete trail system, as proposed under the 2007 Conceptual Master Plan (including the proposed project) would cover less than 7% of the park's area. As shown in Figure 2, the trails and boardwalks are spaced throughout the park, which distributes potential minor environmental impacts, discussed in greater detail below.

There are currently three piers accessible from Brooks Park (see Figure 1). USACE requires that piers and similar structures not infringe on navigation. ADCNR State Lands Division requirements state that structures may not exceed 25% of a waterbody (USACE, 2011a, c). Aerial photographs suggest that existing piers meet these guidelines. The two, T-shaped fishing piers are each roughly 800 square feet. The easternmost pier, which boats can tie up alongside, is a little larger, roughly 1,200 square feet. The observation tower would have a footprint of approximately 600 square feet, above Chickasaw Creek. Therefore, combined, the existing and proposed infrastructure to be located above the creek would extend over approximately 3,400 square feet.

There are approximately 1,800 feet of Chickasaw Creek shoreline along the land within Brooks Park. The width of Chickasaw Creek varies along this shoreline, from approximately 300 feet wide at the eastern edge of Brooks Park, to approximately 100 feet wide at the western edge of Brooks Park; the creek's width is affected by natural variability in water volume, channel configuration, etc. Conservative estimates using two aerial photographs (available through Bing and Google Maps) taken at different times suggest Chickasaw Creek's surface area adjacent to Brooks Park is at least 250,000 square feet. Approximately 3,400 square feet of public access infrastructure above Chickasaw Creek, including the proposed observation tower, would therefore be elevated over less than 2% of the creek's surface area along Brooks Park.

Some potential minor impacts of piers, boardwalks, and walkways are short-term, including turbidity increases during construction and temporary impacts to water quality if some amount of the chemicals with which the wood pilings were treated leaches out, which typically occurs during the first 90 days after pilings are installed. In addition, shading is anticipated to reduce some photosynthetic activity in a confined area, despite mitigation measures that consist of elevating infrastructure and leaving spaces between the decking boards along the boardwalks to allow light penetration. Another long-term impact is displacement of habitat in very small areas beneath the pilings; most motile organisms typically move to nearby areas. Pilings also sometimes create new microhabitats because of the shade, shelter, and substrate they provide, which can attract some organisms after construction ceases (Kelty and Bliven, 2003; USACE, 2011a, b). While pilings can change the flow of water immediately around them, there has been little research on changes to flow patterns occasioned by piers in streams where flow is much lower than that found in ocean settings (Kelty and Bliven, 2003). Because USACE's analyses of the impacts of activities authorized under ALG05-2011 and ALG06-2011 indicates that these types of projects will not affect flow regimes, it seems likely that while some localized changes to flow patterns in Chickasaw Creek adjacent to the pilings will occur, they would be minor, considering the limited size of the area where there are pilings compared to the size of Chickasaw Creek alongside of Brooks Park (USACE, 2011a, b).

USACE reports that cumulatively, considering all the piers, walkways, gazebos, and other shelters that will be authorized under ALG05-2011 and ALG06-2011, when viewed on the scale of total estuarine and near-shore marine habitat, the impact of the loss of benthos and other minor habitat disturbances is de minimus (USACE, 2011a, b). NOAA's Restoration Center also assessed the potential impacts of trail restoration, constructing boardwalks and footbridges, and related activities involving creating and repairing trails. It found that these projects would cause only short-term, minor adverse impacts to geology, soils, water, living resources (plants and

animals), and EFH, but that the projects could also have direct and indirect long-term beneficial impacts on geology, soils, water, living resources, EFH, socioeconomics, etc. as a result of reducing the potential for erosion and allowing controlled public access to natural areas (NOAA Restoration Center, 2006).

In light of the types of impacts anticipated, the analyses conducted by USACE and the NOAA Restoration Center, and the relatively small percentage of habitat in and adjacent to Brooks Park potentially impacted by existing and planned infrastructure, cumulative impacts to the environment of planned and future public access improvements at Brooks Park are expected to be minor. The impacts of existing and planned infrastructure would be similar to the impacts discussed in Section 5 of this EA and would be very unlikely to be significant, even if the City of Chickasaw adds another boardwalk or similar public access structure above wetlands or Chickasaw Creek in another 5-10 years, as long as these structures continue to be relatively small and to be implemented consistent with applicable federal requirements (many of which are discussed in Section 6.0). For example, the City must comply with USACE requirements when designing projects to be located in wetlands and waterways, such as Alabama general permits ALG05-2011 and ALG06-2011, which do not authorize any impacts to wetlands or streams, nor impacts to endangered or threatened species.

In short, NOAA's analysis indicates that partially funding the construction of the proposed infrastructure sets no precedents for future actions that would significantly affect the quality of the environment. In addition, there will not be significant cumulative impacts because of the relatively small area affected, compared to the size of Brooks Park as a whole (and in light of the hundreds of acres of wetlands and creeks present throughout the City), and given the fact that projects must comply with federal and state requirements designed to protect threatened and endangered species, wetlands, and other natural and historic resources.

Although the construction of a new bird observation tower might enhance ecotourism at Brooks Park, ACAMP indicates that the proposed project is unlikely to substantially increase visitation to the park, an estimated 5,000 visitors per year. In general, net long-term effects of past and potential future projects would be likely to be beneficial. Beneficial impacts to natural heritage and the experiences available to the public would derive from providing additional safe vantage points from which to view riparian and wetland settings, as well as wildlife. Beneficial impacts to natural resources include providing enhanced opportunities to view, protect and conserve any protected species that can be seen in the area, including from boardwalks and the proposed observation tower, as well as reducing the likelihood of visitors (e.g., bird-watchers) walking through wetlands, which can result in trampling some species (because the availability of boardwalks and trails likely encourages visitors to stay on them).

Irreversible and Irretrievable Commitments of Resources

Although there is not currently any infrastructure in the 2.5 acres in the northwestern portion of the park that were acquired in 2012, there will be no changes to overall land use within the park over the long term. The primary irretrievable consequences of the proposed project would be the time, money, and human effort to plan and implement the project. If the infrastructure that is

built were to be damaged by future unforeseen events, it would be difficult to recapture any of the financial resources invested.

6.0 COMPLIANCE WITH OTHER ENVIRONMENTAL AND ADMINISTRATIVE REVIEW REQUIREMENTS

Clean Air Act
The Clean Air Act (42 U.S.C. § 7401 *et seq.*) directs the U.S. Environmental Protection Agency to set limits on air emissions to ensure basic protection of health and the environment. The fundamental goal is the nationwide attainment and maintenance of the National Ambient Air Quality Standards (NAAQS). Primary NAAQS are designed to protect human health. Secondary NAAQS are designed to protect the public welfare (for example, to prevent damage to soils, crops, vegetation, water, visibility, and property).
Compliance: Construction will be carried out by hand; a jet pump will be used to install pilings. Construction activities will comply with all applicable state rules and local requirements.

Clean Water Act (CWA)
The Clean Water Act (33 U.S.C. § 1251 *et seq.*) is the principal law governing pollution control and water quality of the Nation's waterways. Section 404 of the CWA authorizes a permit program for the beneficial uses of dredged or fill material in navigable waters. The U.S. Army Corps of Engineers administers the program. As a condition of wetlands permits issued under Section 404, USACE also requires compliance with Section 401 of the CWA, which requires applicants for federal licenses or permits to conduct activities that may result in a discharge of pollution into the waters of the United States to obtain a certification, from the appropriate state, of compliance with applicable water quality standards and goals (or a waiver from the state).
Compliance: ACAMP and the City of Chickasaw consulted with the Mobile District of the USACE about whether any USACE permits would be needed for the project, including under Section 404 of the Clean Water Act. A project manager from USACE's Regulatory Division in Mobile, Alabama, sent a letter (see Appendix D) to the Mayor of Chickasaw in response to this inquiry on February 7, 2013, pursuant to Section 404 of the CWA and Section 10 of the Rivers and Harbors Act. The USACE indicated that the construction of the bird observation tower over Chickasaw Creek was authorized by Alabama General Permit ALG06-2011 and the construction of the boardwalk through wetlands along Chickasaw Creek was authorized by Alabama General Permit ALG05-2011, as long as certain conditions are met. These requirements include compliance with special conditions, general conditions, coastal zone management certification conditions, and water quality certification conditions associated with the general permits; coordination with the ADCNR State Lands Division; completion of construction within three years; and agreement on the part of project proponents that the United States may require, in the future, removal or relocation of any structures constructed. When the Alabama general permits were reissued, in 2011, ADEM determined that activities authorized under the general permits comply with the requirements of CWA Section 401 as long as they are conducted in accordance with the water quality certification conditions attached to the general permits. The City plans to comply with all permit requirements, including those associated with Sections 404 and 401 of the CWA. For more information about USACE general permits for Alabama and the associated

conditions, see http://www.sam.usace.army.mil/Portals/46/docs/regulatory/docs/al_gen.pdf (USACE, 2011c).

Coastal Barrier Resources Act (CBRA)
Originally passed in 1982 and reauthorized multiple times, CBRA (16 U.S.C. § 3501 *et seq.*; 12 U.S.C. § 1441 *et seq.*) was enacted to address issues related to coastal barrier development and to minimize the loss of human life, wasteful federal expenditures, and damage to fish, wildlife and other natural resources by restricting federal financial assistance in designated coastal barriers, with some exceptions.
Compliance: The project is not within a designated CBRA area and does not involve development activities inconsistent with CBRA.

Coastal Zone Management Act (CZMA)
The goal of the CZMA (16 U.S.C. § 1451 *et seq.*) is to preserve, protect, develop and, where possible, restore and enhance the Nation's coastal resources. Pursuant to the CZMA (16 U.S.C. § 1455) and NOAA regulations (15 C.F.R. Part 923), NOAA approved the State of Alabama's CZMA management program on September 25, 1979. NOAA provides, subject to annual Congressional appropriations, annual implementation grants to states with federally-approved CZMA management programs. The annual implementation grants include activities and projects under CZMA §§ 306, 306A and 309 (16 U.S.C §§ 1455, 1455a and 1456b), which are reviewed and approved by the appropriate State CZMA agency(or agencies) and NOAA as part of the annual federal CZMA grant submission and approval process. CZMA § 306A (16 U.S.C § 1455a) land acquisition and construction projects included in a state's annual CZMA implementation grant may also require additional state and/or federal permits.
Compliance: The project will be in full compliance with this Act. The ACAMP is administered by two state agencies, ADCNR and ADEM. ADCNR issues CZMA grants, whereas ADEM issues state permits and administers the CZMA federal consistency provision for Alabama. State agencies or local governments responsible for CZMA § 306A projects that are part of Alabama's approved annual CZMA implementation grant will also obtain any required ADEM permit or other state or local permits prior to completion of the project. If a CZMA § 306A project also requires a federal permit (e.g., a Clean Water Act § 404 permit from the U.S. Army Corps of Engineers), then the state agency or local government 306A project proponent will also provide a consistency certification to ADEM, pursuant to CZMA § 307(c)(3)(A) (16 U.S.C § 1456(c)(3)(A)) and 15 C.F.R. Part 930, Subpart D, and obtain ADEM's CZMA federal consistency concurrence. As noted above, ADCNR formally consulted ADEM about this project.

Department of Commerce Pre-award Notification Requirements for Grants and Cooperative Agreements
Published by the Department of Commerce in the *Federal Register*, October 1, 2001 (at 66 *Federal Register* 49917), and amended October 30, 2002 (at 67 *Federal Register* 66109), are requirements applicable to all federal financial assistance awards issued by the Department.
Compliance: Special Award Conditions on the financial assistance award that would fund the proposed project require compliance with these requirements.

Endangered Species Act (ESA)

The federal Endangered Species Act (16 U.S.C. § 1531 *et seq*.; 50 C.F.R. parts 17, 222, and 224) directs all federal agencies to conserve endangered and threatened species and their habitats and encourages such agencies to utilize their authority to further these purposes. Under the Act, NOAA's National Marine Fisheries Service and USFWS publish lists of endangered and threatened species and their critical habitat. Section 7 of the Act requires that federal agencies consult with these two agencies to minimize the effects of federal actions on endangered and threatened species.

Compliance: Gulf sturgeon are listed as threatened under the ESA in Mobile County. However, no waters within Mobile River systems are designated as critical habitat for the Gulf sturgeon (USFWS and NOAA, 2003). As noted in Section 4.2.3, NOAA's Estuarine Living Marine Resources Program indicated that Gulf sturgeon do not utilize Mobile Bay or its tributaries during any life stage (Nelson (ed.), 1992; NOAA NOS, 2000). There is no evidence that Gulf sturgeon or other NOAA trust resources (marine or anadromous species) listed under the ESA are found in Chickasaw Creek. Thus, formal consultation with the National Marine Fisheries Service under the ESA is not required. Two endangered species under the jurisdiction of the USFWS have been identified at or near Brooks Park. Florida manatees have been reported twice in the vicinity of the project area, both within the past five years, in the summer and fall. A manatee expert at DISL indicated that it is unlikely that manatees would be seen in the vicinity of Brooks Park in January and February and that manatee presence in March, April, and May would be possible, but infrequent (R. Carmichael, DISL, personal communication, November 1, 2013). Alabama Red-Belly turtles, designated as endangered under the ESA and found only in Mobile and Baldwin Counties, have been reported within 5 kilometers of Brooks Park, including in the 1990s near Chickasabogue Park, a few miles upstream from Brooks Park (ALNHP 2013; R. Clay, ADWFF, November 25, 2013, citing a personal communication from D. Nelson, University of South Alabama). See Sections 4.2.4 and 5.2 for more information about Florida manatees and Alabama Red-Belly turtles, their habitats, and best management practices USFWS outlined. One USFWS recommendation (but not a requirement) was for the work at Brooks Park to occur between January and April, which is outside the primary seasonal manatee use in Alabama and before the nesting season for Alabama Red-Belly turtles. The USFWS 2013 letter concludes that no negative effects to species under its jurisdiction are anticipated as long project design does not change, the best management practices it outlined are followed, and no new information reveals that the project may affect these species in a manner or to an extent not previously considered (S. Detwiler, USFWS, personal communication, November 13, 2013). USFWS subsequently indicated that adherence to the other best management practices would be adequately protective of endangered species, even if some construction activities extend beyond April (D. Ingram, USFWS, personal communication, January 8, 2014). Based on consultation with USFWS and the commitment of the project partners to try to carry out construction between January and April and to follow the other best management practices, NOAA concluded that the proposed project may affect, but is not likely to adversely affect, endangered species, and USFWS concurred. Since there is no critical habitat for any species listed under the ESA in or near Brooks Park, there are no potential project-related impacts to critical habitat.

Environmental Justice

To be consistent with the President's Executive Order 12898 on Environmental Justice (February 11, 1994), Executive Order 12948 (Amendment to Executive Order 12898), and the Department

of Commerce's Environmental Justice Strategy, applicants must ensure that their projects will have no disproportionately high and adverse human health or environmental effects on minority or low income populations.

Compliance: The project will have no adverse impacts on any minority or low income populations that may be located near the site. The project is consistent in use and type with existing zoning and land use regulations, as well as previous boardwalk projects. Minorities make up just over a third of the residents of the City of Chickasaw; 34% are African-American and another 3% come from other minorities. In Mobile County, African-Americans make up 35% of the population and other minorities represent 5% of the population. Minority and low-income visitors to Brooks Park would benefit from the proposed project, which would improve access for all visitors to the northwestern portion of the park and opportunities to view birds and other species that utilize Chickasaw Creek and adjacent wetlands.

Executive Order 11990 − Protection of Wetlands, Executive Order 11988 – Floodplain Management, and Flood Disaster Protection Act

Executive Order 11990 requires federal agencies to avoid the adverse impacts associated with the destruction or loss of wetlands, to avoid new construction in wetlands if alternatives exist, and to develop mitigation measures if adverse impacts are unavoidable. Executive Order 11988 requires federal agencies to avoid, to the extent possible, long and short-term adverse impacts associated with the occupancy and modification of floodplains. Pursuant to the Flood Disaster Protection Act, the National Flood Insurance Program (NFIP) prohibits the use of funds for acquisition or construction of buildings in special flood hazard areas in communities that are not participating in the Flood Insurance Program (as identified in the NFIP's Community Status Book).

Compliance: NOAA's Guidance Manual on Compliance with Implementing Executive Orders 11988 and 11990 (issued in 2012) outlines an evaluation process for projects that extend into floodplains and wetlands. However, the evaluation process does not apply to most projects that entail minor modification of existing facilities or structures in a floodplain or wetland to improve safety or environmental conditions, as long as certain conditions are met. The proposed project conforms to the exception for minor modification of existing structures because the new boardwalk segment would be a minor, 450-foot extension of the existing boardwalk system and the new tower would be a minor, 2-story, variation on gazebos and piers over Chickasaw Creek that already exist within Brooks Park. The proposed project would improve the safety conditions for visitors trying to reach the recently-acquired, northwestern portion of Brooks Park, and the boardwalk would reduce the environmental impacts of visitors. Although part of Brooks Park is in the AE flood zone, the City of Chickasaw does participate in the NFIP (Federal Emergency Management Agency, 2013). No buildings will be constructed in the floodplain; the proposed project only involves constructing a boardwalk and a birding tower. The City of Chickasaw would not require a special floodplain development permit to be issued for this project because the public access structures to be constructed will not be occupied (A. Gohres, ACAMP, personal communication, October 28, 2013).

Executive Order 13089 – Coral Reef Protection

Among other things, Executive Order 13089 directs federal agencies whose actions may affect U.S. coral reef ecosystems to identify their actions that may affect U.S. coral reef ecosystems, utilize their programs and authorities to protect and enhance the conditions of these ecosystems,

and ensure that any actions they authorize, fund, or carry out will not degrade the conditions of such ecosystems (to the extent permitted by law).
Compliance: The proposed project will not affect any coral reef ecosystems because none are present in the immediate vicinity of Brooks Park.

Executive Order 13112 − Invasive Species
The purpose of Executive Order 13112 is to prevent the introduction of invasive species, respond to and control invasions in a cost-effective and environmentally sound manner, and to provide for restoration of native species and habitat conditions in ecosystems that have been invaded.
Compliance: The preferred alternative will not introduce any invasive species to Brooks Park, nor will it involve any invasive species removal. No heavy equipment may be brought through wetlands to construct the project, which will result in all supplies needed for construction being carried on foot. Also, the jet pump to be used will be cleaned prior to being used at Brooks Park (P. Hinesley, ACAMP, personal communication, December 19, 2013).

Executive Order 13158 − Marine Protected Areas (MPAs)
Executive Order 13158 requires Federal agencies to identify actions that affect natural or cultural resources that are within MPAs. It further requires Federal agencies, in taking such actions, to avoid harm to the natural and cultural resources that are protected by MPAs.
Compliance: Although all of Mobile and Baldwin Counties, including Chickasaw, are within the Mobile Bay National Estuary Program service area, MBNEP's entire service area is not itself an MPA according to the definition under this Executive Order. However, MBNEP is a marine managed area, and NOAA evaluated potential impacts to its cultural and natural resources and heritage. There would be no cultural resource or heritage impacts from the observation tower and boardwalk extension project and minor beneficial impacts on natural resources and heritage within the MBNEP service area. As noted previously, the availability of a safe, elevated boardwalk and sheltered tower would discourage walking directly through wetland areas, benefitting adjacent natural resources. When contacted about the project, MBNEP's Executive Director offered a few observations, including that while Brooks Park does not itself include priority wetlands habitat, it represents similar ecosystems and is well-situated for educating visitors about the value of wetlands and for ecotourism (R. Swann, MBNEP, personal communication, October 31, 2013; MBNEP, 2012; The Nature Conservancy, 2009). The project would provide improved vantage points for visitors to observe Chickasaw Creek and adjacent wetland areas. It would also help support heritage values by restoring human connections to coastal resources, a recommended action in the draft MBNEP Comprehensive Conservation Management Plan for 2013-2018 (R. Swann, MBNEP, personal communication, November 1, 2013; MBNEP, 2012). MBNEP includes the Bon Secour National Wildlife Refuge, which is the nearest site to Brooks Park that meets the definition of MPA under this Executive Order. The Bon Secour National Wildlife Refuge includes Little Dauphin Island (in western Mobile Bay) and parts of Baldwin County. The proposed project at Brooks Park will have no impact on the Bon Secour National Wildlife Refuge because they are more than 30 miles apart.

Fish and Wildlife Coordination Act
Provisions of the Fish and Wildlife Coordination Act (16 USC § 661-666c) provide for interagency consultation, particularly consultation of the U.S. Fish and Wildlife Service and appropriate state wildlife agency, when Federal agencies plan to conduct activities involving the

impoundment, diversion, deepening, control, or modification of a body of water for any purpose, with only two exceptions. Interagency consultation allows Federal agencies to incorporate recommended conservation measures intended to reduce potential project impacts on fish, wildlife, and the aquatic and terrestrial plant species upon which they depend.
Compliance: NOAA (and, in some cases, ACAMP) consulted a variety of State of Alabama and federal agencies, listed in Section 10.0 of this report, about potential impacts of the proposed project, including USFWS and the Alabama Division of Wildlife and Freshwater Fisheries. ADEM recommended that the observation tower be sited above Chickasaw Creek at least 3 feet from its interface with adjacent wetlands, rather than above wetlands (a recommendation that was adopted). USFWS provided comments and recommendations described under the paragraphs outlining Endangered Species Act and Marine Mammal Protection Act compliance. An ADWFF staff member indicated that he did not foresee the project having "any significant impact on wildlife resources," and did not express any concern about the siting of the observation tower over Chickasaw Creek (R. Clay, ADWFF, personal communication, December 10, 2012).

Magnuson-Stevens Fishery Conservation and Management Act
The Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801 *et seq*.) as amended and reauthorized by the Sustainable Fisheries Act (Public Law 104-297), established a program to promote the protection of essential fish habitat (EFH) in the review of projects conducted under federal permits, licenses, or other authorities that affect or have the potential to affect such habitat. After EFH has been described and identified in fishery management plans by regional fishery management councils, federal agencies are obligated to consult with the National Marine Fisheries Service with respect to any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, by such agency that may adversely affect any EFH.
Compliance: NOAA's Office of Ocean and Coastal Resource Management consulted with a representative of the National Marine Fisheries Service's Southeastern Regional Office about EFH and the potential impacts of the proposed project. EFH for white shrimp extends to tidal creeks like Chickasaw Creek that are within influenced by Mobile Bay. These tidal creeks are primarily freshwater at the surface, but will seasonally have subsurface salinities of at least 1 part per thousand. No dredging or filling will be carried out as part of the proposed project. The only impacts will be related to driving pilings into Chickasaw Creek to support the birding tower and into wetlands areas to support the boardwalk. Adverse impacts to EFH resulting from the pilings and project construction are anticipated to be de minimis, and no EFH Conservation Recommendations were provided (M. Thompson, NMFS, personal communication, August 2, 2013).

Marine Mammal Protection Act (MMPA)
The Marine Mammal Protection Act (16 U.S.C. § 1361 *et seq.*), as amended, prohibits the take of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the U.S. The primary management objective of the MMPA is to maintain the health and stability of the marine ecosystem, with a goal of obtaining an optimum sustainable population of marine mammals within the carrying capacity of the habitat. The MMPA is intended to work in concert with the provisions of the ESA. There are some exceptions to the prohibitions on taking marine mammals, including a

mechanism for requesting authorization from the National Marine Fisheries Service's Office of Protected Resources for "incidental," but not intentional, taking, of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing or directed research on marine mammals) within a specified geographic region. Regulations adopted under the MMPA restrict harassment (meaning any act of pursuit, torment, or annoyance that has the potential to injure a marine mammal in the wild by causing disruption of behavioral patterns, including breathing, breeding, feeding, migration, and sheltering).
Compliance: Manatees are protected under the MMPA, as well as the ESA. In its November 2013 letter, USFWS outlined best management practices to avoid harassment of any manatees that might be present in the area during construction (see Appendix C). Two of the best management practices outlined relate the use of boats as part of construction activities (which is not planned) and to the use of siltation or turbidity barriers during construction. A third calls for not operating any moving equipment within 50 feet of any manatee sighted in Chickasaw Creek until it leaves the project area of its own volition, and a fourth requires collisions with or injuries to manatees to be reported to USFWS and the DISL Manatee Sighting Network. While USFWS recommended trying to schedule construction from January to April, outside the primary seasonal manatee use period in Alabama (June to December), it noted that other measures it recommended, combined with the low-impact methods of construction anticipated, are designed to protect manatees, even if some construction occurs later in the year (D. Ingram, USFWS, personal communication, January 8, 2014). The City's intent to ensure compliance with the MMPA is demonstrated by the commitment on the part of City staff to following the four best management practices outlined by USFWS relating to construction practices and actions to take if any manatees are sighted in the area, as well as the City's intent to construct as much of the project as possible between the months of January and April. No other species protected under the MMPA are known to use Chickasaw Creek in the vicinity of Brooks Park.

Migratory Bird Treaty Act (MBTA)
The Migratory Bird Treaty Act (16 U.S.C. § 715 *et seq.*) provides for the protection of migratory birds. For example, it regulates capturing or killing migratory birds, their import and export, scientific collection, and possession for educational purposes. The Act does not specifically protect migratory bird habitat, but USFWS may suggest consideration of time of year restrictions for construction or remedial activities at sites where it is likely migratory birds may be nesting or project schedules that would avoid the nesting seasons of migratory birds.
Compliance*:* Although Brooks Park is not known to be widely used by migratory birds, NOAA consulted with a representative of the USFWS Migratory Bird Program, who indicated that the proposed project did not present any significant concerns related to the take of migratory birds. USFWS also indicated that proposed activities are fully compatible with the goals and objectives of the MBTA, including promoting the long-term conservation of migratory birds and public recreation and education related to migratory birds (D. Demarest, USFWS, personal communication, August 8, 2013). The proposed project would give visitors to Brooks Park a better vantage point from which to observe and appreciate birds that visit Chickasaw Creek and the northwestern portion of Brooks Park.

National Historic Preservation Act
The purpose of the National Historic Preservation Act (16 U.S.C. § 470 *et seq.*) is to provide for the preservation of historic American sites, buildings, objects, and antiquities of national

significance, and for other purposes by specifically providing for the preservation of historical and archeological data which might otherwise be lost or destroyed.
Compliance: In consultation with ACAMP, NOAA determined that the proposed action would have no adverse effect on historic properties and submitted this finding to the Alabama Historical Commission. The Commission concurred with NOAA's assessment on June 21, 2013, noting that the proposed work should create no adverse effect to properties listed on or eligible for the National Register of Historic Places (see Appendix E).

National Marine Sanctuaries Act
Under the National Marine Sanctuaries Act, federal agency actions internal or external to a national marine sanctuary, including private activities authorized by licenses, leases, or permits, that are likely to destroy, cause the loss of, or injure any sanctuary resource are subject to consultation with the Secretary of Commerce. Each federal agency proposing such an action must provide a written statement describing the action and its potential effects on sanctuary resources no later than 45 days before the final approval of the action. In addition, sanctuary permits may be required for certain actions that would otherwise be prohibited.
Compliance: The proposed project will not impact any National Marine Sanctuary resources because there are no National Marine Sanctuaries near Brooks Park.

Rivers and Harbors Act
The Rivers and Harbors Act of 1899 (33 U.S.C. § 401 *et seq.*) regulates development and use of the nation's navigable waterways. Section 10 of the Act prohibits unauthorized obstruction or alteration of navigable waters and vests the USACE with authority to regulate discharges of fill and other materials into such waters.
Compliance*:* Pursuant to Section 10 of this Act and to the Clean Water Act, USACE indicated that the proposed project at Brooks Park is eligible for two general permits (ALG05-2011 and ALG06-2011), as long as conditions identified in the approval letter (see Appendix D) and the general permits are met. All construction activity will be carried out in compliance with the Rivers and Harbors Act.

7.0 CONCLUSION: FINDING OF NO SIGNIFICANT IMPACT

The National Oceanic and Atmospheric Administration proposes to partially fund public access improvements at William Brooks Park in Chickasaw, Alabama, that would enable: (1) extending an existing 8-foot wide boardwalk by 450 feet to provide safe, accessible public access to the land added to Brooks Park in 2012, and (2) constructing a two-level, roofed observation tower at the end of the new boardwalk segment, above Chickasaw Creek, a few feet from the wetlands-creek interface. The observation tower would be approximately 20 feet high, 24 feet wide, and 24 feet long. A No Action alternative was also considered.

Significant individual and/or cumulative environmental effects would not result from implementation of the preferred alternative, and preparation of a Finding of No Significant Impact (FONSI) is warranted.

NOAA Administrative Order (NAO) 216-6 (revised June 20, 1999) provides eleven criteria for determining the significance of the impacts of a proposed action. These criteria are discussed below as they relate to the proposed project.

a. Has the agency considered both beneficial and adverse effects? (A significant effect may exist even if the Federal agency believes on balance the effect will be beneficial.)

The agency has considered both beneficial and adverse effects, and no significant effects are anticipated. The beneficial effects include making the northwestern portion of Brooks Park accessible to a larger number of people (e.g., individuals with disabilities or pushing strollers), providing vantage points from which to view the environment in the northwestern portion of the park, creating an area for contemplation (the observation tower), helping reduce impacts to nearby habitats by encouraging people not to stray from the new infrastructure, and creating new substrate, shelter, and shade that some organisms would benefit from. Adverse effects of the project could include impacts to a small number of plants and animals in areas where construction would occur, but these impacts would be minimal and largely temporary. Most animal species potentially impacted would be able to relocate to or recolonize areas outside the construction zone. USFWS outlined best management practices related to reducing the potential for impacts to manatees and Alabama Red-Belly turtles, both listed as endangered under the ESA. Further, USFWS noted that it did not anticipate negative impacts to those species if the best management practices are followed (see Appendix C). When OCRM conveyed to USFWS that the City was not sure it could adhere to the recommended project timeframe, but would adhere to the other best management practices, USFWS indicated that approach would be adequately protective of endangered species, considering the low-impact construction practices planned (D. Ingram, USFWS, personal communication, January 8, 2014). Shading impacts would be minor and would be mitigated by elevating the new infrastructure on pilings by 3 feet. Along the boardwalk, USACE requires the decking boards to be spaced at least three-quarters of an inch apart to allow for some light penetration. Another planned mitigation measure is installing pilings using a jet pump (not heavy machinery). None of the anticipated effects are considered significant individually or cumulatively. The proposed project would address the final improvements suggested in the 2007 Conceptual Master Plan for Brooks Park. Other potential projects to improve public access that are under consideration for Brooks Park in the future, including installing security cameras and additional benches, are minor.

b. To what degree would the proposed action affect public health and safety?

The proposed project would have a minor beneficial effect on public health and safety by creating a smooth, level surface for people to traverse during a variety of weather conditions, as well as sheltered places for people to stand, within the observation tower, when it rains. In addition, the proposed action could reduce the likelihood that people (e.g., bird-watchers) will traverse wetlands in the future, which can be unsafe.

c. To what degree would the proposed action affect unique characteristics of the geographic area in which the proposed action is to take place?

None. The proposed infrastructure will look similar to infrastructure in other parts of Brooks Park and will not detract from the unique characteristics of the park or the portion of Chickasaw Creek immediately upstream from the Highway 43 bridge. None of the City of Chickasaw's unique historic and cultural resources would be affected by the proposed action.

d. To what degree would the proposed action have effects on the human environment that are likely to be highly controversial?

None. There is no controversy associated with the project. Visitors support the project and look forward to its completion (A. Gohres and P. Hinesley, ACAMP, personal communication, June 4, 2013). There was no opposition to previous improvements at Brooks Park carried out in phases over the past approximately 5 years, consistent with the Conceptual Master Plan (P. Hinesley, ACAMP, personal communication, December 19, 2013). Also, in early 2013, the City of Chickasaw distributed a public opinion survey in connection with its comprehensive planning process. Approximately 16% of the households in Chickasaw completed the survey (reflecting the views of more than 420 respondents). One open-ended question asked residents to identify their three favorite places in Chickasaw. The most common response, selected by 24% of respondents, was the City's parks and trails, followed by Brooks Landing (the boat launch at Brooks Park). An open-ended question about what improvements were needed along Highway 43 did not garner any responses related to the amenities at Brooks Park. In response to an open-ended question about things to improve in Chickasaw, none of the respondents mentioned Brooks Park, although some respondents (8%) alluded to a need to improve playgrounds and parks for children. In short, the detailed summary of survey responses reveals no evidence of opposition to improvements completed or proposed at Brooks Park (City of Chickasaw, 2013, Appendix A). The City is currently soliciting public comments on its draft *Comprehensive Plan 2030*, which will give residents an opportunity to comment on all its recommendations related to possible future projects to enhance outdoor recreation opportunities within Chickasaw, including the proposed project.

e. What is the degree to which effects are highly uncertain or involve unique or unknown risks?

None. The proposed action does not have highly uncertain effects, as there are similar boardwalks within Brooks Park to which the proposed boardwalk segment can be compared, and the proposed 450-foot boardwalk segment will be constructed in accordance with all the conditions associated with Alabama General Permit ALG05-2011. In addition, similar bird observation towers and gazebos have been installed in other locations in Alabama. The proposed Brooks Park observation tower is eligible for Alabama General Permit ALG06-2011. The U.S. Army Corps of Engineers prepared an environmental assessment associated with each general permit, evaluated potential impacts of projects authorized under each general permit, and reached a finding of no significant impact for ALG05-2011 and ALG06-2011. USFWS was consulted and indicated that it did not anticipate negative impacts to endangered species if four required best management practices are followed, even if the City of Chickasaw is unable to complete the project in the timeframe it aims for, between January and April. In short, the effects of the proposal would not involve unique, unknown, or highly uncertain risks; all available data indicate that any adverse impacts would be minimal.

f. What is the degree to which the action establishes a precedent for future actions with significant effects or represents a decision in principle about a future consideration?

None. The proposed project would address the final improvements suggested in the 2007 Conceptual Master Plan for Brooks Park. Approval of funding for this proposed project does not establish a precedent. NOAA approves funding for small construction projects consistent with Section 306A of the CZMA every year, including projects that have included constructing and improving boardwalks, piers, and viewing platforms that allow the public to observe and access coastal settings. Each project that ACAMP proposes to fund is reviewed individually by ACAMP and NOAA (and other agencies, as needed).

g. Does the proposed action have individually insignificant but cumulatively significant impacts?

No. Adverse effects could include impacts to a small number of plants and animals in areas where construction has already occurred and areas where it is proposed, but these impacts would be minimal and largely temporary. Most impacted species would be able to relocate to areas outside the construction zone. Analyses conducted by the U.S. Army Corps of Engineers and the NOAA Restoration Center, respectively, of the cumulative effects of projects in wetlands, waterways, and similar riparian settings that are similar in nature to the public access infrastructure that exists and is proposed at Brooks Park reached findings of no significant impact (NOAA Restoration Center, 2006; USACE, 2011a, b). Existing and proposed boardwalks and trails at Brooks Park extend over approximately 7% of the uplands and wetlands at Brooks Park. (A few gazebos, benches and picnic areas that exist were not figured into this estimate, but the areas they cover would collectively be minimal.) The existing and proposed public access infrastructure elevated above Chickasaw Creek (three piers and the proposed observation tower) are estimated to cover an even smaller percentage of the surface area of the portion of the creek alongside of Brooks Park. All available data, including consideration of the relatively small area that all the public access infrastructure would extend over, indicate that individual and cumulative impacts are likely to be insignificant.

h. What is the degree to which the action adversely affects entities listed in or eligible for listing in the National Register of Historic Places, or may cause loss or destruction of significant scientific, cultural, or historic resources?

None. NOAA determined that the proposed action would have no adverse effect on historic properties and submitted this finding to the Alabama Historical Commission. The Alabama Historical Commission concurred with this determination on June 21, 2013 (see Appendix E).

i. What is the degree to which endangered or threatened species, or their critical habitat, as defined under the Endangered Species Act of 1973, are adversely affected?

Manatees and Alabama Red-Belly turtles, both endangered species, have been reported at or near Brooks Park. There is no federally-designated critical habitat within or adjacent to Brooks Park. NOAA and ACAMP consulted with the USFWS Alabama Ecological Services Field Office

about potential impacts of the project because of its jurisdiction over these species; no species under the jurisdiction of the National Marine Fisheries Service have been identified near Brooks Park. USFWS identified best management practices that would help mitigate any potential impacts of the project to endangered species. (A copy of the USFWS letter is included as Appendix C.) USFWS further noted that it did not anticipate negative impacts to endangered manatees or Alabama Red-Belly turtles as long as the four best management practices related to construction practices and requirements that apply if manatees are present during construction are followed, the project is carried out as described to USFWS, and no new information comes to light about potential effects on listed species in a manner or to an extent not previously considered. While USFWS recommended the project be constructed between January and April, it indicated that even if construction extends into other months, as long as the other best management practices are followed, the approach to the project would be adequately protective of endangered species, and no negative impacts would be anticipated. ACAMP and the City of Chickasaw have committed to carrying out the project during the recommended timeframe, if possible, and ensuring the other best management practices are followed (A. Gohres, ACAMP, personal communication, December 15, 2013; P. Hinesley, ACAMP, personal communication, January 3, 2014). Thus, NOAA concluded that the project may affect, but is not likely to adversely affect, listed species, and USFWS concurred (S. Detwiler, USFWS, personal communication, November 13, 2013; D. Ingram, USFWS, personal communication, January 8, 2014).

j. Does the proposed action have a potential to violate Federal, state, or local law for environmental protection?

No. The City of Chickasaw would carry out the project, and it has verified that no local permits are needed. A representative of the City consulted with ADEM to obtain authorization to construct the new boardwalk segment and the observation tower, and the ADEM State Lands Division provided a letter on April 2, 2013, indicating that it had no objection to the proposed project, which complies with State Lands Division Regulation 220-4-.09 (J. Jordan, ADCNR, State Lands Division, Submerged Lands, personal communication, April 2, 2013). ACAMP also consulted other state agencies about the project proposal, including the Division of Wildlife and Freshwater Fisheries. Compliance with federal requirements is documented in the preceding section of this EA (Section 6.0). A list of agencies and persons consulted is included as Section 10.0 of this EA. Given project review at the state and federal level, no violation of environmental protection laws is threatened.

k. Will the proposed action result in the introduction or spread of a non-indigenous species?

No. No additional plants or animals will be introduced as part of the proposed project. The jet pump that will be used to install the pilings will be cleaned prior to its use at Brooks Park. All supplies needed for construction will be carried to the project area on foot.

Finding of No Significant Impact
Environmental Assessment
William Brooks Park Boardwalk Extension and Bird Observation Tower

NOAA has prepared the attached Environmental Assessment (EA) for the William Brooks Park Boardwalk Extension and Bird Observation Tower, which conforms to the procedural and technical requirements set forth in NOAA Administrative Order 216-6, Environmental Review Procedures for Implementing the National Environmental Policy Act (NEPA), and NEPA. The proposed action is to approve providing funding to the Alabama Coastal Area Management Program, under Section 306A of the Coastal Zone Management Act, which would enable public access enhancements in the part of Brooks Park acquired in 2012 to benefit the safety of visitors, the educational and recreational experiences available to them in the northwestern portion of the park, accessibility, and the natural environment. The EA assesses the potential environmental impacts of funding the construction of a bird observation tower over Chickasaw Creek and the extension of an existing boardwalk to reach the observation tower, which is the preferred alternative for NOAA, the Alabama Coastal Area Management Program, and the City of Chickasaw, which owns the park.

Having reviewed the EA, I have determined that the project assessed within will not have a significant impact on the quality of the human environment. Therefore, the preparation of an Environmental Impact Statement for the proposed action is not required by Section 102(2)(c) of the National Environmental Policy Act or its implementing regulations.

JAN 3 0 2014

for Holly A. Bamford, Ph.D. — Date
Assistant Administrator for
Ocean Services and Coastal Zone Management

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10.0 LIST OF AGENCIES AND PERSONS CONSULTED

Amy Gohres and Phillip Hinesley, ACAMP

Cara Stallman, for the City of Chickasaw

Dan Everson, USFWS, Alabama Ecological Services Field Office

Dean Demarest, USFWS, Migratory Bird Program, Southeast Region

Elizabeth Hieb, Dauphin Island Sea Laboratory, Manatee Sighting Network

Greg Rhinehart, Alabama Historical Commission (see Appendix E)

Jeff Jordan, ADCNR, State Lands Division, Submerged Lands

Leslie Turney, USACE, South Alabama Branch, Regulatory Division (see Appendix D)

Mark Thompson, NOAA, National Marine Fisheries Service, Southeast Regional Office

Michael Barbour, ALNHP, Auburn University Environmental Institute (see Appendix B)

Michael Len, ADEM, Montgomery Branch

Roberta Swann, Mobile Bay National Estuary Program

Roger Clay, ADWFF

Ruth Carmichael, Dauphin Island Sea Laboratory, Manatee Sighting Network and Marine Ecology Research Laboratory

Sam Rawls, City of Chickasaw, Public Works Director

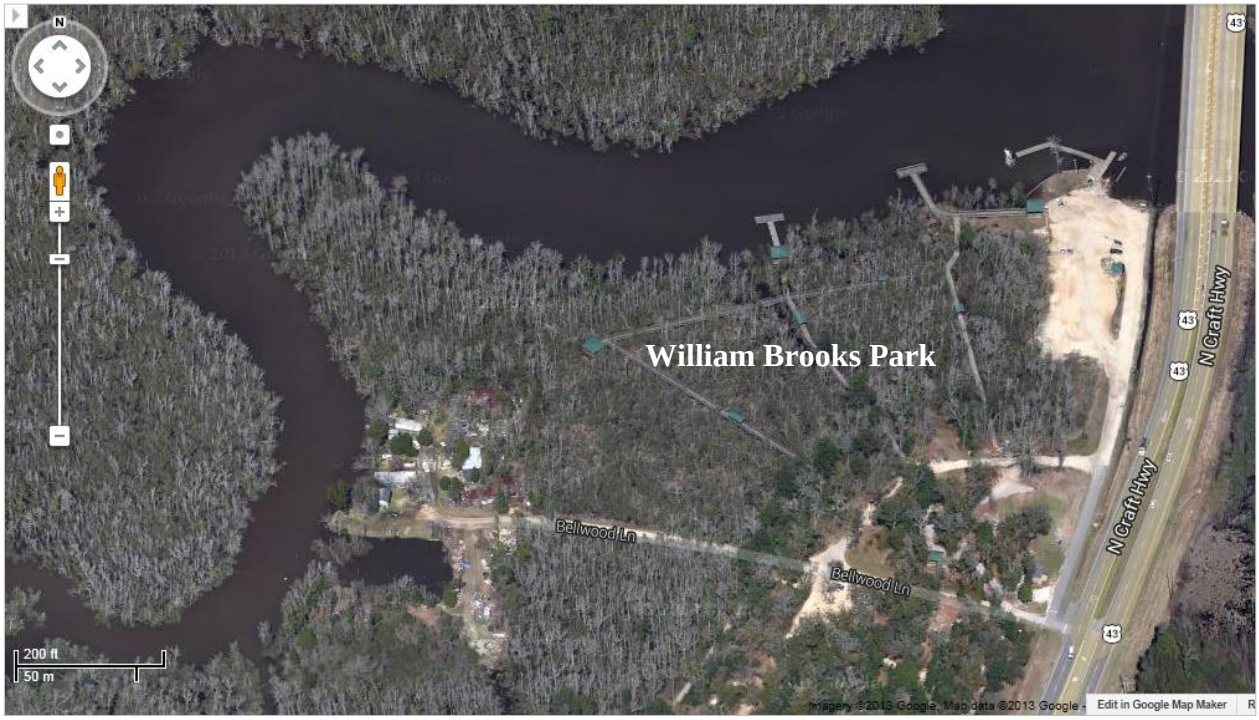
Susan Detwiler, USFWS, Alabama Ecological Services Field Office (see Appendix C)

Susan Dingman, ADEM, Mobile Branch

11.0 APPENDICES

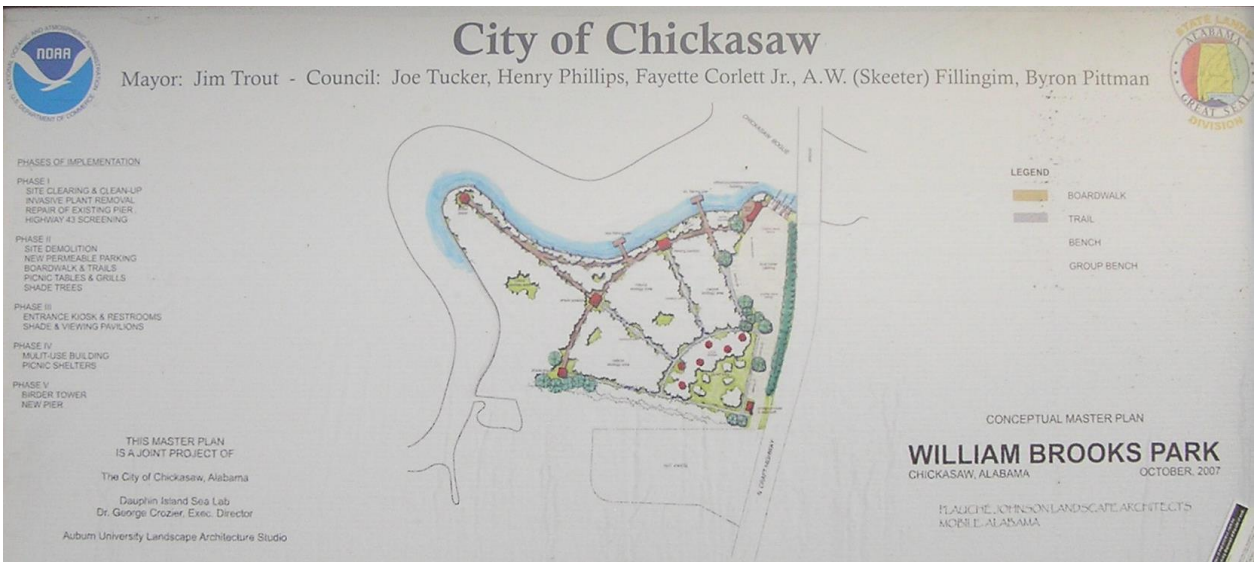
APPENDIX A: FIGURES

Figure 1: Aerial photograph of William Brooks Park showing existing boardwalks



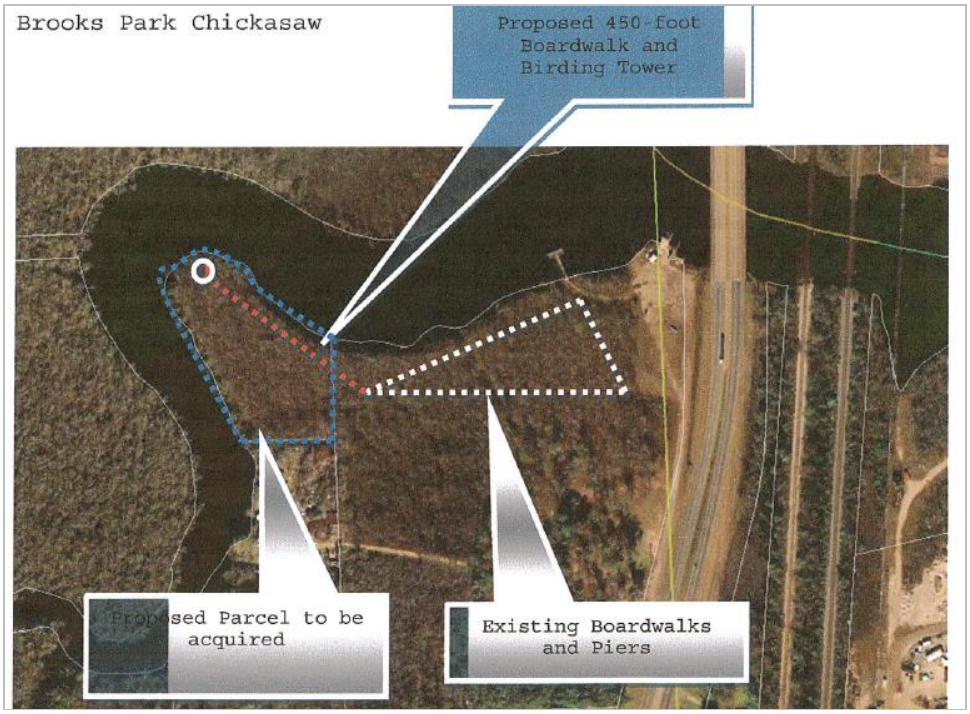
(Aerial photograph from Google Maps, 2013)

Figure 2: Conceptual Master Plan for Brooks Park



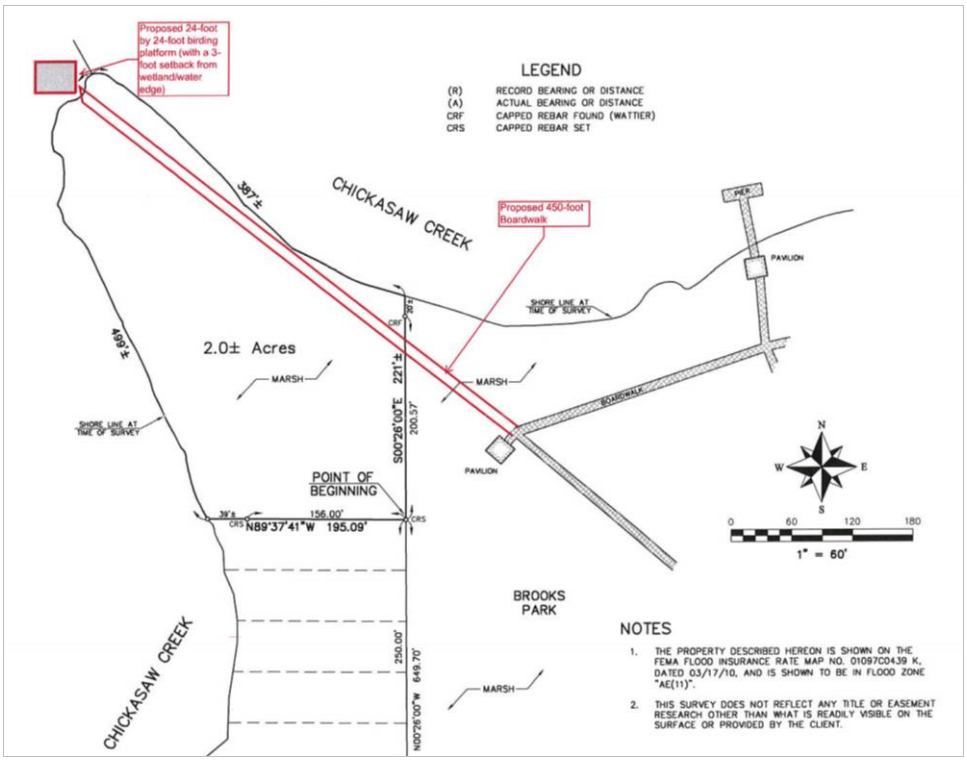
(Photograph of sign depicting Conceptual Master Plan courtesy of A. Gohres, ACAMP, 2013)

Figure 3: Diagram showing proposed Brooks Park land acquisition, which occurred in 2012



(Image courtesy of A. Gohres, ACAMP, 2013)

Figure 4: Plan for proposed project at Brooks Park



(ACAMP, 2013, from a basemap prepared by Wattier Surveying, Inc.)

Figure 5: View of point off of which the observation tower would be sited

(Photograph, facing west, courtesy of A. Gohres, ACAMP, 2013)

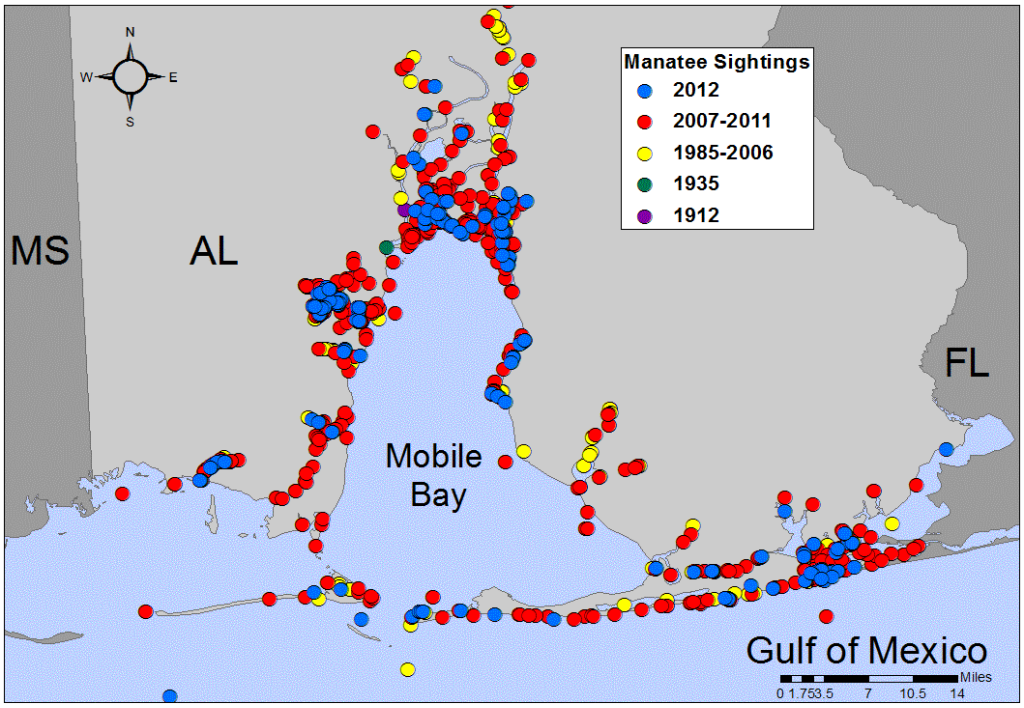
Figure 6: View of an existing boardwalk at Brooks Park

(Photograph from ACAMP, 2013)

Figure 7: View of proposed location of boardwalk extension, facing east

(Photograph from ACAMP, 2013)

Figure 8: Manatee Sightings Reported in Alabama through 2012



(Map from DISL, n.d.)

Appendix B

Species of Conservation Concern Documented within 5 km of Brooks Park

Taxonomic Group	EO ID	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Status	SWAP Status	EO Rank	Last Observed	Element Occurrence Data
Amphibians	2803	*Amphiuma pholeter*	One-toed Amphiuma	G3	S1		SP	P2	H	1972-05-09	Carey (1985) reported a collection from the Mobile College campus on 9 May 1972 (specimen(s) in University of South Alabama Museum Cat #2407); first record for Mobile County.
Mammals	6729	*Lasiurus intermedius*	Northern Yellow Bat	G4G5	S1		SP	P2	H	1969-03-24	A male was collected from this locality on 24 March 1969; weight = 13.6 grams, total length = 137mm, tail = 53mm, and hind foot = 10mm (Linzey and Linzey, 1969).
Turtles	6906	*Graptemys nigrinoda delticola*	Delta Map Turtle	G3T2Q	S2		SP		B	1995-06-30	8 turtles captured between 1995-06-13 and 1996-06-30 (46 trap days).
Turtles	4281	*Macrochelys temminckii*	Alligator Snapping Turtle	G3G4	S3		SP	P2	C	1995-07-13	1 turtle captured and released between 1995-07-13 and 1995-06-21.
Turtles	6686	*Pseudemys alabamensis*	Alabama Red-bellied Turtle	G1	S1	LE	SP	P1	C	1995-07-13	2 turtles captured and released between 1995-07-13 and 1995-06-21.
Turtles	5258	*Pseudemys alabamensis*	Alabama Red-bellied Turtle	G1	S1	LE	SP	P1	B	1995-06-30	9 turtles captured between 1995-06-13 and 1996-06-30 (46 trap days) 5 females, 1 male and 3 juveniles.

Appendix C: U.S. Fish and Wildlife Service Endangered Species Act Compliance Letter

United States Department of the Interior

FISH AND WILDLIFE SERVICE
1208-B Main Street
Daphne, Alabama 36526

IN REPLY REFER TO:
2014-I-0078

NOV 13 2013

Ms. Amy Gohres
Alabama Department of Conservation
and Natural Resources
31115 - 5 Rivers Boulevard
Spanish Fort, AL 36527

Dear Ms. Gohres:

Thank you for your email received November 1, 2013, requesting comments on a Coastal Area Management Program project for the revised location of a proposed birding tower located in William Brooks Park, Chickasaw, Mobile County, Alabama. We have reviewed the information and are providing the following comments in accordance with the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. et seq.) and the Marine Mammal Protection Act of 1972 ((16 U.S.C. 1361-1407).

Based on the information provided in your November 1, 2013, email, and telephone call from Ms. Rebecca Feldman, NOAA, we understand the birding tower is now proposed to be installed over open water using a jet pump to avoid shading submerged aquatic vegetation.

Our records indicated both the federally endangered West Indian manatee (*Trichechus manatus*) and the Alabama red-belly turtle (*Pseudemys alabamensis*) are known to occur in or near your project site and similar nearby habitat. This habitat type also supports other fish and wildlife resources important to the public. Manatees have been recorded in Alabama waters in every month of the year; however, higher use is typically reported June through December. Alabama red-belly turtles nest May-July on riverbanks and sand spoil sites. Both species use quiet backwater areas with dense submerged vegetation in and along Mobile Bay moving between sites through open water tributaries and channels.

We do not anticipate negative impacts to these species with this type of construction if the following best management practices (BMPs) are followed:

- If possible, conduct the project January-April which is outside the primary seasonal manatee use period in Alabama.
- If siltation or turbidity barriers will be used, these shall be made of material in which manatees cannot become entangled, are properly secured and kept taut, and are regularly monitored to avoid manatee entrapment. Barriers must not block manatee entry to, or exit from, essential habitat.

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- If work is accomplished through use of boats or barges, avoid collision with these species by advising all construction personnel to operate at "no wake/idle" speeds at all times while in the construction area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
- If manatees are seen within 100 yards of the active daily in-water construction operation or vessel movement, operate all moving equipment no closer than 50 feet of a manatee. Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment. Activities will not resume until the manatee(s) has departed the project area of its own volition.
- Any collision with and/or injury to a manatee shall be reported immediately to the U.S. Fish and Wildlife Service at 251-441-5839 or 251-441-5181 and the Dauphin Island Sea Lab's Manatee Sighting Network at 1-866-493-5803.

In summary, endangered species that may be in this area can be protected by use of BMPs. No further endangered species consultation will be required for this portion of the project unless: 1) the identified action is subsequently modified in a manner that causes an effect on listed species or a designated critical habitat; 2) new information reveals the identified action may affect federally protected species or designated critical habitat in a manner or to an extent not previously considered; or 3) a new species is listed or critical habitat is designated under the Endangered Species Act that may be affected by the identified action.

Thank you for the opportunity to review this project. The Service supports projects such as this one that benefit the public by providing opportunities to experience local fish and wildlife resources. If you have any questions or need additional information, please contact Ms. Dianne Ingram at (251) 441-5839. Please refer to the reference number located at the top of this letter in future phone calls or written correspondence.

Sincerely,

Susan Detwiler
Acting Deputy Field Supervisor
Alabama Ecological Services Field Office

cc:
Mr. Jim Valade, US Fish and Wildlife Service, North Florida Ecological Services Office, 7915 Baymeadows Way, Suite 200, Jacksonville, FL 32256-7517
Ms. Rebecca Feldman, National Oceanic and Atmospheric Administration, Office of Ocean and Coastal Resource Management and Coastal Services Center, 1305 East-West Highway, SSMC4 Silver Spring, MD, 20910

Appendix D: U.S. Army Corps of Engineers Project Review Letter

REPLY TO ATTENTION OF:

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, MOBILE DISTRICT
CORPS OF ENGINEERS
P.O. BOX 2288
MOBILE, ALABAMA 36628-0001

February 7, 2013

Inland Branch
Regulatory Division

SUBJECT: Department of the Army General Permit for Minor Structures and Activities within the State of Alabama, File Number **SAM-2008-0331-LET**, City of Chickasaw – William Brooks Park birding tower, Chickasaw, Mobile County, Alabama.

Mayor Byron Pittman
City of Chickasaw
C/o Mr. Sam Rawls
Post Office Box 11307
Chickasaw, Alabama 36671

Dear Mayor Pittman:

Reference is made to your request for a Department of the Army permit to construct a pile-supported birding tower and wooden boardwalk connecting the structure to an existing pile-supported boardwalk trail system within the William Brooks Park facility on Chickasaw Creek in Chickasaw, Alabama. Specifically, the public park project site is located on the south shoreline of Chickasaw Creek, west of U.S. Highway 43 (a.k.a. North Craft Highway) within Section 16, Township 3 South, Range 1 West near latitude 30.781513° N and longitude -88.073471° W, in Chickasaw, Mobile County, Alabama where the following work is proposed:

a.) The construction of a metal roofed, two story, pile-supported 24-foot wide by 24-foot long bird observation tower in Chickasaw Creek. The birding tower will consist of an upper and lower platform that will be connected by a 10-step stairwell. The birding tower will be constructed a minimum of 3-feet waterward from the point where the water and vegetated wetlands interface. **This work is authorized by Alabama General Permit ALG06-2011**.

b.) The construction of 450 linear feet of 8-foot wide pile-supported wooden boardwalk connecting the birding platform to an existing network of boardwalk trails through forested wetlands along Chickasaw Creek. A minimum of 3 linear feet of the pile–supported boardwalk would extend across Section 10 waters to connect the birding tower to the boardwalk system through wetlands. **This work is authorized by Alabama General Permit ALG05-2011**.

Upon the recommendation of the Chief of Engineers and under provisions of Section 10 of the River and Harbor Act of 1899 (33 U.S.C. 403) and Section 404 of the Clean Water Act (33 U.S.C. 1344), authorization is hereby given by the Secretary of the Army for the performance of the work in

accordance with the enclosed descriptions and plans and the Alabama General Permits. The proposed construction activities as described above are authorized by Alabama General Permit Number ALG05-2011 and Alabama General Permit Number ALG06-2011. Enclosed is a copy of these General Permits and **their associated Special Conditions, General Conditions, Coastal Zone Management Certification Conditions, and Water Quality Certification Conditions** for your review and compliance. This information may also be accessed on our website at **http://www.sam.usace.army.mil/Missions/Regulatory/GeneralPermits.aspx**. Your work is further subject to the following special conditions:

a. Compliance with all the terms and conditions of the General Permit Program and permit special conditions is mandatory.

b. The permittee understands and agrees that if future operations by the United States require the removal, relocation, or other alteration of the structure or work herein authorized, or if in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the U.S. Army Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

c. It is the responsibility of the permittee to coordinate this activity with the Alabama Department of Conservation and Natural Resources (ADCNR), State Lands Division, for any leases that may be required for impacts to State water bottoms. ADCNR, State Lands Division, 31115 Five Rivers Boulevard, Spanish Fort, Alabama 36527, phone number (251) 621-1238.

d. It is the permittee's responsibility to ensure the contractors working on this project are aware of all General, Special, Coastal Zone Management, and Water Quality Certification conditions of the permit.

If title to these structures are transferred or assigned to another party or in the event of removal or destruction of such structures by any cause, the District Engineer shall be notified promptly in writing.

The District Commander shall be notified promptly in writing at the commencement and completion of the work. The enclosed Commencement Card and Compliance Certification Form may be used for that purpose. Also, the enclosed yellow Notice of Authorization card must be posted at the site during construction of the permitted activity. **Work authorized by the General Permit must be completed within three years of the authorization date**. In the event you have not completed construction of your project within the specified time limit, a separate application or re-verification may be required.

This authorization does not obviate any obligation or responsibility for compliance with the provisions of any other law or regulation of any local, State or Federal authority.

Copies of this authorization letter have been provided to the Alabama Department of Environmental Management, Coastal/Facility Section ,Attention: Mr. Scott Brown, 4171 Commanders Drive, Mobile, Alabama 36615, and Alabama Department of Conservation and Natural Resources, State Lands Division – Coastal Section, Attention: Mr. Phillip Hinesley, 31115 Five Rivers Boulevard, Spanish Fort, Alabama 36527 for informational purposes.

Please contact me at (251) 694-3873, if you have any questions. For additional information about our Regulatory Program, please visit our web site at **http://www.sam.usace.army.mil/Missions/Regulatory.aspx**, and please take a moment to complete our customer satisfaction survey while you're there. Your responses are appreciated and will allow us to improve our services.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:

BY:

STEVEN J. RHOEMHILDT, P.E.
Colonel, Corps of Engineers
District Commander

LESLIE E. TURNEY
Project Manager
Inland Branch
Regulatory Division

Enclosures

2/7/13
L. TURNEY/3873/ayr
M. MOXEY 2/8/2013
FILE

Appendix E: Alabama Historical Commission Project Review Letter

STATE OF ALABAMA
ALABAMA HISTORICAL COMMISSION
468 SOUTH PERRY STREET
MONTGOMERY, ALABAMA 36130-0900

FRANK W. WHITE
EXECUTIVE DIRECTOR

TEL: 334-242-3184
FAX: 334-240-3477

June 21, 2013

Rebecca Feldman
NOAA
Office of Ocean & Coastal Resource Management
Silver Spring, Maryland 20910

Re: AHC 13-0949 (AHC 13-0061 & AHC 13-0062)
Revised Projects
Dauphin Island Bird Sanctuary & Brooks Park in Chickasaw
Mobile County, Alabama

Dear Ms. Feldman:

Upon review of the revisions to the proposed projects, AHC 13-0061 and AHC 13-0062, we have determined that there should be no adverse effect to properties listed on or eligible for the National Register of Historic Places. Therefore, we continue to concur with these actions.

We appreciate your continued efforts on this project. Should you have any questions, please contact Greg Rhinehart at (334) 230-2662 or by e-mail at Greg.Rhinehart@preserveala.org. Please have the AHC tracking number referenced above available and include it with any correspondence.

Truly yours,

Elizabeth Ann Brown

Elizabeth Ann Brown
Deputy State Historic Preservation Officer

EAB/GCR/gcr

United States Department of the Interior

FISH AND WILDLIFE SERVICE
1208-B Main Street
Daphne, Alabama 36526

IN REPLY REFER TO:
2014-I-0078

NOV 13 2013

Ms. Amy Gohres
Alabama Department of Conservation
and Natural Resources
31115 - 5 Rivers Boulevard
Spanish Fort, AL 36527

Dear Ms. Gohres:

Thank you for your email received November 1, 2013, requesting comments on a Coastal Area Management Program project for the revised location of a proposed birding tower located in William Brooks Park, Chickasaw, Mobile County, Alabama. We have reviewed the information and are providing the following comments in accordance with the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. et seq.) and the Marine Mammal Protection Act of 1972 ((16 U.S.C. 1361-1407).

Based on the information provided in your November 1, 2013, email, and telephone call from Ms. Rebecca Feldman, NOAA, we understand the birding tower is now proposed to be installed over open water using a jet pump to avoid shading submerged aquatic vegetation.

Our records indicated both the federally endangered West Indian manatee (*Trichechus manatus*) and the Alabama red-belly turtle (*Pseudemys alabamensis*) are known to occur in or near your project site and similar nearby habitat. This habitat type also supports other fish and wildlife resources important to the public. Manatees have been recorded in Alabama waters in every month of the year; however, higher use is typically reported June through December. Alabama red-belly turtles nest May-July on riverbanks and sand spoil sites. Both species use quiet backwater areas with dense submerged vegetation in and along Mobile Bay moving between sites through open water tributaries and channels.

We do not anticipate negative impacts to these species with this type of construction if the following best management practices (BMPs) are followed:

- If possible, conduct the project January-April which is outside the primary seasonal manatee use period in Alabama.
- If siltation or turbidity barriers will be used, these shall be made of material in which manatees cannot become entangled, are properly secured and kept taut, and are regularly monitored to avoid manatee entrapment. Barriers must not block manatee entry to, or exit from, essential habitat.

- If work is accomplished through use of boats or barges, avoid collision with these species by advising all construction personnel to operate at "no wake/idle" speeds at all times while in the construction area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
- If manatees are seen within 100 yards of the active daily in-water construction operation or vessel movement, operate all moving equipment no closer than 50 feet of a manatee. Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment. Activities will not resume until the manatee(s) has departed the project area of its own volition.
- Any collision with and/or injury to a manatee shall be reported immediately to the U.S. Fish and Wildlife Service at 251-441-5839 or 251-441-5181 and the Dauphin Island Sea Lab's Manatee Sighting Network at 1-866-493-5803.

In summary, endangered species that may be in this area can be protected by use of BMPs. No further endangered species consultation will be required for this portion of the project unless: 1) the identified action is subsequently modified in a manner that causes an effect on listed species or a designated critical habitat; 2) new information reveals the identified action may affect federally protected species or designated critical habitat in a manner or to an extent not previously considered; or 3) a new species is listed or critical habitat is designated under the Endangered Species Act that may be affected by the identified action.

Thank you for the opportunity to review this project. The Service supports projects such as this one that benefit the public by providing opportunities to experience local fish and wildlife resources. If you have any questions or need additional information, please contact Ms. Dianne Ingram at (251) 441-5839. Please refer to the reference number located at the top of this letter in future phone calls or written correspondence.

Sincerely,

Susan Detwiler
Acting Deputy Field Supervisor
Alabama Ecological Services Field Office

cc:
Mr. Jim Valade, US Fish and Wildlife Service, North Florida Ecological Services Office, 7915 Baymeadows Way, Suite 200, Jacksonville, FL 32256-7517
Ms. Rebecca Feldman, National Oceanic and Atmospheric Administration, Office of Ocean and Coastal Resource Management and Coastal Services Center, 1305 East-West Highway, SSMC4 Silver Spring, MD, 20910