

**ENVIRONMENTAL ASSESSMENT  
HAM CREEK PARK DEVELOPMENT  
WHITNEY LAKE, JOHNSON COUNTY, TEXAS**



*Prepared for*

**Whitney Lake Project Office**

*by*

**US Army Corps of Engineers  
Fort Worth District**

**February 2006**

**FINDING OF NO SIGNIFICANT IMPACT**  
**ENVIRONMENTAL ASSESSMENT**  
**HAM CREEK PARK DEVELOPMENT**  
**WHITNEY LAKE, JOHNSON COUNTY, TEXAS**

Description of Action. The purpose of the Federal action is to develop Ham Creek Park into a class A campground at Whitney Lake, Johnson County Texas. The U.S. Army Corps of Engineers (USACE) would then outgrant Ham Creek Park to Johnson County for operation and maintenance. The proposed plan would include construction of roads, a boat ramp with parking, a gate house, group pavilions, day use sites, recreational vehicle and primitive camping sites, hiking trails, an equestrian center, and an amphitheater.

Anticipated Environmental Effects. Alternatives considered included four construction alternatives and the no action as described in the environmental assessment (EA).

There will be no significant adverse impacts to the human and natural environment associated with proper implementation of the proposed action. No significant adverse environmental impacts are anticipated for soil, waters of the U.S., water quality, fish and wildlife, aquatic vegetation, noise and general aesthetics, cultural resources, hazardous, toxic, and radioactive wastes, air quality, recreation, or socioeconomics within the subject property. Approximately 32 acres of grasslands, 2.4 acres of riparian woodlands, and 3.25 acres of upland woodlands would be affected by the proposed action, but mitigation would be preformed to help offset the impacts.

USACE entered into formal Section 7 Endangered Species Act (ESA) consultation with the U.S. Fish and Wildlife Service (Service) regarding the effects of the project on the golden cheeeked warbler. The Service issued a biological opinion that determined the project would destroy 8.5 acres and cause harassment on 109 acres of golden cheeeked warbler habitat. The Service determined that a total of 117.5 acres would be authorized as incidental take under Section 9 of the ESA and that the project would not jeopardize the continued existence of the golden cheeeked warbler. USACE would implement all of the terms and conditions stated within the biological opinion.

There would be impacts to approximately 1.7 acres of waters of the U.S. from the construction of the boat ramp. These impacts would be covered by Letter of Permission CESWF-97-LOP-1.

Facts and Conclusions. Based on a review of the information contained in this EA, it is concluded that the implementation of the Ham Creek Park Development (Alternative 1) is not a major Federal action, which would significantly affect the quality of the human environment within the meaning of Section 102(2)(c) of the National Environmental Policy Act of 1969, as amended.

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John R. Minahan  
Colonel, Corps of Engineers  
District Commander

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Date

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**ENVIRONMENTAL ASSESSMENT  
HAM CREEK PARK DEVELOPMENT  
AND MASTER PLAN SUPPLEMENT  
WHITNEY LAKE  
JOHNSON COUNTY, TEXAS**

**1.0 INTRODUCTION**

**1.1 BACKGROUND**

The U.S. Army Corps of Engineers (USACE) in conjunction with Johnson County proposes to develop Ham Creek Park along the Brazos River arm of the northern portion of Whitney Lake to expand public recreational opportunities. The Whitney Lake Office received funding from Congress in the amount of \$900,000 for expenditure during Fiscal Year 2006 for initial development of a multi-use park facility at Ham Creek Park. It is anticipated that future funding would be available from Congress to complete the park development.

A team was assembled to explore alternatives for park development and recommend a park development plan to meet the public's current and future recreational needs. The team included members from local chambers-of-commerce, businesses, mayors, and adjacent landowners. The team produced four construction alternatives and provided a park development plan recommendation. Each of the alternatives, including the no-action alternative, and the potential impacts associated with each alternative, was evaluated.

Figure 1 provides an aerial view depicting the existing park. Larger images of these figures are also provided in Appendix A of this Environmental Assessment (EA). The east side of the park is currently closed to vehicular access; however, the park remains open to foot traffic where visitors can still enjoy hiking, fishing, and hunting. The west side of the park contains only a one-lane boat ramp, which has remained open when lake levels are adequate for boat ramp launching. Illegal all-terrain vehicle use occurs within the park through access gained through cut barbed-wire fences along the perimeter of the park. A history of park operations is discussed later in this document.

A Master Plan for Whitney Lake was developed in 1972 for the operation and maintenance of the lake. In 1976 a Final Environmental Statement for the Operations and Maintenance Programs of Whitney Lake, Waco Lake, Proctor Lake, Stillhouse Hollow Dam and Lake, and Somerville Lake, Brazos River Basin, Texas was prepared to address the impacts of operating Whitney Lake. In 1983 an Environmental Impact Assessment was prepared for the partial closure of Ham Creek Park to vehicular traffic and relocation of 12 picnic tables to McCown Park at Whitney Lake. The park remained designated as a park, but it was limited to low density recreation such as hiking, bird-watching, etc.



**Figure 1: General Map of Existing Park**

**Section A:** Section A is a 51 acre plot on the east side of Ham Creek.

**Section B:** Section B is a 61 acre plot on the east side of Ham Creek. This side of Ham Creek is accessible off of FM 916.

**Section C:** Section C is a 46 acre plot on the west side of Ham Creek.

## 1.2 PURPOSE AND NEED

The northern portion of Whitney Lake continues to receive high visitation, especially during spring and summer months. The nearest recreational facilities to Ham Creek Park, Kimball Bend Park, approximately 15 miles away, and Plowman Creek Park, 18 miles away, frequently become inundated with visitors, indicating a need for additional recreational facilities within the area. Development of Ham Creek Park would offer relief for nearby

highly-visited parks and improve visitors' recreational experience. Ham Creek Park allows park visitors entering from Johnson County more convenient access to recreational facilities.

Ham Creek Park currently only offers a boat ramp and it is only available above elevation 530 feet MSL, 3 feet below conservation pool. In 2003, lake levels were too low for visitors to utilize the boat ramp. The remaining park areas remain closed, but foot access is permitted and some visitors occasionally utilize the areas for hiking, sightseeing and fishing. Initial funding for Fiscal Year 2006 to begin construction of recreational facilities at Ham Creek Park is already appropriated by Congress.

The purpose of this environmental assessment is to address potential environmental impacts associated with the alternatives for development of Ham Creek Park, re-classification of Ham Creek Park as a high density recreation park, and leasing the park to Johnson County for operations and maintenance. Since at least parts of Ham Creek Park have been officially closed and the park has been mostly inoperable since the early 1990's and there is potential habitat for the golden cheeeked warbler (*Dendroica chrysoparia*) (GCW) in the park, USACE felt it prudent that an environmental assessment be prepared to address potential environmental impacts of the proposed alternatives. Since GCWs are located on Federal property and adjacent private property, protective measures are required to minimize impacts to the species.

## **2.0 DESCRIPTION OF ALTERNATIVES**

### **2.1 GENERAL**

All construction alternatives include construction of facilities for day-users and campers. Existing facilities and roadways would be utilized to the maximum extent possible. Two existing restrooms would be demolished as renovation of these facilities to serve current needs is not economical. Park development would be contained within footprint as designated in the Whitney Lake Master Plan. All roadway surfaces would remain 20 feet wide. Gravel roadway surfaces would be improved to an asphalt surface and existing asphalt surfaces would have new asphalt surfacing applied. Road shoulders and adjacent drainage ditches would be widened. Existing shoulders and drainage ditches vary up to 5 feet from the edge of the roadway. New road shoulders would be up to two feet on both sides of the road. New drainage ditches, with culverts under the roadway as necessary to allow for adequate drainage, would be up to six feet wide. Utility lines, including electric, water, sewer and telephone, would be placed within the road shoulders. It is anticipated that the existing county water system would provide water services. Tree canopies along roadways would remain intact as much as possible.

Each alternative includes hiking trails, with the proposed plan including an additional hiking/equestrian trail. All trails would be designed to minimize vegetation removal and no trees would be removed. All trail surfaces would be unimproved surface. Widths of hiking trails would be about 8 to 10 feet and the hiking/equestrian trail would average 11 feet. All trails would accommodate emergency and operational vehicles if necessary. Tree limbs overhanging the hiking/equestrian trail at a height less than 16 feet would be trimmed to allow for horse and rider clearance. Specific trail lengths are not yet determined, but it is estimated the hiking trail would be approximately 1.5 miles long within the park and the hiking/equestrian trail would be a loop extending outside the park on the east side of the park approximately 1.5 miles long.

### **2.2 NO ACTION ALTERNATIVE**

Ham Creek Park would remain in its present condition and Ham Creek Park would not be developed into a multi-use Class A Campground. Park visitors would continue to utilize the existing boat ramp only when lake levels are sufficient to allow limited lake access and only be permitted foot access to remaining portions of the park.

## 2.3 ALTERNATIVE1 (Proposed Action)

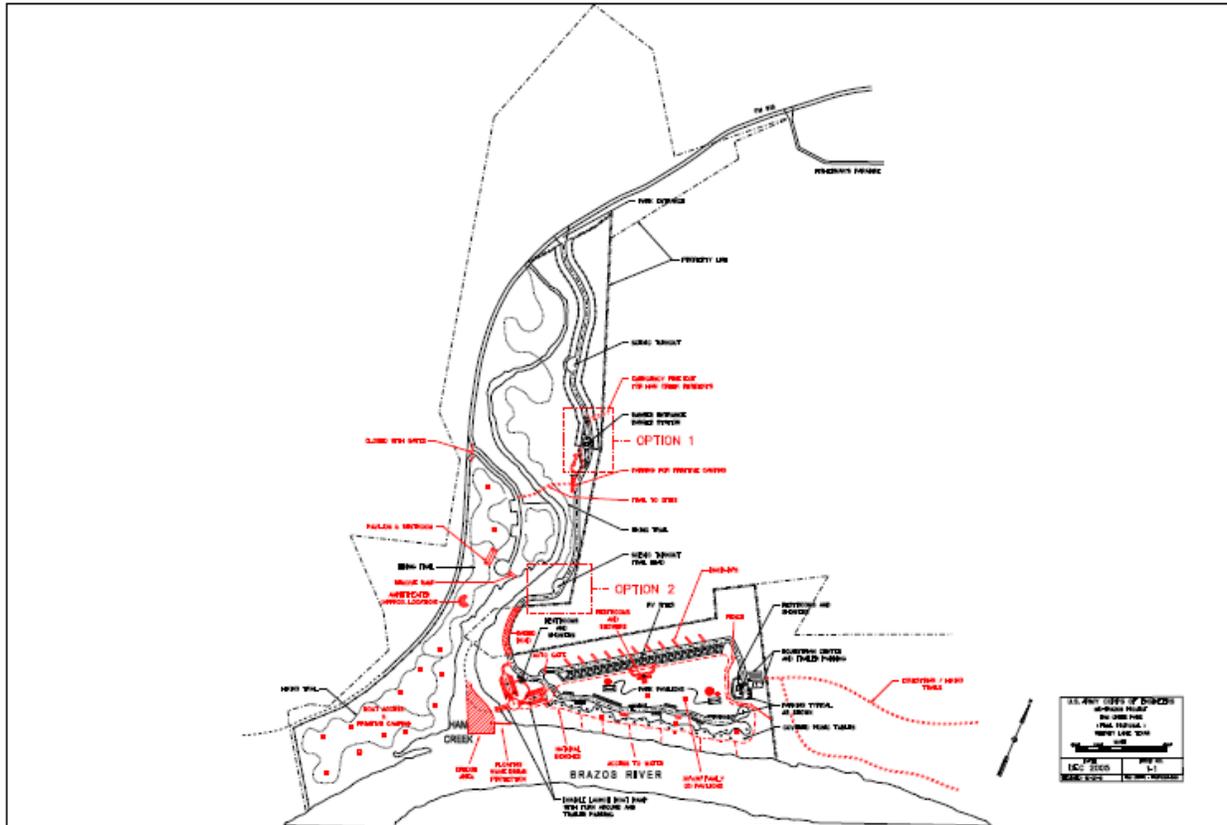


Figure 2: Alternative 1 (Proposed Action)

Alternative 1 shown in Figure 2 ( Figure also larger in Appendix A) above includes constructing a gate entrance complex along the access road at location approximately 1,500 feet from entrance in Section A, labeled Option 1 in Figure 2. The complex includes one-way entrance and exit lanes, turn-around, gatehouse, parking lot, pull-off lanes, gate attendant pad and an emergency road adjoining roadway within Fisherman’s Paradise subdivision. The emergency road allows alternate access for emergency exit when necessary. The complex would be comprised of approximately 2 acres. Actual location of facilities would be determined by that which preserves the greatest existing vegetation, specifically trees.

A two-lane boat ramp with a parking lot containing approximately 50 parking spaces to accommodate vehicles with boat trailers would be constructed at the confluence of Ham Creek within Section B. A courtesy dock for boat loading and unloading would also be placed adjacent to the boat ramp and approximately 150 feet of shoreline along Ham Creek would be cleared to allow for additional access for boat loading and unloading. The plan would including dredging approximately 1.7 acres at the confluence of Ham Creek and the Brazos River to allow for increased boat access at the boat ramp in Section B at much lower lake elevations. A floating wave break would also be placed to reduce wave action on the boat ramp and adjacent shoreline.

Additional activities in Section B would include constructing a waterborne restroom with showers at the new boat ramp and at the equestrian center. Approximately thirty recreational vehicle (RV) campsites with electrical and water hook-ups would be constructed along the upper portion of the section and twenty picnic sites would be placed near the lakeshore. Section B would also include a dump station, two pavilions, equestrian center and trailhead for a hiking/equestrian trail.

Twelve primitive campsites, hiking trail, pavilion with restroom and amphitheater would be constructed in Section C. The existing boat ramp and roadways within the section would be closed. These facilities would only be accessed by foot along a hiking trail from the parking lot below the gate entrance complex. Special permits may be issued to large organizations to allow for limited vehicle access (i.e. school busses). No improvements would be made at the point where the hiking trail crosses Ham Creek. The creek bed is comprised of rocks and gravel and it remains dry except for lake flooding events and short durations after heavy rainfall events. During such events, the facilities located in Section C would be closed.

Barbed-wire fence and/or pipe fence would be installed along the perimeter of the entire park, 7,159 feet, to prevent ATV access. Woody vegetation would be cleared eight feet from the property line. Vehicle barriers in the form of pipe fence would be placed along roadways, parking areas and trailheads to restrict vehicle access to road surfaces only. Security lights would be installed at the boat ramp, restrooms and gate entrance complex for security and safety purposes. Refuse receptacles would be utilized throughout the recreation area.

Construction would occur in phases over several years as funding is received, with initial construction beginning in May 2006. Phase I includes renovating existing roadways and constructing the boat ramp with parking lot and courtesy dock. Construction of the gate entrance complex, day use facilities, and restrooms would be completed in Phase II and the construction of campsites, group shelters, trails and utility lines would occur in Phase III.

## 2.4 ALTERNATIVE 2

Alternative 2 is the same as Alternative 1, except that the gate entrance complex would be constructed within Section A nearest Section B (Option 2).

## 2.5 ALTERNATIVE 3

This alternative, shown on figure 3, includes construction of the gate entrance complex and two-lane boat ramp at the same locations as Alternative 1. Section B includes a parking lot serving the boat ramp accommodating about 30 vehicles with trailers, two restrooms, pavilion, approximately 30 RV campsites with electrical and water service, and approximately 20 picnic sites. A dump station would be placed within Section A near Section B. Roads would have to be cleared and widened.

Section C includes a hiking trail similar to Alternatives 2 and 3 with primitive campsites placed along the lake side of the hiking trail. An asphalt road would be constructed from the gate entrance complex to the existing roadway within Section C and placement would be determined by that which results in the least impact to existing woody species. Tree canopies along roadways would remain intact as much as possible.

A concrete low-water crossing, approximately 26 feet wide (including 4 foot wingwalls) by 100 feet long, would be constructed across Ham Creek. A small 18-inch culvert would allow for minor creek flow through the crossing. A restroom with shower facilities would be constructed to serve primitive campsites and the existing boat ramp parking lot would be utilized as a parking lot for approximately 20 vehicles. Primitive campsites including a table and tent pad would be constructed along the hiking trail on the south portion of Section C. Specific number of primitive campsites would be determined by trail placement and woody vegetation present. Existing boat ramp and unutilized existing roadways would be closed, with existing roadway between section and F.M. 916 serving as an emergency exit.



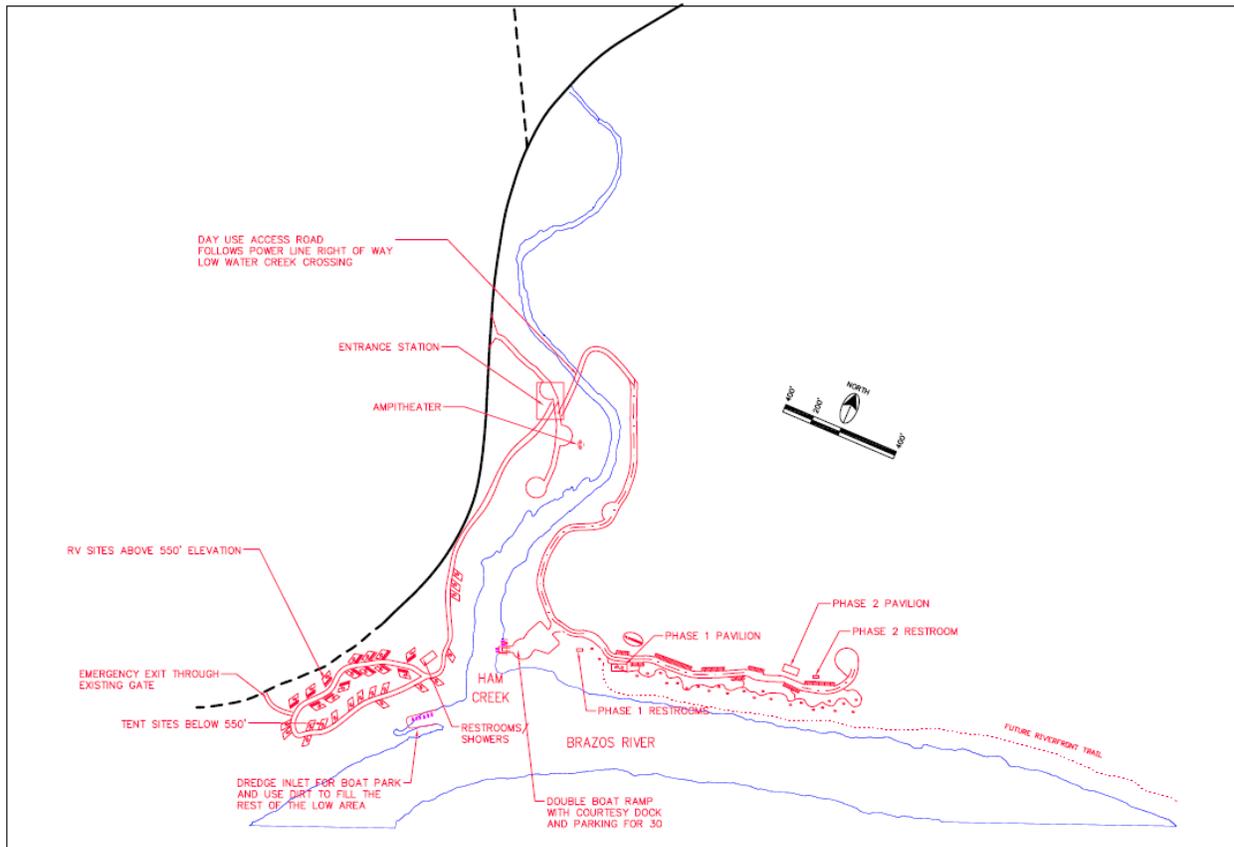


Figure 4: Alternative 4

### 3.0 AFFECTED ENVIRONMENT

#### 3.1 PROJECT SETTING & LAND USE

Whitney Lake is a multipurpose water resource development project authorized by the Flood Control Acts of August 18, 1941( Public Law 228, 77th Congress, 1st Session) and December 22, 1944 ( Public Law 534, 78th Congress, 2nd Session) to provide flood control, hydroelectric power, water conservation for domestic and industrial uses, recreation and other beneficial water uses. The lake is located along the county lines of Hill and Bosque Counties on the main stem of the Brazos River at river mile 442.4, 5.5 miles southwest of Whitney, Texas. At normal pool elevation, 533 feet above Mean Sea Level (MSL), the lake comprises 23,560 acres. An additional 20,136 acres of fee land extend above this pool. Recreation areas include ten parks operated by the USACE, one park operated by the Texas Parks and Wildlife Department, one park operated by Texas Department of Transportation, one park operated by Hill County, one park operated by the city of Whitney, one private yacht club, and three recreation areas operated by concessionaires. Approximately 13,600 acres of fee land are dedicated as natural areas, with only low impact public use permitted.

The clear water, scenic bluffs, a relatively mild climate, and excellent fishing, swimming, and boating opportunities attract many visitors each year. Also, because the Dallas/Fort Worth Metroplex is located within 60 miles of Whitney Lake, public visitation places a high demand on its recreational facilities.

The Brazos River above Whitney Lake has been recognized by various public and private agencies and organizations for its scenic beauty and its recreation potential. It has been listed by the National Park Service's

Nationwide Rivers Survey of 1995 as the Number 1 scenic and recreational river in northern half of Texas and by Water Skier's Magazine as one of Texas' Top 10 water skiing areas. The narrow, tree-lined channel and high bluffs offer protection from the wind even on the most blustery days and make this an extremely popular area for boating and fishing.

Ham Creek Park is located approximately 8 miles west of Rio Vista on F.M. 916 along the Brazos River arm of the northern portion of Whitney Lake in Precinct 1 in the southwestern corner of Johnson County, Texas (Figure 1). The park encompasses approximately 191 acres and is divided into two areas by Ham Creek. These areas are referred to as "east" and "west", in regards to their location relevant to Ham Creek, and are served by separate access roads off Farm to Market (FM) 916.

Ham Creek Park was constructed in the late 1950's and remained fully operational by USACE until the early 80's when the east side of the park was closed due to budget limitations. In 1984 the east side of the park was leased to Carswell Air Force Base as a recreational and instructional area for Air Force personnel. The lease was terminated and the east side of the park was closed again in 1990. The east side of the park contains a road, two restrooms, and a well house, all in various states of disrepair. The west side of the park contains a well house and a one-lane boat ramp, which remains open when lake levels are adequate for boat ramp launching.

The Whitney Lake Master Plan classifies Ham Creek Area into two land use categories, Recreational Area and Aesthetic and Multiple Use Recreation. The portion of the park on the north side of F.M. 916 and a 100-foot wide section immediately adjacent to the roadway on the south side of F.M. 916 until Ham Creek Tributary is classified as Aesthetic and Multiple Use Recreation. Aesthetic and Multiple Use Recreation is defined as areas set aside for management of resources for multiple recreation uses not requiring supporting facilities. The remaining park is classified as Recreation Area and is described as high intensity public use area with a variety of activities and supporting physical development.

Contiguous government property to Ham Creek Area is that which lies along the Brazos River arm of Whitney Lake on the east side of the park. Land along the Brazos River arm is classified as Special Use Area and includes low intensity public use with minimum physical developments and lands to be used by non-profit organizations or agencies for the purpose of rendering a public recreational/educational service of a charitable or character building nature on a non-exclusive basis. The contiguous government property is currently being utilized as wildlife management area.

Remaining lands surrounding Ham Creek Area are privately owned. A privately owned subdivision, Fisherman's Paradise, is found along the east side of the park. The Klondike Ranch, which is private property, is also found on the west side of the park along the Brazos River arm.

### 3.2 CLIMATE

The local climate is characterized by long, hot summers and short, mild winters. Average monthly temperatures for the area range from a winter low of about 33° F to a summer high of 96 °F. Average annual precipitation is approximately 33 inches. Heaviest rainfall occurs during February and March and lowest rainfall occurs from July through September.

### 3.3 GEOLOGY AND SOILS

According to the Soil Survey of Johnson County Texas, Ham Creek lies within the Bolar-Brackett-Aledo soil series. Most of the park lies within this series, however, when you leave the creek bottom and get out of the draws, the Oledo-Bolar series takes over.

#### *Bolar-Brackett-Aledo*

The Bolar-Brackett-Aledo series is strongly sloping to steep, very shallow to moderately deep, moderately alkaline loamy, stony, and gravelly soils on uplands. This map unit is dominantly made up of well drained soils that have

slopes of 8 to 60 %. This unit makes up about 5 percent of the county. It is about 23 percent Bolar soils, 20 percent Brackett soils, 8 % Aledo soils, and 49 % soils of minor extent.

The strongly sloping to steep Bolar Soils are on side slopes where they are mixed with narrow bands of Aledo soils. Bolar soils are well drained, and permeability is moderate. Typically, the surface layer is stony clay loam about 19 inches thick. The subsoil to a depth of 37 inches is clay loam that is brown in the upper part and pale yellow in the lower part. The underlying material is fractured limestone interbedded with calcareous marl.

The moderately steep to very steep Brackett soils are on side slopes. Brackett soils are well drained, and permeability is moderately slow. Typically, the surface layer is grayish brown loam about 8 inches thick. The layer below that to a depth of 14 inches is light brownish gray loam. The underlying material is interbedded limestone and light brownish gray loam.

The strongly sloping to steep Aledo Soils are on side slopes where they are mixed with narrow bands of Bolar soils. Aledo soils are well drained, and permeability is moderate. Typically, the surface layer is dark grayish brown gravelly clay loam about 6 inches thick. The layer below that to a depth of 18 inches is dark grayish brown very gravelly clay loam. The underlying material is coarsely fractured limestone.

The soils in this unit are best suited as rangeland. Native vegetation is mid and tall grasses and scattered live oak trees. These soils are moderately well suited to use as habitat for wildlife because the vegetation provides good cover and protection. The soils are poorly suited to use for pasture or crops because of stoniness, slope, shallow rooting depth, and susceptibility to water erosion.

#### *Oledo-Bolar*

The Oledo-Bolar soil series are gently sloping to strongly sloping, very shallow to moderately deep, moderately alkaline loamy soils, on uplands. This map unit is dominantly made up of well drained soils that have slopes of 1 to 12 percent. This unit makes up 21% of the county. It is about 43 % Aledo soils, 26 % Bolar soils, and 31% of minor extent.

The gently sloping to strongly sloping Aledo Soils are on ridgetops and on side slopes where they are mixed with narrow bands of Bolar soils. Aledo soils are well drained, and permeability is moderate. Typically, the surface layer is dark grayish brown clay loam about 5 inches thick. The next layer to a depth of 12 inches is grayish brown very gravelly clay loam. Coarsely fractured limestone is at a depth of 12 inches.

The gently sloping to strongly sloping Bolar Soils are on side slopes where they are mixed with narrow bands of Aledo soils. Bolar soils are well drained, and permeability is moderate. Typically, the surface layer is clay loam about 12 inches thick. It is dark grayish brown in the upper part and dark grayish brown in the lower part. The subsoil to a depth of 36 inches is clay loam that is grayish brown in the upper part and very pale brown in the lower part. The underlying material is fractured limestone interbedded with calcareous marl.

The soils in this unit are moderately well suited for rangeland. Native vegetation is mid and tall grasses and scattered live oak trees. These soils are moderately well suited to use as habitat for wildlife because the vegetation provides good cover and protection. The soils are not suited to use for pasture or crops because of stoniness, slope, the very shallow root zone, and droughtiness.

### 3.4 WATER RESOURCES

#### 3.4.1 Waters of the U.S. including Wetlands

##### *Section 10*

USACE is directed by Congress under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) to regulate *all work or structures in or affecting the course, condition or capacity of navigable waters of the United States*. The

Brazos River is considered navigable within the Fort Worth District from the point of intersection of Grimes, Walker, and Washington Counties upstream to Whitney Dam in Hill and Bosque Counties, Texas. Therefore, the Brazos River is not regulated by Section 10 upstream from Whitney Lake.

#### *Section 404*

The Brazos River arm of the upper portion of Whitney Lake bounds the southern portion of the park area. At normal pool elevation, 533 ft. MSL, approximately 2,400 feet of shoreline exists along the southern park boundary. At normal lake levels, the lake is approximately 300 ft. wide to the opposite shoreline and approximately 15 ft. deep at its deepest point adjacent to the park. During the past ten years, the lake levels generally fluctuated between 522 ft. MSL and 544 ft. MSL. During this same period, lowest lake levels normally occurred from November to January, averaging about 9 feet below normal and highest lake levels usually occurred from February to April, averaging about 1.3 feet above normal.

Ham Creek divides the park area into two parts. The creek derives its water from local surface runoff during rain events, and as such, the majority of the bed dries up during extended droughts. The streambed measures 5,100 ft. in length and ranges between 75 ft. wide as it enters the property and 175 ft. wide at the lake confluence.

On-site visits and consultation of National Wetland Inventory (NWI) maps found that no wetlands exist within park area. Therefore, Whitney Lake as well as Ham creek are the only aquatic features that should be considered Waters of the United States within the project area.

Congress directed USACE under Section 404 of the Clean Water Act (33 USC 1344) *to regulate the discharge of dredged and fill material into all waters of the United States including wetlands*. As such, activities that result in a discharge of dredged or fill material into the lake or Ham Creek would be regulated activities under Section 404 of the Clean Water Act. Furthermore, regulated activities under Section 404 of the Clean Water Act may be permitted by General Permit (such as Nationwide General Permits, Regional General Permits, or Programmatic General Permits) or Individual Permit (such as Standard Individual Permits or Letters of Permission). Based on the nature of this project it appears that the project may meet the terms and conditions associated with the Letter of Permission Procedure 1 (CESWF-97-LOP-1) for activities at certain reservoirs and Federal and state sponsored projects.

### 3.4.2 Water Quality

The draft 2004 Texas Water Quality Inventory, based upon data from March 3, 1998 to February 28, 2003 collected from Monitoring Station 11853 located at SH 174 Bridge crossing Whitney Lake, lists chloride as a public water supply concern and harmful algal blooms, including golden alga (Texas Commission on Environmental Quality 2005).

## 3.5 BIOLOGICAL RESOURCES

### 3.5.1 Wildlife and Fish

Whitney Lake is one of the premier fishing lakes in the state, renowned for its striped bass and white bass. The lake supports approximately 40 species of fish. The principal native and introduced gamefish species include largemouth bass (*Micropterus salmoides*), striped bass (*Morone saxatilis*), white bass (*Morone chrysops*), smallmouth bass (*Micropterus dolomieu*), white crappie (*Pomoxis annularis*), black crappie (*Pomoxis nigromaculatus*), channel catfish (*Ictalurus punctatus*), blue catfish (*Ictalurus furcatus*), flathead catfish (*Pilodictus olivaris*), black bullhead (*Ameiurus melas*), and yellow bullhead (*Ameiurus natalis*). Various species of sunfish, shad, shiners, and minnows are also present.

Common mammal species include white-tailed deer (*Odocoileus virginianus*), eastern cottontail (*Sylvilagus floridanus*), swamp rabbit (*Sylvilagus aquaticus*), fox squirrel (*Sciurus niger*), opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), gray fox (*Urocyon cinereoargenteus*), coyote (*Canis latrans*), and bobcat (*Felis rufus*). Migratory waterfowl and resident birds within the Whitney Lake include nearly

300 species of ducks, geese, songbirds, wading birds, and shorebirds. Other wildlife present within Whitney Lake include various species of turtles, snakes, lizards, toads, frogs, and salamanders.

### 3.5.2 Aquatic Vegetation

Submergent aquatic vegetation in the project area is limited. Ham Creek is an ephemeral creek that flows for short durations during rain events, but is dry for most of the year. Vegetation in the Brazos River, along mudflats during low water periods, and along the banks include typical river plants including: Button bush (*Cephalanthus occidentalis*), switchgrass (*Panicum virgatum*), willow baccharis (*Baccharis, Sp.*), Indiangrass, (*Sorghastrum nutans*), willow (*Salix Nigra*), giant ragweed (*Ambrosia trifida*), and cocklebur (*Xanthium strumarium*).

### 3.5.3 Terrestrial Vegetation

Figure 5 shows the vegetation classification of the park area. Table 1 shows the acreage of the vegetation types within the park area. The vegetation types are described below.

AREA	GRASSLAND	RIPARIAN WOODLAND	UPLAND WOODLAND	WATER
A	0	18	32	0
B	32	12	18	1
C	0	33	11	2

**Grasslands:** The area is generally vegetated with herbaceous species including Johnsongrass (*Sorghum halapense*), silver bluestem (*Bothriochola laguroides*), giant ragweed (*Ambrosia trifida*), Texas bluebonnet (*Lupinus texensis*) and goldenrod (*Solidago sp.*) Low shrubs, Virginia creeper, wild grape and green briar vines, along with small clusters of young elm, hackberry, and oak trees dot the interior. A mature juniper-oak complex occupies the fence line along northwestern boundary of this section, while a mix of mature pecan (*Carya sp.*), oak and elm trees line the river bank on the southern edge.

**Riparian Woodlands:** Ashe juniper (*Juniperus ashei*), black willow (*Salix Nigra*) and plateau oak (*Quercus fusiformis*) are the dominant tree species in the overstory. Other species occurring less frequently include Pecan, (*Carya illinoensis*), Texas oak (*Quercus buckleyi*), shin oak (*Quercus sinuata var. breviloba*), American sycamore (*Planatus occidentalis*), netleaf hackberry (*Celtis reticulate*), cedar elm (*Ulmus crassifolia*) and Texas ash (*Fraxinus texensis*). The canopy cover of the wooded upland areas ranges from 75-90%. The area is generally vegetated with herbaceous species including Indiangrass (*Sorghastrum nutans*), Johnsongrass (*Sorghum halapense*), silver bluestem (*Bothriochola laguroides*), giant ragweed (*Ambrosia trifida*), Texas bluebonnet (*Lupinus texensis*) and goldenrod (*Solidago sp.*) Low shrubs, Virginia creeper, wild grape and green briar vines, along with small clusters of young elm, hackberry, and oak trees dot the interior.

**Upland Woodlands:** The section is roughly 4200 feet in length and begins at FM 916, extending to confluence with the Brazos River and varying in width from 153 feet to 1080 feet at the widest point. The canyon slope along this section is vegetated with mature juniper/oak woodlands. Ashe juniper (*Juniperus ashei*) and plateau oak (*Quercus fusiformis*) are the dominant tree species in the overstory. Other species occurring less frequently include Pecan (*Carya illinoensis*), Texas oak (*Quercus buckleyi*), shin oak (*Quercus sinuata var. breviloba*), American sycamore (*Planatus occidentalis*), netleaf hackberry (*Celtis reticulate*), cedar elm (*Ulmus crassifolia*) and Texas ash (*Fraxinus texensis*). The canopy cover of the wooded upland areas ranges from 75-90%.



Figure 5: Ham Creek Park Vegetation

### 3.5.4 Threatened and Endangered Species

Section 7 of the Endangered Species Act of 1973 (PL 93-205) (ESA) requires Federal agencies to consult with the U.S. Fish and Wildlife Service (Service) in order to ensure projects do not jeopardize the continued existence of threatened and endangered species. Four Federally listed threatened and endangered species are listed by the Service for Johnson County. Table 2 shows the species and their status.

In addition to federally listed species, Texas Parks and Wildlife Department (TPWD) list species of concern by county. The full county list is located in Appendix B. Initial consultation with TPWD indicated that they had records of the Glen Rose yucca, Brazos water snake, a rookery, and golden cheeked warblers in the surrounding area. They also noted that there are potential impacts to aquatic species in the area. The list for Johnson County shows that the Brazos water snake (*Nerodia harteri*), sharpnose shiner (*Notropis oxyrhynchus*), small eye shiner

(*Notropis buccula*), pistolgrip (*Tritogonia verrucosa*), rock-pocketbook (*Arcidens confragosus*), and Texas Fawnsfoot (*Truncilla macrodon*) have been documented in Johnson County.

The GCW are addressed below and will be addressed in the impacts section. No Glen Rose yuccas were documented in the immediate project area, and therefore, they would not be impacted. There were no indicators of a rookery within the park boundaries. The sharpenose shiner and the smalleye shiner could potentially occur in the area; however, any construction alternative would only impact a small insignificant amount of the water and water frontage, and therefore, should not impact these species. The Brazos water snake has been documented in Johnson County; however, the immediate project area is mainly comprised of mud banks with a sediment bottom and the Brazos water snake prefers shallow water with rocky bottoms and rocky portions of the bank. Since this type of habitat is not present the project is not expected to affect the Brazos water snake.

The Brazos River in the project location should not be conducive for the pistolgrip, rock-pocketbook, and Texas fawnsfoot. These species are river species. The project area is under the influence of Whitney Lake and the Brazos River here has a substantial amount of sediment. None of the species are tolerant of lake systems. Only the Texas fawnsfoot is endemic to the Brazos River basin and little is know about this species and it is intolerant of lake settings. Therefore, no impacts to these species are expected as a result of this project.

TABLE 2 Threatened and Endangered Species Johnson County, Texas		
SPECIES	SCIENTIFIC NAME	STATUS
bald eagle	<i>Haliaeetus leucocephalus</i>	Threatened
black-capped vireo	<i>Vireo atricapillus</i>	Endangered
golden-cheeked warbler	<i>Dendroica chrysoparia</i>	Endangered
whooping crane	<i>Grus americana</i>	Endangered

#### *Bald Eagle and Whooping Crane*

The bald eagle has been reported at various locations at Whitney Lake, but none within or adjacent to the park have been reported. Habitat within the park and along the shoreline is not considered preferred habitat for either the whooping crane or bald eagle, although it is possible that the bald eagle could potentially utilize some trees along the shoreline for perching.

#### *Black-capped Vireo*

The black-capped vireo (BCV) is a migratory bird found within the region during breeding season, March through August. Its breeding habitat consists of scrubby growth of irregular height distribution comprised of mostly deciduous shrubs, especially oaks and sumac. Vegetation must reach the ground and contain open spaces. Frequently this habitat is found along eroded slopes, gullies, or ravines (Audubon Watchlist).

A habitat assessment of the entire government property surrounding Whitney Lake was conducted in 1996 and found marginal amounts of BCV habitat. BCV breeding surveys conducted over three years, 1996-1998, upon a combined total of 2,645 acres observed three BCVs, none within Ham Creek Park. Data for positive sightings in Ham Creek Park by other agencies or individuals was not available during the preparation of this EA. A site visit conducted by USACE and Service personnel on August 4, 2005 verified the lack of suitable BCV habitat within the park.

#### *Golden-cheeked Warbler*

The GCW is a migratory songbird present in the region only during the breeding season, March through early August. Its habitat is described as mature juniper-oak woodlands, with 50 percent or greater canopy cover. The warbler requires the bark of older Ashe juniper (*Juniperus ashei*) for its nesting material.

The habitat assessment conducted in 1996 found approximately 2,800 acres of suitable GCW within the entire government property surrounding Whitney Lake. Ham Creek Park was determined to possess approximately 60 acres of marginally suitable habitat for the GCW. GCW breeding surveys conducted from 1996 through 1998, upon

a combined total of 2,645 acres yielded the presence of forty-one (41) GCWs. One was observed in Ham Creek Park. On April 24, 2004, Dr. Michael Guilfoyle and Ranger Sam Masters saw one bird and heard at least two others on USACE property approximately 1200 yards north of the proposed park development area. On March 30, 2005 – one GCW was banded by Denise Lindsay, University of Louisiana at Lafayette, during a sampling study. It was determined by Service and USACE personnel during a park visit on August 4, 2005 that suitable GCW habitat is still present within the park. Additionally, a known GCW colony is present on adjacent private property at the Klondike Ranch less than 2 miles away from the entrance to the park, as documented by a survey conducted in 2002 by The Nature Conservancy. Although few GCWs have been recorded within the park since 1998, there is a strong possibility of the existence of GCWs within the park due to favorable habitat presence and the proximity to a known GCW colony on adjacent private property.

Due to the fact that GCWs have been sited and there is potential habitat in Sections A and B of the park area, a biological assessment was completed and USACE entered into formal Section 7 consultation with the Service on November 7, 2005. In addition to potential GCW habitat within the park area, there is known habitat for the GCW in other areas on Federal property at Whitney Lake.

### 3.6 NOISE AND GENERAL AESTHETICS

The park offers a picturesque setting with Whitney Lake, a riparian woodland, and a bluff vegetated with oaks and junipers. The park area is generally very quiet for the most part, with exceptions of passing boats within the lake and vehicular traffic on adjacent roadway. Typically, weekends create more noise than weekdays due to increased visitation and traffic. Illegal ATV operation within the park generates considerable noise at times.

### 3.7 CULTURAL RESOURCES

The park area contains two recorded sites, Sites 41JN6 and 41JN7, recorded by Southern Methodist University in 1971 during a survey of the Whitney Lake shoreline. Both sites were described as small lithic scatters. Cultural resources investigations included a pedestrian survey with shovel testing of areas proposed for new construction and the evaluation of two previously recorded archeological sites (41JN6 and 41JN7) located within Ham Creek Park. Shovel testing at both sites failed to recover subsurface artifacts. Neither site is considered eligible for the National Register of Historic Places. No additional cultural resources were identified during the present survey.

### 3.8 HAZARDOUS, TOXIC, AND RADIOACTIVE WASTES

A review of historical records and literature searches revealed no known hazardous, toxic, and radioactive wastes to occur within the park area. On-site investigations visits did not reveal potential hazardous, toxic, or radioactive wastes.

### 3.9 AIR QUALITY

Air quality is defined by ambient air concentration of specific pollutants determined to be of concern with respect to the health and welfare of the general public. Under the Clean Air Act Amendments of 1990, the EPA established National Ambient Air Quality Standards (NAAQS), including six “criteria pollutants:” lead, ozone, sulfur dioxide, oxides of nitrogen, carbon monoxide, and particulate matter less than 10 microns in diameter (PM10). Areas that exceed a Federal air quality standard are designated as non-attainment areas.

Johnson County is classified by U.S. Environmental Protection Agency (EPA) as one of 23 nonattainment counties in Texas in 2005. The monitoring station located in Cleburne, 12 miles northeast, recorded ozone as the main pollutant within Johnson County. The 8-hour average concentration of ozone was 0.09 ppm, exceeding the primary standard of 0.08 ppm (EPA 2005).

### 3.10 RECREATION

Whitney Lake received nearly 1 million visitors in Fiscal Year 2004 (OMBIL 2005). The nearest parks include Plowman Creek Park, 18 miles from Ham Creek Park, and Kimball Bend Park, 15 miles from Ham Creek Park, both

operated by USACE. In Fiscal Year 2004, Plowman Creek, a 189-acre park with 34 campsites, a day-use area and two-lane boat ramp, received approximately 17,000 visitors (USACE 2006). Kimball Bend, a 129-acre park with 11 campsites, a day-use area and two-lane boat ramp, received approximately 28,000 visitors (USACE 2006). Popular recreational activities include camping, picnicking, boating, fishing and sightseeing. As is true of all the parks at Whitney Lake, Kimball Bend and Plowman Creek Parks routinely reach maximum capacity during weekends over spring and summer months, especially during holiday weekends. The parks also receive high visitation during fall weekends early in hunting seasons.

In April 2002, the Fort Worth District established a Water Related Recreation Use Policy for Fort Worth District Lakes. The purpose of the policy was to establish maximum boat carrying capacities for all lakes within the Fort Worth District. The policy established a goal of 22 acres of water per boat during peak use times as the District's standard for resource protection and user enjoyment. Whitney Lake has a current estimated carrying capacity of 38.2 acres of water per boat, well under the district minimum of 22 acres of water per boat.

### 3.11 SOCIOECONOMICS

Johnson County encompasses 730 square miles with a population of 126,811 in 2000, comprised of 90 percent white, 2.5 percent black or African American and the remainder American Indian, Asian, or other races. The average household size was 2.85 and average family size was 3.2 in 2000. In 2000, median household income was \$44,621 and 8.8 percent of the individuals were below poverty level (US Census Bureau 2005). Dominate industries within the county include manufacturing, retail trade, construction, and educational, health and social services.

## **4.0 ENVIRONMENTAL CONSEQUENCES**

### 4.1 PROJECT SETTING & LAND USE

#### *No Action*

The park area would remain in its current state and there would not be any change in land use. Area would continue to receive little public recreation use. Boaters would utilize boat ramp only with adequate lake levels, about 5 months per year, and foot access to areas closed to vehicular traffic would also continue. Illegal ATV operation would likely remain at current or increased levels, further damaging the natural resources within the park area.

#### *Construction Alternatives*

Land use within the park area would remain the same, although the park area would be utilized as a high intensity, multi-use recreational area, serving both day users and campers. As such, park area would become more intensively operated and managed and illegal ATV operation within the park would discontinue. In addition, certain areas within the high intensity recreation use, shown on Figure 6, would be classified as "no build zones" after construction of project recreation features in order to protect GCW habitat.



Figure 6: Designated “No Build Zones” after Construction of Project Features

## 4.2 GEOLOGY AND SOILS

### *No Action*

Some direct and indirect upon geology and soils would likely continue. It is assumed that illegal ATV operation within the study area would remain at similar or increased levels within all park areas except steep slopes. Soils would be lost to erosion and rocks displaced due to continued illegal ATV operation. Illegal dumping of unknown substances and materials may also occur.

### *Alternative 1 (Proposed Action)*

Construction activities would involve only minor soil disturbance. The only roadways requiring construction are those to accommodate the gate entrance complex. Very few trees and underbrushing is required for construction of campsites as RV campsites would be contained predominately within grassland area. Only minor underbrushing would be performed for construction of primitive campsites and trails. The boat ramp would require large amounts of cut and fill to establish the boat ramp parking and turnaround areas. The turnaround and parking would be located above the conservation pool of the lake.

Appropriate measures to reduce impacts would be performed. A stormwater pollution prevention plan using best management practices would be implemented prior to construction to minimize erosion and runoff as a result of construction activities. Silt fencing and/or erosion control fabric would be utilized as appropriate, and disturbed areas would be graded to original contours as appropriate and seeded with native vegetation as required. Hazardous substances such as fuel, oil, grease, and other petroleum products associated with construction equipment may potentially leak onto soils. Hazardous spill prevention plans would be utilized throughout construction to minimize impacts of hazardous substances. There could be additional erosion to the banks from increased boat traffic in the area due to the construction of the new boat ramp. It is expected that boat traffic would not substantially increase from current use, but the area could be used more, since they would not have to travel as far by boat. Lake levels are normally lower in summer months during the peak use of the area, so impacts to the normal bank would still be minimal.

#### *Alternative 2*

Potential impacts would be less than those of Alternative 1 because the construction would occur predominately on previously disturbed land.

#### *Alternative 3*

Potential impacts would be similar to those of Alternative 1 above, but potential exists for additional impacts as a result of construction of the low-water crossing. As compared to Alternative 1, constructing the 100-foot long low-water crossing and associated roadway between Sections A and C, would disturb an estimated additional 0.4 acre of previously undisturbed land. The slope of the land adjacent to and surrounding the low-water crossing would also create an increased potential for erosion.

#### *Alternative 4*

Potential impacts would be similar to those of Alternative 1 above, but with a greater potential for additional impacts as a result of additional construction required. As compared to Alternative 1, constructing the 300 foot long low-water crossing and associated roadway between Sections A and C, the roadway serving the RV campsite loop in Section C, RV campsites within Section C and the gate entrance complex, would disturb an estimated additional 8 acres of undisturbed land. The slope of the land adjacent to and surrounding the low-water crossing would also create an increased potential for erosion.

### 4.3 WATER RESOURCES

#### 4.3.1 Waters of the US including Wetlands

##### *Section 404*

##### *No Action*

It is assumed that illegal ATV operation within the study area would remain at similar or increased levels within all park areas which would continue to degrade creek and river bottoms. The banks would continue to erode.

##### *Alternative 1 (Proposed Action)*

Construction would comply with the stormwater pollution prevention plan as required by the Texas Pollution Discharge Elimination System (TPDES) general permit for construction activities. The construction activities would impact approximately 1.7 acres of open water by dredging to increase the use of the boat ramp during periods of low water conditions (Approximately 6 months out of the year). Approximately 30,000 cubic yards of materials would be removed. An additional 50 feet of bank would be impacted by constructing the boat ramp. Approximately 50 cubic yards of materials would be removed from construction of the boat ramp and approximately 50 cubic yards of materials would be installed as fill in the form of rip rap. Approximately 0.08 acres of Waters of the U.S. would be impacted from boat ramp construction, which is already included in the 1.7 acres of impacts. Plan views of the boat ramp are included in Appendix A. In addition, figures showing impacted Waters of the U.S. are shown in Appendix A. Minor, insignificant temporary adverse impacts from increased turbidity within Ham Creek and the

Brazos River would occur while the materials were being excavated. A backhoe or track hoe would be used and the dredge materials would be placed in a dump truck and disposed of on upland sites and used in park construction areas in order to prevent impacts. Erosion control measures would be performed throughout construction to reduce potential impacts. Potential also exists that hazardous substances may be discharged into surface water, such as fuel, oil, grease, and other petroleum products associated with construction equipment; however, best management practices would be implemented to reduce chances for impacts. The boat ramp by itself would comply with Regional General Permit CESWF-02-RGP-8 (RGP-8); however, due to the additional dredging, this alternative would comply with Letter of Permission CESWF-97-LOP-1 (LOP-1) Appendix C).

#### *Alternative 2*

Potential impacts would be similar to those of Alternative 1. The boat ramp and dredging would comply with LOP-1.

#### *Alternative 3*

The boat ramp construction and dredging would be the same as Alternative 1 and would comply with LOP-1. In addition, Alternative 3 would result in .4 acres of impacts of stream bed, associated with construction the low-water crossing on Ham Creek. Construction of the low water crossing would result in approximately 8,000 cubic yards of fill. The low water crossing would comply with Nationwide Permit 14 (NWP-14).

#### *Alternative 4*

The boat ramp construction and dredging would be the same as Alternative 1 and would comply with LOP-1. Potential impacts from the low water crossing would be similar to those of Alternative 3, but with additional impacts because the low water crossing would be much larger. It is estimated that approximately .8 acres of stream bed would be impacted with the construction of the low water crossing. Approximately 12,000 cubic yards of fill would be in Ham Creek as a result of the low water crossing, but the crossing would still comply with NWP-14. In addition, approximately 2-4 acres of river bottom would be excavated on the shoreline of Section C using a backhoe or track hoe to allow for additional water access from the camping sites (Approximately 100,000 cubic yards of materials). Although this activity would impact water of the US, no permit would be required because the project would be constructed by excavation only and would be done by loading the dredge materials into a dump truck and removed from the project site to avoid impacts. No bull dozers would be used during construction of the dredged areas.

### 4.3.2 Water Quality

#### *No Action*

It is assumed that illegal ATV operation within the study area would continue within all park areas except steep slopes. Frequent ATV operation within the park area would continue to increase erosion. The run-off from these eroded areas would decrease water quality by increasing turbidity and sediment transport. Illegal dumping could also occur, introducing unknown substances and debris into the waters within the park area.

#### *Alternative 1 (Proposed Action)*

Alternative 1 would result in minor, insignificant temporary adverse impacts from increased turbidity and sediment transport within Ham Creek and the Brazos River during excavation and boat ramp construction. A backhoe or track hoe would be used and the dredge materials would be placed in a dump truck and disposed of on upland sites in order to prevent impacts. Erosion control measures would be utilized throughout construction to reduce potential impacts. Potential also exists that hazardous substances may be discharged into surface water, such as fuel, oil, grease, and other petroleum products associated with construction equipment; however, best management practices would be implemented to reduce chances for impacts. Construction activities would comply with the stormwater prevention and hazardous spill prevention plans as required by the Texas Pollution Discharge Elimination System (TPDES) to reduce potential impacts and insure these impacts would be temporary and reduced to minor and less than significant.

### *Alternative 2*

Impacts from implementing Alternative 2 would be similar to Alternative 1.

### *Alternative 3*

Potential impacts would be similar to those of Alternative 1, but with greater potential for additional impacts upon water quality because of the increased ground disturbance area, .4 acres, associated with construction the low-water crossing. Although the quantity of disturbed area is only slightly greater than Alternative 1, the potential impact is greater because the construction would take place within and adjacent to Ham Creek. The low water crossing would serve as a depository for sediment on the upstream side and minor increases in scour and erosion would be expected downstream. Culverts would be placed under the low water crossing in order to pass low flows.

### *Alternative 4*

Potential impacts would be similar to those of Alternative 3, but with a greater potential for additional impacts upon water quality because of the increased ground disturbance in areas that have not been previously disturbed, 8 acres. Similar to Alternative 3, Alternative 4 includes construction of a low-water crossing, one much larger than Alternative 3, and the potential impact is greatly increased because the construction would take place within and adjacent to Ham Creek. Increased deposition upstream and scour and erosion would be expected. In addition, water quality would be impacted by the dredging of an additional 2-4 acres of river bottom in front of Section C.

## 4.4 BIOLOGICAL RESOURCES

### 4.4.1 Fish and Wildlife

#### *No Action*

It is assumed that illegal ATV operation would continue. Some wildlife would be directly impacted by the disturbance of ATV operation within the park area. The direct and indirect impact of ATV operation within the park area would likely push some wildlife species from the park area and may place other wildlife species under stressful conditions.

#### *Alternative 1 (Proposed Action)*

Wildlife species located within the footprints of the facilities would be impacted temporarily during construction and would likely inhabit adjacent suitable habitat during construction and return upon construction completion. The direct loss of some habitat could have minor impacts on wildlife species in the immediate vicinity of the park area. Increased vegetative diversity would likely result in the park area being utilized by additional wildlife species. Sedentary species located within the project footprint would be lost; however, this is would involve few species and would be determined to be insignificant. The direct and indirect impact of recreational facilities and increased human presence within the park area would likely push some wildlife species from the park area and may place other wildlife species under stressful conditions. These impacts are expected to be minimal.

#### *Alternative 2*

Wildlife species located within the footprints of the facilities would be impacted temporarily during construction and would likely inhabit adjacent suitable habitat during construction and return upon construction completion. The direct loss of some habitat could have minor impacts on wildlife species in the immediate vicinity of the park area. Increased vegetative diversity would likely result in the park area being utilized by additional wildlife species. Sedentary species located within the project footprint would be lost; however, this is would involve few species and would be determined to be insignificant. The direct and indirect impact of recreational facilities and increased human presence within the park area would likely push some wildlife species from the park area and may place other wildlife species under stressful conditions. These impacts are expected to be minimal.

### *Alternative 3*

Wildlife species located within the footprints of the facilities would be impacted temporarily during construction and would likely inhabit adjacent suitable habitat during construction and return upon construction completion. The direct loss of some habitat could have minor impacts on wildlife species in the immediate vicinity of the park area. Increased vegetative diversity would likely result in the park area being utilized by additional wildlife species. Sedentary species located within the project footprint would be lost; however, this would involve few species and would be determined to be insignificant. The direct and indirect impact of recreational facilities and increased human presence within the park area would likely push some wildlife species from the park area and may place other wildlife species under stressful conditions. These impacts are expected to be minimal.

### *Alternative 4*

Wildlife species located within the footprints of the facilities would be impacted temporarily during construction and would likely inhabit adjacent suitable habitat during construction and return upon construction completion. Impacts as a result of the direct loss of some habitat would be greater for this alternative because of the additional 8 acres of impact. These impacts could have minor impacts on wildlife species in the immediate vicinity of the park area; however, these impacts would be minimal. Increased vegetative diversity would likely result in the park area being utilized by additional wildlife species. Sedentary species located within the project footprint would be lost; however, this would involve few species and would be determined to be insignificant. The direct and indirect impact of recreational facilities and increased human presence within the park area would likely push some wildlife species from the park area and may place other wildlife species under stressful conditions. These impacts are expected to be minimal.

## 4.4.2 Aquatic Vegetation

### *No Action*

It is assumed that illegal ATV operation within the study area would continue. ATVs frequent low areas along and within the lake and creek, impacting aquatic vegetation through physical destruction, decreased water quality and disturbance of seed bed. Run-off from eroded ATV areas decreases water quality and increase sediment deposition within the lake and creek. Aquatic organisms are impacted by the loss of aquatic vegetation, decreased water quality and the physical disturbance within the water and along the streambed.

### *Alternative 1 (Proposed Action)*

Because Alternative 1 involves dredging at the boat ramp location and construction adjacent to surface waters, there is some potential for minor, temporary adverse impacts from increased turbidity, sediment deposition, and hazardous material spills within Ham Creek and Whitney Lake which would impact aquatic communities. Some aquatic organisms would locate to adjacent suitable habitat during construction. Construction activities would comply with the stormwater prevention and hazardous spill prevention plans as required by the Texas Pollution Discharge Elimination System (TPDES) to reduce potential impacts and insure these impacts would be temporary and reduced to minor and less than significant. To limit impacts to existing aquatic communities, dredging activities would occur at a time other than the spring spawning season when fish and wildlife are more vulnerable to disturbances in the environment. Overall, the net effect upon aquatic communities is expected to be minor. No impacts to threatened and endangered species are anticipated.

### *Alternative 2*

Potential impacts would be similar to those of Alternative 1 above. A slightly greater potential for additional impacts upon aquatic communities does exist because of the increased ground disturbance area, .75 acres, associated with the gate entrance complex.

### *Alternative 3*

Potential impacts would be similar to those of Alternative 1, but with greater potential for additional impacts upon aquatic communities because of the increased ground disturbance area, .4 acres, associated with construction of the gate entrance complex and the low-water crossing. Although the quantity of disturbed area is only slightly greater than Alternative 1, the potential impact is increased because the construction would take place within and adjacent to Ham Creek.

### *Alternative 4*

Potential impacts would be similar to those of Alternative 1, but with a greater potential for additional impacts upon aquatic communities because of the increased ground disturbance, 8 acres and an additional 2-4 acres of dredging. Similar to Alternative 3, Alternative 4 includes construction of a low-water crossing, although significantly longer, and the potential impact is increased because the construction would take place within and adjacent to Ham Creek.

## 4.4.3 Terrestrial Vegetation

### *No Action*

It is assumed that illegal ATV operation within the study area would continue. ATV operation can result in physical damage to vegetation through direct contact with vehicle. With continued use of trails, soil compaction and erosion may also damage vegetation. Damaged vegetation impacts associated wildlife through altered habitat.

### *Alternative 1 (Proposed Action)*

*Grasslands:* Construction within Section B would result in the direct loss of some grassland from construction of recreation facilities such as camping sites, and group shelters. The remaining grassland within Section B would be maintained as grassy vegetation through periodic mowing. Vegetative diversity would be increased by planting/reseeding wildflower, grass and forbs mixes in areas disturbed by construction activities. It is estimated that approximately all of the 32 acres of grasslands would be affected; however, there would only be direct losses of approximately 5 acres.

*Riparian Woodlands:* The location of the boat ramp facilities would be located in areas to minimize impacts to existing mature woody vegetation. However, the construction of the boat ramp parking, turn around and the boat ramp itself will result in the unavoidable loss of riparian woodlands. Approximately 2.4 acres of riparian woodlands would be lost.

*Upland Woodlands:* The location of facilities would be determined by presence of woody vegetation, specifically trees, to limit impacts. Whenever possible, facilities would be located so as to preserve the greatest number of desirable trees. Approximately 2 acres of upland woodland would be lost for the gate entrance complex in Section A. Approximately 1.25 acre of upland woodland would be lost from the construction of roadways within Section A. Only a minor amount of underbrushing would be required for construction of primitive campsites and trails. A total of approximately 3.25 acres of upland woodlands would be lost from construction of Alternative 1.

### *Alternative 2*

Potential impacts would be similar to those of Alternative 1 above; however, an additional .75 acres of upland woodland would be as a result of the construction of the gate entrance complex in Section A.

### *Alternative 3*

Potential impacts would be similar to those of Alternative 1 above, but a slightly greater potential impact to the terrestrial community exists as a result of the removal of additional .4 acres of riparian woodland associated with construction of the low-water crossing and associated roadway in Section A.

## *Alternative 4*

*Grasslands:* Construction within Section B would result in the direct loss of some grassland from construction of recreation facilities such as day use picnic sites and group shelters. The remaining grassland within Section B would be maintained as grassy vegetation through periodic mowing. Vegetative diversity would be increased by planting/reseeding wildflower, grass and forb mixes in areas disturbed by construction activities. It is estimated that approximately 2 acres of grasslands would be affected.

*Riparian Woodlands:* The location of the boat ramp facilities would be determined by the presence of mature woody vegetation. However, the construction of the boat ramp parking, turn around and the boat ramp itself will result in the unavoidable loss of riparian woodlands. Approximately 2.4 acres of riparian woodlands would be lost from boat ramp construction. In addition, approximately 2 acres would be lost from the gatehouse construction, 1 acre for roads, and 1 acre for campgrounds in Section C. Approximately .6 acres would be lost from the construction of the low water crossing. The total amount of riparian woodlands lost from the construction would be approximately 7 acres.

*Upland Woodlands:* The location of facilities would be determined by presence of woody vegetation, specifically trees, to limit impacts. Whenever possible, facilities would be located so as to preserve the greatest number of desirable trees. Approximately 3 acres of upland woodland would be lost from the construction of the campground within Section C. Approximately .4 acres would be lost from the construction of the roads in Section A. Only a minor amount of underbrushing would be required for construction of primitive campsites and trails. A total of approximately 3.4 acres of upland woodlands would be lost from construction of Alternative 4.

### 4.4.4 Threatened and Endangered Species

#### *No Action*

The whooping crane, bald eagle and BCV have not been reported within Ham Creek Park. Due to the nature and scope of the project and habitat types present within the park, it is anticipated that the park development would have no effect on either, the whooping crane, bald eagle or BCV.

GCWs habitat exist, sightings have been confirmed within the park and conditions within the park area would remain the same. It is assumed that illegal ATV operation within the study area would continue. Increased frequency of ATV operation may create disturbances for the GCW.

#### *Alternative 1 (Proposed Action)*

GCWs sightings have been confirmed in the park and suitable habitat exists. USACE entered into formal Section 7 consultation with the Service regarding the effects of the proposed plan on the GCW. The Service issued a Biological Opinion (Appendix B) that determined the project would destroy 8.5 acres of habitat and would cause harassment on 109 acres of habitat. The Service determined that a total of 117.5 acres would be authorized as incidental take under Section 9 of the ESA and that the level of anticipated habitat take is not likely to jeopardize the continued existence of the GCW. Actual direct impacts are expected to be less than the 8.5 acres.

The following reasonable and prudent measures would be implemented as recommended by Service in the Biological Opinion:

1. Clearing of GCW habitat for perimeter fence construction would be conducted outside of GCW breeding and nesting season (September through February) and would be no wider than 8 feet.
2. No-build Zones would be clearly marked prior to any construction to prevent accidental clearing by work crews. No-build Zones would be managed as GCW habitat. Buffer areas between the facilities and the No-build Zones would be planted and/or maintained as native vegetation.
3. Trails within No-build Zones would be designed as no hard surfaces, minimal vegetation removal, and would be constructed and maintained outside of BCW breeding and nesting season.
4. Impacts related to lighting generated by the facilities would be minimized by the use of directional lighting and buffers around BCW habitat.

5. USACE would develop an appropriate monitoring plan for reporting progress in development of the property and implementation of the reasonable and prudent measures.

USACE would follow all terms and conditions reflected in the final Biological Opinion. Additional Conservation recommendations for the GCW would be followed as funding allows. Funding would be requested annually to foster implementation of conservation recommendations. If during construction, it is anticipated that direct or indirect impacts are approaching the specified limits and it is anticipated that they may exceed the limits, then construction would cease and consultation would be reinitiated as directed by the Biological Opinion.

#### *Alternative 2 and 3*

Potential impacts would be similar to those of Alternative 1 above.

#### *Alternative 4*

Potential impacts would be similar to Alternative 1; but it would be expected that less direct impact to habitat would occur even though more direct impact to existing vegetation would occur as a result of Alternative 4. This alternative would construct the gate complex in Section C, where limited habitat exists. The resulting total take would however be approximately the same amount of acreage due to the take by harassment.

### 4.5 NOISE AND GENERAL AESTHETICS

#### *No Action*

Park area would remain in its current state and area would continue to receive little public recreation use. The only noise generated would be that of vehicles traveling the boat ramp roadway and during boat operation. Noise would also be generated through illegal ATV operation at current or increased levels within the park area.

#### *Alternative 1 (Proposed Action)*

During construction, noise would result during utilization of construction equipment. Equipment would include bulldozers, motor graders, dump trucks, water trucks, concrete trucks, loaders, back hoes, track hoes, trenchers, rollers, compactors, lay down machines, air compressors, power generators, arc-welders, chainsaws, air guns, power tools, and similar equipment. Hours of operation of construction equipment may vary, but would occur between 8:00 am and 5:00 pm weekdays, with minimum weekend work.

Normal park operation and maintenance activities would also generate noise on an occasional basis. Areas along roadsides and around all facilities would be mowed as growth necessitates. During growing season, park facility areas would usually be mowed every two to three weeks and roadsides about every four weeks, all dependent upon rainfall and funding. Refuse receptacles would be collected in refuse trucks once per week. Pressure washers may be utilized cleaning tables and restrooms once per week.

Visitation of the completed park is anticipated to be fairly high, particularly during the spring and summer months. Noise generated from normal recreation activities would be expected and may include operation of vehicles, boats, personal watercraft, radios, televisions, and other noises associated with outdoor recreational activities. Established park quiet hours would be from 10:00 p.m. to 6:00 a.m. in order to help reduce noise impacts during night hours.

Noise-sensitive receptors are those locations where activities that could be affected by increased noise levels and include locations such as residences, motels, churches, schools, parks, and libraries. Existing noise levels are determined for the outdoor living area at sensitive receptors. There would be buffers to help reduce noise impacts from Ham Creek Park; however, it would be expected that residences located adjacent to the park would experience recreation related noises during normal park hours.

Residences currently enjoy a picturesque view of the Brazos River with fairly hidden remnants of existing dilapidated recreational facilities. This view would be interrupted slightly by placing recreational facilities in Section B. The recreational vehicle sites would be placed within existing tree lines to minimize these visual impacts on the aesthetics of the river. However, the underbrushing of the area would open the area and would increase the scenic beauty of the river to some people.

#### *Alternatives 2, 3, 4*

Potential impacts would be similar to those of Alternative 1 above. Alternative 4 would offset some of the recreational related noise of the camping public by locating them to Section C. However, with the outlay of the land and the residential communities being at a higher elevation, it would more than likely be possible for the sounds to be heard, especially with prevailing winds. Alternative 4 would also reduce some of the direct visual obstructions by placing the recreational vehicle camping facilities in Section C, which would be further to the west.

### 4.6 CULTURAL RESOURCES

#### *No Action*

Cultural resources within the park area would likely remain in similar condition, unless erosion occurred within or adjacent to the cultural resources location.

#### *Alternatives 1, 2, 3 and 4*

Proposed new construction is confined primarily to areas disturbed by the original construction and operation of the park. Based upon cultural resources investigations, it was determined that no historic properties would be affected by the proposed construction at Ham Creek Park. This determination currently is being coordinated with the Texas State Historic Preservation Officer (SHPO). If during construction archeological resources are discovered, construction would cease and accidental discovery procedures would be implemented in accordance with the Federal, state and local laws.

### 4.7 HAZARDOUS, TOXIC, AND RADIOACTIVE WASTES (HTRW)

#### *No Action*

There are currently no-known hazardous, toxic, or radioactive wastes in the project area and therefore no impacts would result of the No Action Alternative.

#### *Alternatives 1, 2, 3 and 4*

No hazardous sites were found within or adjacent to the park area. If hazardous materials were encountered during construction, all construction activities in the immediate area would cease and accidental discovery procedures would be implemented in accordance with all applicable federal, state, and local environmental laws and regulations.

### 4.8 AIR QUALITY

#### *No Action*

No direct or indirect impacts to air quality would occur.

#### *Alternatives 1, 2, 3 and 4*

All construction alternatives would result in increase air pollution from construction equipment. Best management practices would be implemented to the extent practical to reduce dust particles from entering the air. All exhaust discharges would be localized and would be considered insignificant.

### 4.9 RECREATION

#### *No Action*

Park visitors would continue to have extremely limited access to a minimally operated park. Existing facilities (road, boat ramp, wellhouse, and three restrooms) would remain in various states of disrepair and deterioration. Park visitors could only utilize the boat ramp when lake levels are adequate for launching. The remaining portion of

the park would remain closed to vehicles and access could only be gained by foot. Restrooms and running water would remain unavailable. Kimball Bend and Plowman Creek Parks would continue to experience excessive visitation during spring and summer months.

#### *Alternative 1, 2, 3 and 4*

It is estimated that 20,000 vehicles would enter the park annually, bringing an estimated 40,000 visitors. Heaviest visitation, approximately 85 percent of the annual visitation, should occur from the beginning of March through the end of July. May is anticipated to receive the highest visitation. About 80 percent of the weekly visitation occurs over weekends. It is expected that all campsites, picnic sites, group shelters and the boat ramp would be fully utilized on holiday weekends including Easter, Memorial Day, Independence Day and Labor Day. It is estimated that an occupied campsite would have 3.6 persons utilizing the campsite and 1.5 persons per vehicle for day use boat. Alternatives 1 and 2 would increase the total potential acres of water per boat from 38.2 to 35.4 acres of water per boat with the construction of 50 additional boat ramp parking spaces. Alternatives 3 and 4 would increase the total potential acres of water to 36.5 acres of water per boat with the construction of 30 additional boat ramp parking spaces. Any of the alternatives would be well under the district minimum of 22 acres of water per boat. There would be an increased safety risk if boat traffic were actually increased in this area due to the concentration of boats in the narrow river corridor.

### 4.10 SOCIOECONOMICS

#### *No Action*

Local users of the boat ramp would continue to have to drive further to access ramps that are usable.

#### *Alternatives 1, 2, 3 and 4*

Construction of the project would not disproportionately affect any low income or minority populations. Johnson County residents would receive socioeconomic benefits by providing additional access to the lake and increased recreational opportunities. It is anticipated that no negative economic impact would be realized at lake facilities operated by others, unless local users stop storing their boats at local marinas as a result of the dependable boat ramp. These include Indian Lakes and Chisholm Trail Park.

### **5.0 MITIGATION FOR THE PROPOSED ACTION**

The proposed action would impact approximately 2.4 acres of riparian woodlands, 3.25 acres of upland woodlands, and 32 acres of grasslands. All of these impacts would not require mitigation. Impacts as a result of normal operations and maintenance would not have to be mitigated. These include losses for road maintenance and perimeter fence maintenance. The grasslands impacted would be self mitigated as any disturbed area would be reseeded with a wildflower, grass, forb mix. The entire grassland should actually benefit from the reintroduction of the native mix.

The riparian woodlands mentioned above would require mitigation as a result of the construction of the new boat ramp. This mitigation would be performed by expanding the riparian zone adjacent to the picnic sites in Section B using 3-6 inch caliper trees from the impacted area. The trees would be removed by spade and transplanted to those areas. Approximately 20 trees per acre would be planted. In addition, a woodland seed mix comprised of grasses and forbs would be planted in the mitigation areas. Existing woody vegetation would be avoided to the extent possible during construction. In addition, to the expanding the riparian zone in Section B, the riparian zone in Section C would be improved to increase the habitat value of that area. Additional plants and/or trees would be planted as required. Assuming worst case scenario, approximately 3 acres would be planted and any additional requirements would be mitigated by improving remaining riparian woodlands.

Approximately 2 acres of upland woodlands would be lost from the construction of gatehouse complex. This would be mitigated by improving the habitat in the remaining upland woodlands to improve habitat for the GCWs and other species as recommended by the Service.

Mitigation plans would be revised after the construction is finished and actual damages are estimated.

## 6.0 CUMULATIVE IMPACTS

This cumulative impact section only addresses the cumulative impacts of the proposed action. However, as the alternatives have very similar direct and indirect impacts, the cumulative impact would be very close to the same for each of the other construction alternatives.

### *Past Actions:*

Past Actions in the immediate vicinity of the project area include the Construction of Whitney Lake and associated recreation facilities, the construction of and closure of Ham Creek Park as a recreation facility, the construction of F.M. 916, Construction of large residential subdivisions, and other general projects that are associated with rural development. These activities have substantially altered the historical conditions of the environment. It would be nearly impossible and extremely cost prohibitive to accurately measure the impacts of these actions. Therefore, the cumulative impacts are measured against existing conditions and historical conditions to the extent they are known.

### *Present Actions:*

The only known present actions include the Retreat Development Pump Station, the Klondike Ranch conservation/management including GCW habitat on their properties, and gas and oil production activities in Johnson County. The Retreat Development Pump Station is a pump station going through part of Ham Creek Park to water an adjacent golf course. The Klondike Ranch has been and will probably continue to manage habitat for GCW. Oil and gas exploration is growing in Johnson County. These sites are usually about an acre in size and turn the land to bareground.

### *Reasonably Foreseeable Actions of the Corps:*

The only known reasonably foreseeable projects of the Corps in the vicinity of the proposed action are the Kimble Bend Park Renovation and possible master plan supplement to establish environmentally sensitive areas. The Kimble Bend Park Renovation is a multi-phase, multi-year plan, which includes the construction of 80 new electrical campsites designed to meet or exceed current RV industry standards to satisfy current customer demand. Seventy of the new campsites will provide 50-amp service and accommodate the largest modern recreation vehicles. Sewer hookups will be included on 20 of the new sites. Ten additional sites will include screened-in shelters. A group use area consisting of 8 electrical sites and a pavilion with attached enclosed kitchen and restroom facilities will also be constructed. An additional 20 campsites will be included in an Equestrian Campground which will be set apart from the rest of the park. This area will also include a pavilion with kitchen and shower restroom facilities. Plans include the construction of three new restroom/shower buildings. The water system will be extensively upgraded to meet the needs of the park. A park entrance complex is planned to provide security for the park users and to provide a presence to deter further degradation of the natural and cultural resource.

An interpretive plan will be developed with public involvement to take advantage of the unique resources of the Kimball Town Site. All new buildings will be designed to maintain the existing "Ghost Town" character of the park. The old streets and city blocks will be under-brushed and cleared while protecting any plants and trees that were planted by the town's original inhabitants. A climate-controlled interpretive center will be developed with assistance of the Bosque County Historical Commission, the Layland Museum in Cleburne, Texas, and Kimball Bend Historical Committee. The Center will have state-of-the-art interpretive facilities and focus on the old town of Kimball, Texas as well as the Chisholm Trail. An interpretive trail will connect the Interpretive Center with the major ruins and points of interest throughout the park by way of the old city streets.

Additional amenities include laundry facilities and basketball/volleyball courts. A kiosk will be located near the Interpretive Center with touch-screen display will be available to provide visitors with up-to-date information on reservations, local events, lake and park information, etc. New playground equipment suitable for all ages will be installed. A new boat ramp will be constructed on the northwest end of the park for use campers to help alleviate crowded conditions at the existing ramp and adjacent parking area. There would be no more than 20 new spots at the camp ground boat ramp and 10 new spots at the existing ramp. A covered and lighted fishing dock will be

installed near the old boat ramp to provide continuous fishing access for all ages.

The Whitney Lake Master Plan will be supplemented as funds permit to establish environmentally sensitive areas around the lake to protect GCW habitat. This would protect the habitat from future disturbance without undertaking an additional environmental assessment. This would also establish utility corridors in to help minimize impacts to the landscape.

#### *Reasonably Foreseeable Actions of Others:*

Currently known reasonably foreseeable actions of others in the project vicinity include gas and oil production activities in Johnson County, Possible wildlife refuge in the bend of the river, White Bluff Yacht Club Marina expansion, and residential developments expanding around the area.

Oil and gas production is estimated to continue in the area. In addition, there is a proposal to possible establish a wildlife refuge in the bend of the Brazos River adjacent to the project area. It is actual size of the proposed refuge is unknown at this point in time.

The White Bluff Yacht Club currently has approximately 60 wet slips at their marina. They are authorized approximately 190 in their master plan. They plan on expanding their marina by approximately 130 slips to make their total wet slips be 190.

There are at least four proposed or existing residential developments around the project area. Some of these are thousand or more unit developments.

#### GEOLOGY AND SOILS

There would be cumulative impacts to soils as a result of the proposed project and proposed development around the project area. It would be expected that there would be increased erosion as a result of increased impervious cover in the watershed. This is expected to be a relatively small portion of the overall watershed, and therefore should be minor impacts.

#### WATERS OF THE U.S. INCLUDING WETLANDS

There would be expected to be cumulative impacts to waters of the U.S. because of increased sediment transport due to increased scour and erosion and land disturbance from the proposed residential developments. It would be expected that the proposed developments would implement best management practices as would the proposed Ham Creek Development; therefore these impacts would still be expected to be minimal. In addition, there would be cumulative impacts to waters of the U.S. due to construction of the proposed Kimble Bend Park boat ramp. These would still be expected to be insignificant due to the small amounts of acres of impacts.

#### WATER QUALITY

There would be cumulative impacts to water quality as a result of increased scour and erosion and sediment transport due to increased impervious cover and land disturbance from residential development and gas and oil and boat ramp construction in Kimble Bend Park. These impacts would be expected to be minimal due to the fact that direct or indirect cumulative impacts from construction would not result in the Brazos River in this segment to not meet state water quality standards.

#### WILDLIFE AND FISH

There would be adverse and beneficial cumulative impacts to fish and wildlife species habitat as a result of the proposed action. There would be a minor beneficial impact from the protection of habitat by the Klondike Ranch and the possible creation of a refuge in the bend of the river as well as the establishment of environmentally sensitive areas at Lake Whitney. There would be adverse cumulative impacts due to the loss of habitat from the residential development, Kimble Bend Park Renovation, and gas and oil production. These impacts would not be expected to be significant because they would not directly result in the loss of a species or the protection of a species to the point that they are not listed as rare or endangered.

## AQUATIC VEGETATION

There could be minimal cumulative impacts to aquatic vegetation by the construction of the Kimble Bend Park Renovation. However, these impacts would be to a small amount of acres considering Whitney Lake is over 29,000 surface acres and would therefore be insignificant.

## TERRESTRIAL VEGETATION

There would be adverse and beneficial cumulative impacts to terrestrial vegetation as a result of the proposed action. There would be a minor beneficial impact from the protection of or improvement of vegetation by the Klondike Ranch and the possible creation of a refuge in the bend of the river as well as the establishment of environmentally sensitive areas at Lake Whitney. There would be adverse cumulative impacts due to the loss of vegetation from the residential development, Kimble Bend Park Renovation, and gas and oil production. These impacts would not be expected to be significant because they would not directly result in the total loss of a particular vegetation type.

## THREATENED AND ENDANGERED SPECIES

There would be cumulative beneficial and adverse impacts to the GCW as a result of the proposed action. Beneficial impacts would be from the protection of habitat by the Klondike Ranch, possible protection of habitat by the designation of areas as environmentally sensitive areas, and possible protection of habitat as a result of establishing a wildlife refuge in the bend of the river. There would be adverse impacts if the oil and gas production and the residential developments destroyed additional habitat. These impacts are expected to be minor in the overall recovery of the GCW and therefore, they are insignificant.

## NOISE AND GENERAL AESTHETICS

There would be cumulative impacts to the overall noise and aesthetics of the area as a result of residential development and oil and gas production. The impacts are expected to be minimal with regards to the proposed action because the impacts of the proposed action are so concentrated.

## CULTURAL RESOURCES

There are no direct or indirect impacts expected as a result of the proposed action, and therefore, there can be no cumulative impacts.

## HAZARDOUS, TOXIC AND RADIOACTIVE WASTES

There are no direct or indirect impacts expected as a result of the proposed action, and therefore, there can be no cumulative impacts.

## AIR QUALITY

There could be cumulative impacts to air quality as a result of the proposed action and the construction of the other proposed projects of others. These projects would be spread out over a large geographic area and the construction would likely take place during different time periods, and therefore, the cumulative impacts should be minimal to almost non-existent.

## RECREATION

There would be both cumulative beneficial and adverse impacts to recreation as a result of the proposed actions of the Corps and others. The proposed parks would provide more recreational opportunities for the increased number of residences in the area as a result of increased residential developments. In addition, it would relieve the increased pressure from existing parks. It would however have a cumulative impact on the acres of water per boat ratio for the lake. The combined Kimble Bend (30 new boat ramp spaces) and Ham Creek Park (50 new boat ramp spaces)

projects would increase the cumulative total to 33.9 acres of water per boat from the existing 38.2 acres per boat. In addition, with the possible White Bluff Yacht Club marina expansion, there would be approximately 130 new wet slips in their marina. Wet slips are calculated differently than boat ramp slips. It is assumed that only one boat per every 10 would be on the water. This would increase the total by an additional 13 boats. Therefore, it would bring the total combined projects to 33.2 boats per acre. This is still well under the district proposed level of 22 acres of water per boat. There would still be an increased safety risk if additional boat traffic were increased in this particular area. To make sure additional cumulative impacts do not occur, any additional future boat ramp expansion or construction in this part of the lake would require a water related recreation use study.

## SOCIOECONOMICS

There would be temporary beneficial cumulative impacts to socioeconomics in the area due to new construction in the area. These would be expected to be minor due to the fact that the construction would be temporary in nature.

## 7.0 PUBLIC INVOLVEMENT

### 7.1 AGENCY COORDINATION

USACE coordinated with the U.S. Fish and Wildlife Service, Texas Parks and Wildlife Department and Texas Historic Preservation officer during the preparation of this EA. In addition, the draft EA will be coordinated with the appropriate Indian tribes. Correspondence with these and other agencies are located in Appendix D. The draft EA will be coordinated with the following agencies:

U.S. Fish and Wildlife Service  
U.S. Environmental Protection Agency  
Texas Parks and Wildlife Department  
Texas Commission on Environmental Quality  
Texas State Historic Preservation Officer

### 7.2 PUBLIC INFORMATION AND REVIEW

USACE sent a New Release on August 1, 2005 to all members of the public requesting volunteers to participate in series of recreational workshops for the planning and designing of the Ham Creek Park. On October 11, 2005 USACE held its first meeting with approximately 30 people at the Guinn Justice Center in Cleburne to discuss Ham Creek Park and the public workshops. Three groups were organized and workshops were held independently and three separate proposals were developed as discussed as Alternatives 1, 3, and 4 in this EA. Alternative 2 is Alternative 1, but with a different gate house location. Finally on December 14, 2005, the large group met again at the Guinn Justice Center and selected Alternative 1 as the proposed alternative with two locations for the gate house. The two options for the gate house are described as Alternatives 1 and 2. Alternative 1 was the recommended plan and the proposed action. On January 9, 2006 USACE met with the Johnson County Commissioners and Alternative 1 was unanimously approved as the proposed action by the county commissioners. Correspondence related to team involvement is located in Appendix D.

The draft EA will be released for a 30-day public comment period. A Notice of Availability (Appendix D) was sent out releasing this draft for public review.

## 8.0 FINDINGS AND CONCLUSIONS

Implementing Alternative 1 (The Proposed action) for the Ham Creek Park Development would have various impacts to the environment. Minor insignificant impacts would occur to soils, Waters of the U.S., water quality, fish and wildlife resources, aquatic and terrestrial vegetation, noise and general aesthetics, and air quality. Minor benefits would occur to socioeconomics and recreation. There would be no impacts expected for hazardous, toxic, and radioactive wastes and cultural resources. There would be minor cumulative adverse impacts to soils, Waters of the U.S., water quality, fish and wildlife resources, aquatic and terrestrial vegetation, noise and general aesthetics,

air quality, and recreation. There would be minor beneficial cumulative impacts to fish and wildlife resources, terrestrial vegetation, recreation, and socioeconomics.

The Service issued a biological opinion that determined the project would destroy 8.5 acres and cause harassment on 109 acres of golden cheeked warbler habitat. The Service determined that a total of 117.5 acres would be authorized as incidental take under Section 9 of the ESA and that the project would not jeopardize the continued existence of the golden cheeked warbler. USACE would implement all of the terms and conditions stated within the biological opinion.

The Whitney Lake Master Plan would be supplemented to designate Ham Creek Park as a high intensity park area within designated “No-Build Zones” within the park boundaries after construction of proposed project amenities.

Approximately 1.7 acres of Waters of the U.S. would be impacted. It is anticipated that CESWF-97-LOP-1 would be used to authorize the project. This determination is being consulted with the natural resource agencies.

Approximately \$900,000 in funds has been appropriated, that is required to be spent in Fiscal Year 2006, by Congress. This is in-sufficient funds for total construction of the proposed Ham Creek Park Development. Additional funds are expected to be appropriated in the future. Therefore, the project construction would be constructed in at least three separate phases as funds become available.

Phase I of the constructions would be to install things primarily associated with constructing the new boat ramp. This would include the following as funds permit: entrance road, vehicle safety barriers along main road, boat ramp and parking, lighting for ramp and turnaround, park barriers along perimeters, close old boat ramp access, utilities for gate house, and a possible restroom. If funds did not allow, some of the activities could be moved to Phase II. Phase II would be to construct the Day use facilities and camping infrastructure. Finally, Phase III would be to construct the remaining recreation facilities including the camping facilities.

Upon project completion or partial completion, USACE would lease Ham Creek Park to Johnson County and Johnson County would be responsible for the operation and maintenance of the facility. Recreation related use fees would be charge to the visiting public by Johnson County.

Based on the findings and conclusions in this EA and the attached draft Finding of no Significant Impact (FONSI), it is determined that the proposed Ham Creek Park Development would not be a major Federal action that would require an Environmental Impact Statement.

## 9.0 REFERENCES

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