

## FINDING OF NO SIGNIFICANT IMPACT

In accordance with the National Environmental Policy Act (NEPA) of 1969, including guidelines in 33 Code of Federal Regulations, Part 230, the Tulsa District of the U.S. Army Corps of Engineers (USACE) has assessed the environmental impacts of the relocation of the proposed golf course and camping/RV area within the CrossTimbers Development Project at Skiatook Lake, Osage County, Oklahoma. The proposed action will allow the relocation of a golf course and a camping/RV area from their currently approved locations. Originally proposed for construction at Skiatook Point, the golf course would now be constructed in the Tall Chief Cove area of the lake. The camping and RV area, originally proposed for construction in the Tall Chief Cove area, would now be built at Skiatook Point.

As a means of minimizing adverse impacts to the American burying beetle (*Nicrophorus americanus*), a Federally-listed endangered species, standardized survey and other techniques prescribed by the U.S. Fish and Wildlife Service (USFWS) will accompany all construction activities involving excavation or soil disturbance. Changes to the location of the golf course and camping/RV area under the proposed action would impact additional terrestrial habitat that would require mitigation. In consultation with USFWS and other interested parties, USACE would reclassify property at Gouin Point on Skiatook Lake from recreation to wildlife management general to meet this mitigation requirement. This change in land classification by USACE would allow preservation of significant old-growth cross-timbers habitat at Gouin Point, allow hunting activities and management of habitat for wildlife and non-game species, and provide an additional degree of protection for the area from future development.

The environmental review of the proposed project, which is documented in the enclosed Environmental Assessment, indicates that no significant adverse environmental impacts on the natural and human environments would result from the proposed project. Therefore, an Environmental Impact Statement will not be prepared.

28 APR 06

Date



MIROSLAV P. KURKA  
Colonel, U.S. Army  
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Enclosure:  
Environmental Assessment

**ENVIRONMENTAL ASSESSMENT OF THE PROPOSED  
RELOCATION OF THE GOLF COURSE AND CAMPING/RV AREA,  
CROSSTIMBERS DEVELOPMENT PROJECT,  
SKIATOOK LAKE, OSAGE COUNTY, OKLAHOMA**

**April 28, 2006**

**Project Proponent:**

**Skiatook Economic Development Authority  
Skiatook, Oklahoma**

**Prepared for:**

**U.S. ARMY CORPS OF ENGINEERS  
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## **I. PURPOSE, NEED, AND SCOPE**

The purpose of this Environmental Assessment (EA) is to assess the environmental impacts from the proposed relocation of the golf course and camping/RV facilities within the CrossTimbers development area on Federal lands at Skiatook Lake in Osage County, Oklahoma. Although the Final Environmental Statement for Skiatook Lake, dated 11 February 1972, addressed the authorized recreational purposes at this location, significant excavation and changes in the land and current land use will result from the proposed construction activities, thus requiring preparation of an EA to ensure compliance with the National Environmental Policy Act (NEPA) of 1969, as amended.

Skiatook Reservoir was authorized for construction by the Flood Control Act approved 23 October 1962 (Public Law 87-874, 87<sup>th</sup> Congress) in accordance with a plan outlined in House Document No. 563 (87<sup>th</sup> Congress, 2<sup>nd</sup> Session). Purposes of the Skiatook project included flood control, water quality control, water supply storage, recreation, and fish and wildlife.

In 2003 the U.S. Army Corps of Engineers (USACE) approved the lease of approximately 631 acres of land and 46 acres of water located in portions of Sections 25, 26, 27 and 35 of Township 22 North, Range 11 East and Sections 2, 3, and 4 of Township 21 North, Range 11 East in Osage County, Oklahoma, to the Skiatook Economic Development Authority (Figures 1 and 2). As part of the approval of the lease request, USACE required the Skiatook Economic Development Authority (SEDA) to prepare an EA that addressed the environmental impacts of the proposed SEDA sub-lease of the property to StateSource, LLC for construction of the CrossTimbers development. Development in the lease area as part of the sub-lease to StateSource will include a golf course, marina, boat docks, trails, camping and RV sites, and a village. The village will consist of a lodge, cabins, store, and other related facilities. USACE approved the EA for the original CrossTimbers development, and on 13 February 2003 Colonel Robert L. Suthard, Jr. issued a Finding of No Significant Impact (FONSI) for the EA.

The primary purpose of this new EA is to address the relocation of the proposed golf course to the Tall Chief Cove area and the camping/RV site to the Skiatook Point area. The facility relocations, as herein proposed, are completely contained within the original and approved lease area.

## **II. ALTERNATIVES INCLUDING PROPOSED ACTION**

### **A. No Action.**

The No Action alternative would allow continued construction of the CrossTimbers development within the approved lease area at Skiatook Lake as outlined in the [Environmental Assessment for CrossTimbers Project at Skiatook Lake, Oklahoma](#) (original CrossTimbers EA) for which the USACE issued a Finding of No Significant Impact (FONSI) on February 13, 2003. Development would include a golf course located at Skiatook Point, marina, boat docks, trails, camping and RV sites at Tall Chief Cove, and a village (Figure 3).

The village would consist of a lodge, cabins, store, and other related facilities. As used in this document or accompanying attachments, the term “cabins” or “cabin development” refers to public cabins and lodging, restaurants, and retail and related facilities. The term “marina” refers to boat docks, storage, service ramps, parking areas, and service and repair facilities, as well as trails, restaurants, cabins, and retail and related facilities. Approved CrossTimbers construction that has taken place since issuance of the FONSI for the original CrossTimbers EA has consisted of a marina ship store, boat docks, associated marina storage, parking areas, trails, and a marina access road, primarily located in the Sunset Cove area.

### **B. Preferred Alternative (Proposed Action).**

Under the Preferred Alternative, both the golf course and the camping/RV area would be relocated from their currently approved locations. Originally proposed for construction at Skiatook Point, the golf course would now be constructed in the Tall Chief Cove area (Figure 4). The camping and RV area, originally proposed for construction in the Tall Chief Cove area, would now be built at Skiatook Point (Figure 5).

As a means of minimizing adverse impacts to the American burying beetle (ABB) (*Nicrophorus americanus*), a Federally-listed endangered species, standardized survey and other techniques prescribed by the U.S. Fish and Wildlife Service (USFWS) will accompany all construction activities involving excavation or soil disturbance. Accordingly, use of established protocol and activities for ABB protection is included as a component of the proposed action (Appendix A).

## **III. AFFECTED ENVIRONMENT**

### **A. Location.**

The proposed golf course would be constructed in the Tall Chief Cove area. The golf course would be built entirely within the approved CrossTimbers lease area on approximately 121 acres. The area near Tall Chief Cove has average slopes ranging from 6% to 12% and consists of approximately 21 acres of meadows and pasture and 100 acres of wooded terrain.

The proposed camping area and RV park would be constructed at Skiatook Point, which has average slopes ranging from 7% to 37% and consists of approximately 50 acres of meadows and pastures and 300 acres of woodlands.

### **B. Climate.**

Information regarding climatological conditions at Skiatook Lake has been previously summarized in Section III B of the original CrossTimbers EA.

### **C. Social and Economic Conditions.**

**1. Study Area.** Skiatook Lake is located in the southeastern portion of Osage County in north-central Oklahoma. The lake covers 10,190 acres and is owned and operated

by the U.S. Army Corps of Engineers. The Tall Chief Cove camping facilities are used at a 100% rate on weekends (turning away a number of individuals during the peak recreation season). Crystal Bay Marina, located on the north shore of the lake, operates at approximately 90% capacity during the boating season (May through September). The recently opened CrossTimbers Marina is currently operating at approximately 95% capacity.

**2. Population.** The population of Osage County was 44,437 as of the 2000 census. The Skiatook area has seen a growth rate of approximately 10% over the last 10 years.

**3. Employment and Income.** The economy of the area is based primarily on horse and cattle ranching as well as oil and gas production. The unemployment rate in Osage County was 4.0% in 2001 compared to 4.3% for the State. The 1999 per capita income for Osage County as \$17,634 compared to \$22,958 per capita for the State.

**4. Social Ecology.** Land use in the Skiatook Lake area is mainly ranching, although recent years have seen the slow encroachment of housing developments west of the town of Skiatook and on the eastern end of the lake. Upscale housing has been built on private property on both sides of the eastern end of the lake. Lakeview houses start at \$160,000 in the Catalina Cove subdivision east of Sunset Cove. Homes in East Ridge sell in excess of \$230,000. Westside homes in the Santa Barbara subdivision start at \$180,000 and homes in the Beverly Hills subdivision sell for a million dollars or more. At The Estates of CrossTimbers development, 0.5 acre lots sell for \$80,000 to \$160,000. The increase in housing prices has brought an increase in the amount of land that is being made available for development. The median price for a home in the Skiatook area is \$63,176 with an average home price of \$69,601. Only 3.3% of homes within a ten-mile radius of the Town of Skiatook sell for more than \$150,000 (Town of Skiatook Market Profile Report dated 15 June 2001).

**5. Environmental Justice.** Executive Order 12898 requires federal agencies to identify and address disproportionately high and adverse human health and environmental effects of federal programs, policies, and activities on minority and low-income populations. Federal agencies are directed to ensure that federal programs or activities do not result, either directly or indirectly, in discrimination on the basis of race, color or national origin. Federal agencies are required to provide opportunities for input in the NEPA process from affected communities and to evaluate significant and adverse environmental effects proposed federal actions on minority or low-income communities during the preparation of federal environmental documents. The proposed project was evaluated in accordance with E.O. 12898.

**6. Protection of Children from Environmental Health Risks and Safety Risks.** Executive Order 13045 requires that federal agencies make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children. Federal agencies are directed to ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health and safety risks. The proposed project was evaluated in accordance with E.O. 13045.

## D. Natural Resources.

**1. Terrestrial.** Information regarding terrestrial resources at Skiatook Lake has been previously summarized in Section III D.1. of the original CrossTimbers EA. There has been no change to the terrestrial resources since publication of the original CrossTimbers EA.

**2. Soils.** Information regarding soil types and soil associations present in the Skiatook Lake area has been previously summarized in Section III D.2. of the original CrossTimbers EA. There have been no changes to the soil types and soil associations since publication of the original CrossTimbers EA.

**3. Prime Farmland.** As defined by the U.S. Natural Resources Conservation Service (NRCS) there are no Prime or Unique Farmlands within the proposed project area. A small area of prime farmland exists within the lease area downstream of Skiatook Dam, but none of this area will be impacted by activities associated with the proposed project action. A copy of the December 12, 2005 coordination letter from the NRCS with this information is located in Appendix B.

**4. Wild and Scenic Rivers.** No body of water in the Skiatook Lake watershed is a federally designated Wild or Scenic River.

**5. Wetlands/Floodplains.** Information regarding wetlands and floodplains in the Skiatook Lake area has been previously summarized in Section III D.5. of the original CrossTimbers EA. There are no wetlands present in the proposed project area.

**6. Wildlife.** Information regarding wildlife present in the Skiatook Lake area has been previously summarized in Section III D.6. of the original CrossTimbers EA. Animal species present in the area are typical of the cross timbers region in Oklahoma and southern Kansas.

**7. Unique Habitat Resource.** The project area contains cross timbers, which is an increasingly rare and unique habitat type. This component was identified as being present in the project area during preparation of the final environmental statement for the project in 1972. The status of this habitat type has recently been of increasing concern and the focus of recent research by the scientific community.

The cross timbers originally stretched from southeast Kansas, through eastern Oklahoma, and into northeastern Texas. This vegetation type is dominated by blackjack oak, post oak and, in the south, black hickory (*Carya texana*), with an understory dominated by little bluestem. Subdominants include big bluestem, side-oats grama, hairy grama (*Bouteloua hirsuta*), purple lovegrass (*Eragrostis spectabilis*), sand lovegrass (*E. trichodes*), Scribner's panicum (*Panicum oligosanthes*), Indian-grass (*Sorghastrum avenaceum*), longleaf dropseed (*Sporobolus* sp.) and Texas needlegrass (*Stipa leucotricha*) as understory, and hackberry (*Celtis* spp.) as an overstory species. In Oklahoma, the cross timbers prairie habitat type originally covered approximately 30,000 square miles. Throughout much of the eastern range of the cross timbers a combination of fire suppression, plant invasion, and

conversion to agriculture has resulted in the fragmentation and loss of habitat for many migrant songbirds such as the endangered black-capped vireo. Therrell and Stahle (1998) estimate 162 square miles of ancient cross timbers remain today throughout the country, all of which has been impacted by fire suppression, grazing/agriculture, and reservoir impoundment.

Within the general habitat classification of cross timbers there are several different plant communities. The plant community with the broadest distribution is that of the upland cross timbers. The upland cross timbers forest type is generally considered to be a modified version of the oak-hickory forest type that is common along the western portion of the eastern deciduous forest of North America, the major distinction being the lack of the other species of oak and hickory common in eastern North America as well as the lack of black cherry and basswoods. In many places throughout the cross timbers region sandstone or limestone caps many of the hills. Soils associated with the sandstone caps are mostly thin sandy soils that contain unique plant assemblages generally consisting of small annuals and/or succulent perennials with very short taproots, or shallow spreading roots.

One component of this type of habitat is old growth, or ancient cross timbers, which is composed in part of trees that may be 300 to 500 years in age. Tree ring investigations indicate that the ancient cross timber community has remained relatively unchanged following the last glacial period some 6,000 years ago (Stahle et. al. 2000). Due to the rapidly declining trends in this habitat type the value and function of the old growth cross timbers is of special importance. Little is known about the bird communities in these ancient forests.

To date, approximately 300 acres at Tall Chief Cove have been surveyed for ancient (old growth) cross timbers. Candidate trees (those trees possibly 200 years or older) identified in the Tall Chief Cove area and displaying physical characteristics common to old growth timber (including diameter in relation to soil quality, nubs or scars from branch loss, and treetops that are gone or partially gone) were entered into a Geographic Information System (GIS) database. A survey for ancient cross timbers at Skiatook Point has, as of completion of this document, not been completed. The old growth tree inventory of all lands under lease to SEDA is to be incorporated into the CrossTimbers Environmental Management Plan and will be utilized to avoid, to the maximum extent possible, disturbance of the ancient trees. Development activities at Skiatook Point will not begin until candidate trees have been identified and included in the survey GIS database. A preliminary site assessment conducted by SEDA and StateSource, LLC indicates that Skiatook Point exhibits a greater likelihood for the presence of old growth timber. A copy of the Tall Chief Cove old growth tree survey is included in Appendix D.

**8. USACE Project Land Allocation and Classification.** Property acquired by USACE as part of the development of a project is allocated in accordance with the authorized purpose for which they were acquired. Following guidance contained in Engineer Regulation 1130-2-550 and Engineer Pamphlet 1130-2-550, land is allocated by USACE into one of the following categories: a) operations, which consists of lands acquired in accordance with the authorizing documents for operation of the project (i.e. flood control, hydropower, water supply, etc.); b) recreation, consisting of separable lands acquired in accordance with

authorizing documents for public recreation; c) fish and wildlife, consisting of separable land acquired in accordance with authorizing documents for fish and wildlife management; and d) mitigation, which is land acquired or designated in accordance with authorizing documents to offset losses associated with the development of the project.

Allocated project lands are further classified to provide for development and resource management. This classification process refines the land allocations to allow full utilization of project lands based on public desires, legislative authority, and regional and project specific resource requirements and suitability. Land is classified into one of the following categories:

1) Project operations – includes those lands required for the structure, operations center, office, maintenance compound, and other areas that are used solely for project operations.

2) Recreation – includes those lands to be developed for intensive recreational activities by the visiting public, including developed recreation areas and areas for concession, resort, and quasi-public development.

3) Mitigation – only includes land acquired or designated specifically for mitigation.

4) Environmental sensitive areas – areas where scientific, ecological, cultural, or aesthetic features have been identified. Normally limited or no development of public use is contemplated on land in this classification.

5) Multiple resource management – lands managed for one or more of, but not limited to, these activities to the extent that they are compatible with the primary allocation(s) of the property:

a) Recreation-low density – low density recreation activities such as hiking, primitive camping, wildlife observation, hunting, or similar recreational activities.

b) Wildlife management general – fish and wildlife management activities.

c) Vegetative management – management activities for the protection and development of forest and vegetative cover.

d) Inactive and/or future recreation areas – recreation areas planned for the future or that have been temporarily closed.

6) Easement – lands for which USACE holds and easement interest but not fee title.

Information on the allocation and classification of lands at a project becomes part of the project master plan. The project master plan provides resource objectives based on project purposes, applicable Federal laws and regulations, regional needs, resource capabilities, and expressed public desires. Project master plans are used to guide future design, development, and management activities to obtain the greatest benefit through meeting the needs of the public and protecting and enhancing environmental quality.

## **E. Cultural Resources.**

As an area of research, the project area falls within the Southern Great Plains archeological province. A cultural-historic overview of the surrounding region is beyond the

scope of this report; however, a detailed account is given in various USACE publications. Most notable of these publications are The Archeology of the Proposed Skiatook Reservoir, Osage County, Oklahoma (Rohrbaugh and Wycoff 1969), An Historical-Cultural Assessment of the Skiatook Reservoir, Osage County, Oklahoma (Perino 1972), The Prehistory and Paleoenvironment of Hominy Creek Valley 1978 Field Season (Henry 1979), and The Prehistory and Paleoenvironment of Hominy Creek Valley 1979 Field Season (Henry 1982).

As documented in the original CrossTimbers EA, a series of cultural resources investigations and consultations were undertaken in 2002 as part of USACE compliance with Section 106 of the National Historic Preservation Act. Although no significant cultural resources were identified within the SEDA lease area during these investigations, two historic properties were identified on USACE property directly adjacent to the proposed camping area at Skiatook Point. One of these is a traditional cultural property known as Teepee Rock or Healing Rock (34OS679). Healing Rock is a large upright rock located on a ridge point overlooking Skiatook Lake. Originally located in Hominy Creek valley, the rock was moved to its present location by USACE at the request of the Quapaw and Osage tribes in order to prevent the rock from being inundated by Skiatook Lake. According to informants, Healing Rock is a traditional cultural property of significance to the Quapaw and Osage tribes due to association with some of the first Native American Church gatherings held in Osage County. Consultation with the Osage Nation and Quapaw Tribe by USACE in 2002 and 2003 revealed that both tribes still feel that Healing Rock is a significant traditional cultural property in spite of the fact that the rock is no longer located in its original setting. Based on information provided by the Osage Nation and Quapaw Tribe, USACE determined in 2003 that Healing Rock is eligible for listing on the National Register of Historic Places (NRHP) as a traditional cultural property. The other historic property located near Skiatook Point is a prehistoric burned rock mound (34OS678) located in the front yard of the USACE Skiatook Lake office. Based on the undisturbed nature of the site and the likelihood that it contains important information on subsistence activities of the prehistoric inhabitants of the area, USACE has determined that site 34OS678 is potentially eligible for listing on the NRHP and should be protected until such time that a formal determination of NRHP eligibility can be made.

One outcome of the government-to-government consultations between USACE and the Quapaw Tribe and Osage Nation in 2002 and 2003 was the creation of lease provisions and mitigation requirements to minimize potential impacts to the Healing Rock or other cultural resources that might be inadvertently discovered during the construction and operation of the CrossTimbers development. In order to allow public access to the site while minimizing the likelihood of inappropriate behavior at Healing Rock, the following provisions were agreed to by all parties: 1) an area 100 feet on all sides of Healing Rock and approximately 50 feet on either side of the Healing Rock access trail was excluded from the SEDA lease area; 2) the trail and excluded area around Healing Rock will be maintained as part of the maintenance agreement for the USACE Skiatook Lake office compound; and 3) provisions were established in the SEDA lease agreement (and any subsequent sublease agreement) to address future inadvertent discoveries of cultural resources within the entire SEDA lease area (Figure 5).

## **F. Threatened and Endangered Species.**

Threatened, endangered, or candidate species occupying Osage County, Oklahoma include the interior least tern (*Sterna antillarum*), whooping crane (*Grus Americana*), bald eagle (*Haliaeetus leucocephalus*), piping plover (*Charadrius melodus*), mountain plover (*Charadrius montanus*), and Neosho mucket (*Lampsilis rafinesqueana*). These species were identified as potentially occurring in the project area in the previously approved EA prepared for the CrossTimbers development.

Since the 2003 issuance of the original CrossTimbers EA, the U.S. Fish and Wildlife Service (USFWS) has noted the occurrence of the American burying beetle (ABB), a Federally-listed endangered species, in Osage County, Oklahoma. The ABB is a member of the beetle family Silphidae and is known to bury vertebrate carcasses for reproductive purposes as well as exhibit parental care of young. The ABB is fully nocturnal and active when nighttime temperatures consistently exceed 60 F. For the remainder of its life cycle (generally mid-May to late-September) the ABB remains in an inactive state buried at soil depths ranging from 6- to 36-inches (Anderson 1982, Kozol *et al.* 1988). Owing to its confirmed presence in Osage County and its highly mobile nature, the ABB may be present in portions of the project area during summer months. During the inactive season, it is possible that the ABB may exist buried in project area soils of suitable characteristics (see Appendix A). Critical habitat has not been designated for the ABB.

## **G. Water Quality.**

USACE has characterized the general water quality at Skiatook Lake as having macronutrients and trace metals at levels that warrant future monitoring but are not currently a cause for alarm (USACE 1998). Phosphorus concentrations are at levels high enough to consider the lake to be borderline mesotrophic/eutrophic. Mesotrophic lakes show some depletion of oxygen making them not always suitable for warm water fisheries, although productivity is good. Shifting land use patterns in the watershed could shift the entire lake into a higher trophic level (eutrophic). Eutrophic lakes show a reduction in aesthetics due to turbidity, but generally productivity does not limit the reservoirs ability to support warm water fisheries. The second area of awareness is trace metals. Mercury levels were above detection limits in five surface water samples. This survey provided water quality baseline data for Skiatook Lake with samples taken between April and November 1994.

Since 1994, the Oklahoma Water Resources Board (OWRB) has measured water quality in Skiatook Lake. Data gathered in 1996, 1999 and 2000 show that Skiatook Lake is still classified as mesotrophic, bordering on eutrophic. A mesotrophic to eutrophic lake is one that is indicative of moderate to high primary productivity and intermediate nutrient levels. In 1998, the Oklahoma Department of Environmental Quality (ODEQ) determined metals levels in fish at Skiatook Lake did not exceed the screening level or low consumption advisory level for metals toxicity. In 2005 ODEQ issued a state-wide fish consumption advisory for methylmercury toxicity which included Skiatook Lake. While methylmercury values present in fish tissues taken from Skiatook Lake do not exceeded the screening or low consumption advisory levels in 785:45-5-20 Oklahoma's Water Quality Standards, levels of methylmercury present in fish tissues taken from Skiatook Lake do exceed the USEPA

January 2001 published recommended criterion for methylmercury for protection of public health. Previously, Skiatook Lake was listed on the 1998 State of Oklahoma 303(d) list of impaired waters for pesticide from unknown sources. The most recent State of Oklahoma Integrated Report, dated 2002, shows that Skiatook Lake is impaired due to low dissolved oxygen from unknown sources only, with insufficient data to determine impairment due to pesticide at this time. Additionally, Skiatook Lake is identified as not meeting the criteria necessary to fully support warm water aquatic communities as described in 785:46-15-5, Implementation of Oklahoma's Water Quality Standards, Assessment of Fish and Wildlife Propagation support.

More recently, USACE conducted a water quality survey from March 2003 through September 2004 designed to update the 1994 USACE water quality survey. Results from this most recent survey indicate an increase in Secchi depth and total phosphorus. Trace metal results mirror those observed in 1994. A eutrophic classification is supported by nutrient and phytoplankton assemblage data with the reservoir trending towards having higher concentrations of total phosphorus relative to 1994 concentrations. Lake-wide the algal assemblage present in Skiatook Lake is dominated by diatoms and blue-green algae, comprising 41% and 44% respectively of the total algal assemblage. Table 1 lists the percent contribution of diatoms and blue-green algae present at sampling locations near the dam, at the mouth of Tall Chief Cove, and at Skiatook Point. The majority of the dominant diatoms within the reservoir are comprised primarily of filamentous forms, indicating a high abundance of food for zooplankton and zooplanktivorous fish (i.e. small fish which feed primarily on zooplankton). The dominant blue-greens include *Anabaena* spp., *Aphanizomenon* spp., and *Cylindrospermopsis raciborskii*.

**TABLE 1**

**Results of 2003 and 2004 Algal Assemblage Sampling at Skiatook Lake**

<b>Sample Location</b>	<b>Diatom %</b>	<b>Blue-Green %</b>
Near Dam	41%	44%
Tall Chief Cove	52%	35%
Skiatook Point	47%	39%
Lake-Wide Average	41%	44%

The dominate blue-greens present in Skiatook Lake are known to have the ability to produce anatoxin-a, which is a neurotoxin affecting the nervous system, and cylindrospermisin, which is a hepatotoxin affecting the liver. While there is no data

available to determine toxin production by blue-green algae in Skiatook Lake, the number of cells per milliliter present at the Dam, Skiatook Point, and Tall Chief Cove portions of the reservoir exceeded the World Health Organization (WHO) guidance level of 20,000 cells per milliliter from August - September 2003 and July - September 2004. Although the value of 20,000 cells per milliliter indicates a low risk of adverse health effects, WHO guidance recommends providing information to lake swimmers regarding possible adverse health effects (WHO 1999).

In general, the areas of awareness for Skiatook Lake are similar to those identified in 1994 by USACE relating to increasing nutrient levels, increases in trophic state, and trace metal concentrations in the reservoir (primarily methylmercury).

#### **H. Air Quality.**

The geographic area containing Skiatook Lake is in attainment and meets the National Air Quality Standards for criteria pollutants designated in the Clean Air Act. Consequently, a conformity determination in accordance with the U.S. Environmental Protection Agency (EPA) Conformity Rule is not required for the proposed action.

#### **I. Noise.**

Noise levels in the project area are consistent with an area that is experiencing a growth in population levels. Various housing areas are in the process of development and construction adjacent and nearby to the proposed project area. To the north of Skiatook Point (proposed camping/RV area) a variety of housing areas are currently being built. Multiple areas along the southern portion of Skiatook Lake are being cleared and developed for single residence housing.

### **IV. IMPACTS OF THE PROPOSED ACTION**

#### **A. Social and Economic Impacts.**

##### **1. Future Without Project Conditions.**

**a. Population.** Impacts to the population are expected to be identical under the “Future Without Project Conditions” and the “Future With Project Conditions”. It is expected that the project will have a minor but direct impact on the number of people living in Osage County. In general, population trends of the past decade should continue or may increase slightly in the area due to recent improvements and upgrades, such as the repaving of existing road surfaces and construction of new road networks. Additionally, Rural Water District No. 15 (RWD 15) has plans to upgrade the water system by installing a new 8 inch main line to the eastern portion of the lake.

The project will have a direct and positive impact on those individuals using the Skiatook Lake facilities. Although construction activities are expected to temporarily increase noise and traffic, the new facilities are expected to generate increased interest in the

area by others living in distant locales, which, in turn, will increase opportunities for the local population.

**b. Employment and Income.** Impacts to employment and income are expected to be identical under both the “Future Without Project Conditions” and the “Future With Project Conditions”. Projected construction will increase job opportunities in the area. When all phases of the project are in operation approximately 50 to 60 new jobs will be created, which would make CrossTimbers one of the major employers in the local area. In the long-term, unemployment rates should remain slightly lower than average state rates. However, construction related expenditures should increase local incomes. Income for local residents should remain slightly lower than in other more urbanized areas of Oklahoma.

**c. Social Ecology.** Impacts to social ecology are expected to be identical under both the “Future Without Project Conditions” and the “Future With Project Conditions”. The project will be consistent with the local development. The eastern end of Skiatook Lake has seen an increase in housing development in the last 5 to 10 years. The Estates at CrossTimbers subdivision has recently placed on the market a total of 64 lots, each consisting of 0.5 acres, to the northeast of Sunset Cove. RWD 15 reports that an additional 20 new homes have been built in close proximity to the leased property in the last 5-10 years and 300 new houses were built in the general area over the last 5-10 years.

RWD 15, which receives water from the Town of Skiatook, will provide potable water to the area and currently has plans to upgrade their delivery system. RWD 15 has a 2000 acre-foot future use water storage contract at Skiatook Lake. This storage is from the originally authorized water supply storage. As the proposed project is developed, RWD 15 will activate the water storage contract from future use to a present use status. The town of Skiatook would treat water from water storage at RWD 15 to insure that the demands for the phased development of the proposed project are met. Water to irrigate the golf course will be purchased from RWD 15 and supplemented as needed with Skiatook Lake water.

Onsite sewage treatment will be handled via an aerobic system. The system(s) installed will comply with all applicable state and federal laws and regulations regarding wastewater treatment.

Traffic flow to the area will come from the North on SH 20 either via Lake Road or via Rogers Blvd and from the South via W. 103<sup>rd</sup> St. to Lake Road. This is the normal traffic pattern today. As previously discussed, noise in the area is expected to temporarily increase during the construction phase.

The aesthetics of the proposed development are of utmost importance. The proposed CrossTimbers project will be built consistent with its surroundings, with existing facilities in Oklahoma and Missouri being used as templates for project design. The standard of living will also benefit from the development via an increase in employment and land values.

## 2. Future With Project Conditions.

**a. Population.** Impacts to population under the “Future With Project Conditions” are expected to be identical to those identified for the “Future Without Project Conditions”. The scope of development at CrossTimbers will be the same, the only difference being the location of the golf course and camping area.

**b. Employment and Income.** Impacts to employment and income under the “Future With Project Conditions” are expected to be identical to those identified for the “Future Without Project Conditions”. The scope of development at CrossTimbers will be the same, the only difference being the location of the golf course and camping area.

**c. Social Ecology.** Impacts to social ecology under the “Future With Project Conditions” are expected to be identical to those identified for the “Future Without Project Conditions”. The scope of development at CrossTimbers will be the same, the only difference being the location of the golf course and camping area.

**d. Environmental Justice.** In accordance with Presidential Executive Order 12898, a review of this project was evaluated in terms of its effect of excluding persons (including populations) from participating in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination because of their race, color, or national origin. The review indicates that no such effects will result from the project.

**e. Protection of Children from Environmental Health Risks and Safety Risks.** In accordance with Presidential Executive Order 13045, a review of this project was evaluated in terms of any health risks and safety risks that may disproportionately affect children. The review conducted indicates, at present, a low to moderate environmental health risk to children due to the presence of blue-green algae at cellular densities high enough to merit administrative action (WHO 1999) and capable of producing neurotoxins (nerve toxins) and hepatotoxins (liver toxins). Symptoms experienced due to acute exposure to neurotoxins could possibly include muscle cramps, twitching, paralysis, cardiac or respiratory failure, death in animals (WHO 1999, NOAA 2005). Symptoms experienced due to acute exposure to hepatotoxins could possibly include nausea, vomiting, and acute liver failure (WHO 1999, NOAA 2005). It is recommended that information regarding possible adverse health effects related to primary and secondary water contact be posted at public use facilities within the lease area consistent with USACE public notice practices.

### B. Natural Resources Impacts.

**1. Terrestrial.** Temporary disturbance to soils and existing vegetation will occur from construction activities (i.e., shaping, excavation, installation of sod and turf). With the exception of the buffer zones around its perimeter, a large percentage of the 121 acres in the golf course will be disturbed during construction. Additionally, other potentially disturbed acreage will include 40 acres for the Village, 5 acres for the marina, and 59 acres for the camping/RV Park extension with a modest additional development occurring within

the balance of the project area for trails and other facilities as detailed in the development plan. Approximately three-quarters of the total area is timbered and the remaining one-quarter is open prairie land and aquatic habitat (see Table 2).

<b>ESTIMATED WILDLIFE HABITAT TYPE TO BE ALTERED BY THE PROPOSED PROJECT</b>							
	<b>PRAIRIE</b>	<b>INTERSPERSED FOREST</b>	<b>FOREST EDGE</b>	<b>CLOSED CANOPY FOREST</b>	<b>RIPARIAN</b>	<b>AQUATIC</b>	<b>TOTAL</b>
<b>GOLF COURSE</b>	21 acres (17%)	0 acres	5 acres (4%)	95 acres (79%)	0 acres	0 acres	121 acres (52%)
<b>MARINA</b>	0 acres	0 acres	0 acres	3 acres (9%)	2 acres (5%)	30 acres (86%)	35 acres (15%)
<b>VILLAGE</b>	8 acres (20%)	0 acres	2 acres (5%)	30 acres (75%)	0 acres	0 acres	40 acres (17%)
<b>RV/CAMPING</b>	0 acres	0 acres	3 acres (10%)	54 acres (90%)	2 acres (3.5%)	0 acres	59 acres (23%)
<b>TRAILS</b>	0 acres	0 acres	0 acres	5 acres (100%)	0 acres	0 acres	5 acres (2%)
<b>TOTAL</b>	29 acres (13%)	0 acres	10 acres (4%)	187 acres (72%)	4 acres (1.5%)	30 acres (13%)	260 acres (100%)

While detailed construction plans for all CrossTimbers features have yet to be developed, conservative estimates of terrestrial habitat disturbance can be derived from total acreages noted in Table 2. Accordingly, approximately 200 acres of forest habitat, 4 acres of riparian zone, and 29 acres of prairie habitat would be potentially lost as a result of all CrossTimbers development features. These estimates can be considered worst-case as some habitat will remain upon completion of construction. However, habitat fragmentation in these areas may result in reduced ecosystem function despite the existence of some remaining habitat.

The development of the village, golf course, marina, and camping/RV park will, to the extent possible, avoid those areas with old growth cross timbers. Through the use of the Old Growth Tree Inventory, the golf course and village will be designed and developed to showcase the ancient trees through educational signage.

By locating the golf course in the Tall Chief Cove area and the combination primitive camping and RV area on Skiatook Point, the CrossTimbers development will be able to design around and safeguard the maximum amount of ancient trees possible.

**2. Prime and Unique Farmlands.** There are no Prime or Unique Farmlands located in the proposed project area.

**3. Aquatic and Wetlands.** Nutrient loading from fertilizer applications and contamination from pesticide use at the golf course should be minimal due to efforts taken to maximize the integration of existing undeveloped lands into the project design. A detailed Turf Management and Integrated Pest Management Plan will be used to properly apply

fertilizers, herbicides and pesticides (see golf course design guidelines in Appendix D). A buffer zone consisting of existing shoreline habitats, cross timbers, riparian species, natural plants and Bermuda grass should be ideal for natural assimilation and/or decomposition of possible pollutants. The native cross-timber trees, shrubs, and grasses in the buffer zone will serve as indicators of excessive herbicide application due to their sensitivity to these products.

**4. Fish and Wildlife.** The construction of a "target golf course" may benefit some wildlife species and adversely impact others. Foraging species may benefit from increased food availability provided by clearing of the underbrush. However, neotropical bird species that utilize the cross timbers could be adversely impacted. In coordination with USACE and USFWS, bird and small mammal habitat will be added where possible throughout the project. As with any construction project, some species will be displaced.

Other construction is proposed within the heavily used Tall Chief Cove area where wildlife has either been displaced or adapted to human occupancy.

**5. Migratory Birds.** The potential impacts of the proposed development to migratory birds have been evaluated. The change in camping and golf course locations within the existing SEDA lease should not impact the USACE ability to protect migratory birds from deleterious impacts. According to information contained in the document Partners in Flight, Bird Conservation Plan for the Osage Plains (Physiographic Area 33, American Bird Conservancy, Version 1.0, October 2000), the physiographic area of the proposed development consists of grass-shrublands and Savanna-woodlands.

In grass-shrublands, the breeding bird species that appear to be increasing consist of the Bewick's Wren and Blue-gray Gnatcatcher, while declining species consist of the Western Kingbird, Eastern Kingbird, Scissor-tailed Flycatcher, Loggerhead Shrike, Bell's Vireo, Brown Thrasher, and Lark Sparrow. With or without the proposed development, this trend is expected to continue.

In Savanna-woodlands, the breeding bird species that appear to be increasing consist of the Wild Turkey, Eastern Bluebird, Indigo Bunting, Carolina Chickadee, Tufted Titmouse, White-breasted Nuthatch, and Carolina Wren. The declining species consist of the Redheaded Woodpecker, Northern Flicker, Western Kingbird, Eastern Kingbird, Scissor-Tailed Flycatcher, Loggerhead Shrike, and Brown Thrasher. Again, this trend is likely to continue with or without the proposed development.

**6. Impacts on Fishing and Hunting Opportunities.** An Aquatic and Terrestrial Mitigation Plan has been designed, approved by the USACE, and implemented.

Skiatook Point and Tall Chief Cove are part of the leased area. These areas are zoned for recreation use and are closed to hunting. The area from Skiatook Dam south to Tall Chief Cove (approximately 200 acres) was zoned for recreation-low density and had been used for archery-only hunting in accordance with Oklahoma Department of Wildlife Conservation (ODWC) regulations. Approximately 100 acres of this shoreline (in the vicinity of the marina and cabin developments) have been rezoned by USACE to recreation use to allow

currently approved development and are no longer open to hunting. The remainder of the shoreline (from the cabins to Skiatook Dam) remains zoned for recreation-low density.

The proposed use of this shoreline area (from the cabins to Skiatook Dam) for a trail would probably result in some seasonal restrictions on archery-only hunting activities. In consultation with the USFWS and ODWC, USACE has agreed to rezone approximately 300 acres in the undeveloped eastern portion of the Twin Points recreation area at Skiatook Lake from recreation to wildlife management general (Figure 1). Twin Points was originally purchased for development as a recreation area, but the planned recreation facilities were not constructed due to a lack of funding. Changing the classification of this portion of Twin Points to wildlife management general will allow hunting activities and management of habitat for wildlife and non-game species to take place on that portion of the lake, effectively offsetting the loss of hunting opportunities in the SEDA lease area. It will also provide an additional degree of protection for this area from future development considerations. USACE will continue to maintain responsibility for wildlife management activities at Twin Points.

**7. Threatened and Endangered Species.** The proposed action incorporates the use of standardized protocol (Appendix A) for minimizing adverse impacts to the endangered American burying beetle. These techniques will become a part of the Environmental Management Plan for the CrossTimbers development and will be employed in association with all construction activities. Surveys, relocation, and baiting away techniques (if applicable), and other standardized actions will be timed and phased relative to construction activities such that they meet current USFWS criteria for ABB protection. Accordingly, adverse impacts to the ABB as a result of this project should be minimal.

Adverse impacts to other listed threatened, endangered, or candidate species are not anticipated in association with the proposed action. These species are either not expected to occupy specific project lands or are temporary migrants through the area. No critical habitat has been designated for any of these species within the proposed project area. Correspondence regarding threatened and endangered species is included in Appendix B.

**8. Wetlands/Floodplains And Water Quality Permits.** No existing wetlands as identified by the USFWS (National Wetlands Inventory) will be impacted by the proposed project. All permanently habitable buildings will be located outside of the 50-year floodplain (2% chance of flooding over a given year). The project was coordinated with the Floodplain Management Section of the Tulsa District USACE in accordance with Executive Order 11988. The project will have no impacts on the floodplain of Hominy Creek.

All required Clean Water Act permits would be acquired prior to the start of any construction activities associated with the proposed project.

**9. Cultural Resources.** As part of compliance with Section 106 of the National Historic Preservation Act (NHPA), USACE reopened consultation with potentially interested Native American tribes regarding potential impacts to cultural resources from the proposed change in the CrossTimbers development plan in January 2005. Letters were

received later that same month from the Osage Tribal Council and the Quapaw Tribe of Oklahoma indicating a desire to consult with USACE on potential impacts to cultural resources as a result of the proposed CrossTimbers development changes (see Appendix C).

Cultural resources concerns expressed by the Quapaw Tribe and Osage Nation centered around potential impacts to Healing Rock (34OS679) and the burned rock mound (34OS678) located near Skiatook Point. Although neither of these historic properties are located within the actual SEDA lease, their close proximity to the proposed camping and RV areas at Skiatook Point raised concerns regarding the protection of these significant cultural resources from physical damage or vandalism by the public.

After a series of informal telephone conversations on the topic, representatives from USACE, StateSource, and the Osage Nation and Quapaw Tribe meet on January 13, 2006 to discuss tribal concerns and desires regarding the proposed project. As a result of this meeting, all parties agreed that protection and interpretation of historic properties at Skiatook Lake was desired and appropriate, and would be conducted under the following general guidelines: 1) StateSource would consult with the Osage Nation, Quapaw Tribe, and USACE on the interpretation of cultural and other natural resources throughout the CrossTimbers lease area. Examples of potential interpretation efforts discussed included Healing Rock, tribal names for natural and cultural features located along the proposed trail, construction history of Skiatook Lake, and general information on the prehistory of the area; 2) once constructed, StateSource would provide a permanent security presence in the proposed camping area at Skiatook Point, and would consult with all parties regarding the placement of any future security features or controls that might be considered for the area; and 3) that the results of the consultation meeting would be formalized as part of some sort of agreement document (MOA or MOU), and that any resulting guidelines or requirements would be incorporated into the CrossTimbers EMP as appropriate.

Because USACE, SEDA, StateSource, and the Osage Nation and Quapaw Tribe have agreed to work together to effectively protect and interpret cultural and natural resources in the CrossTimbers development area, USACE feels that the proposed modification to the CrossTimbers development plan will have no adverse effect on historic properties.

**10. Water Quality.** Surface water quality impacts associated with the proposed golf course could conceivably occur in two aquatic environments: (1) Skiatook Lake and (2) constructed surface waters on the golf course. Potential contaminants could be transported to these systems via surface or subsurface flows. Chemical constituents of potential concern include nutrients (nitrogen, phosphorus, potassium or N-P-K) from fertilizers, pesticides and herbicides, and sediment. Excessive nutrients are of concern in surface waters owing to their ability to promote excessive algae growth, which lowers the dissolved oxygen content of the water and poses potential health threats to swimmers. At elevated concentrations, pesticides and herbicides can negatively impact aquatic organisms or result in contamination of waters used for water supply purposes. Decreased water clarity, loss of storage capacity, and reduced aesthetics are among potential detrimental impacts associated with excessive sediment transport to surface waters.

The proposed golf course on Tall Chief Cove is estimated to occupy 121 acres. Topographic slopes on lands surrounding Tall Chief cove range from 6% to 12%. Features intended to mitigate potential water quality impacts would include a buffer zone of natural vegetation between the maintained turf and the water's edge that would average 125 feet in width for slopes less than 10% and average 200 feet for slopes greater than 10%. The recommended minimum buffer zone width in any topographic setting would not be less than 32 feet in width (Fischer and Fischenich 2000). Forests within the buffer zone may be selectively thinned to increase the amount of sunlight at ground level to promote dense cover vegetation. This vegetation will better retain and absorb sediment and nutrients, thereby decreasing amounts that might reach the lake. Natural vegetation will be enhanced with additional plant varieties (e.g. poplar and cottonwood trees, grasses such as buffalo and couch, ferns and other low-growing plants) that have been proven effective in absorbing N-P-K. These plant varieties have been successfully used downstream of cattle pastures to protect downstream water sources from potential sources of high nitrogen and total phosphorous concentrations (See "Using Buffers to Reduce Sediment," at [http://www.rivers.gov.au/acrobat/techguidelines//tech\\_guide\\_vo12\\_chapd.pdf](http://www.rivers.gov.au/acrobat/techguidelines//tech_guide_vo12_chapd.pdf) and "Conservation Buffers & Water Quality", <http://www.ent.iastate.edu/iprn/icrn/2000/6-12-2000/consbuffers.html>).

While desirable from a water quality standpoint, thinning of the buffer zone area could have an adverse effect upon the quality of the cross timbers ecosystem. Because the majority of the filtration of sediment and nutrients occurs within the first 32 feet of a buffer for low to moderate slopes (Fischer and Fischenich 2000) thinning will only occur within the first 32 feet of buffer strips when the total width of the buffer is greater than 40 feet. In areas where the buffer strip might be less than 32 feet in width infiltration trenches could be used to enhance the performance of the buffer zone next to the golf course as well as minimize the loss to ecosystem / buffer function.

Additional design features or construction techniques to supplement the buffer zone around the perimeter of the golf course would be further detailed in the CrossTimbers Environment Management Plan (EMP). The EMP would be updated as necessary as new information becomes available. At this time, design features being considered for implementation as part of the golf course design include:

(1) Man-made retention/detention ponds and other features to collect surface runoff and prevent potential contaminants, including N-P-K, pesticides and herbicides, and sediment from being transported to the lake. A study by Purdue University's Environmental Sciences and Engineering Institute determined that that proper use of fertilizers and pesticides on golf courses does not add any chemicals to surface or ground water. Purdue University Professor Zachary Reicher states, "In fact, the grass itself actually will use or trap most of the nutrients and chemicals contained in runoff from adjacent areas." See <http://news.uns.purdue.edu/html4ever/020708.Reicher.wetlands.html>

(2) Infiltration trenches adjacent to sand-based putting greens drained to gravel sumps or man-made water features. Small sedimentation ponds may be constructed upstream to reduce nutrient and sediment deposits from impacting the water quality of designed features.

(3) Berms and swales adjacent to or incorporated into tees, fairways, and roughs to direct and/or collect runoff discharged into man-made water features.

A Turf Management Plan, to be included in the CrossTimbers EMP, would specify types, amounts, and usage frequency of turf management chemicals to be used on the golf course. All applied products will be U.S. Environmental Protection Agency (EPA) approved. Chemicals considered for use would be non-persistent, short-lived, degradable, and non-mobile. Where practical, foliar applied liquid fertilizers will be used that are readily absorbed by the turf, thereby minimizing their availability for runoff. Granular fertilizers used to supplement liquid fertilizers would include those made by Nature Safe ([www.naturesafe.com](http://www.naturesafe.com)). These products include slow-release organic fertilizers enhanced with food energies from yeast, sugars, carbohydrates, proteins, fats, vitamins and enzymes. Together these ingredients increase the natural soil microbes that aid in turf rooting, stress tolerance and disease management. They also contain humus as a soil conditioner to buffer salts and improve the nutrient holding capacity of soils. They are low salt index organic fertilizers ideal for hot weather application to promote turf recovery and increase wear and stress tolerance. The cumulative effect of these types of products in turf management increases the performance of the turf to filter, trap, and absorb potential contaminants and sediment and prevent these contaminants from entering surface or ground waters.

The primary objective of the golf course's fertility program is to create a soil environment where sufficient nutrients are available for optimal plant health with minimal risk to water quality. Studies conducted by Michigan State University have proven that healthy turf along with thatch bind most all of the applied nitrogen. Unused nitrogen is consumed by microorganisms which, when they die, release nitrogen as complex forms of N that do not move downward to any extent in soils. Natural organic and slowly soluble fertilizers would be used in conjunction with liquid fertilizers. These forms of fertilizers are non-mobile and timed to release nutrients for staged uptake by the turf. In order to reduce the amount of nutrients having to be applied, mowing practices would include "grass cycling". Returning the grass clipping to the maintained turf provides four pounds of nitrogen, ½ pound of phosphorus and two pounds of potassium for every 100 pounds of dried grass clippings (according to North Carolina State University).

All products used on the CrossTimbers Golf Course would be thoroughly tested by the manufacturer and approved by the EPA prior to their usage. All applications would be made by a licensed applicator in accordance with State of Oklahoma requirements. Products would be selected for use based upon published charts listing maximum recommended application rate of active ingredient per acre and a leaching potential rate. Products used would be chosen to minimize risk of impacting water quality. No products would be applied within the natural buffer area between the maintained turf and Skiatook Lake.

Additional management programs to be detailed in the EMP include an Integrated Pesticide Management Plan, which would determine thresholds for pesticide usage, thereby reducing the availability of pesticides as a potential contaminant; and a fertilization system, which would be used to apply fertilizers on a continuous basis. This application process maximizes the absorption of fertilizers by plants, thereby reducing the availability of fertilizers as a potential contaminant to ground and surface waters.

In order to minimize or eliminate temporary impacts to water quality during the construction of the golf course, village, and other features, as well as during turf establishment, measures would be taken to reduce impacts (i.e. stormwater construction permits and appropriate protective measures). A stormwater management plan would be required during operation of the facility. All applicable laws and regulations concerning stormwater management would be followed during the construction and operation of the project.

In order to ensure water quality protection, sufficient detail regarding chemical application rates, qualifications and training of grounds maintenance and chemical application personnel, and other personnel involved in golf course operations would be provided in the EMP as described in Section V of this document.

**11. Air Quality.** The geographic area containing Skiatook Lake is in attainment and meets the National Air Quality Standards for criteria pollutants designated in the Clean Air Act. Conformity to the 1993 Conformity Rule (EPA) for ambient air quality is not necessary because foreseeable emissions from activities associated with the proposed project would not result in the regional air quality becoming a non-attainment area.

**12. Noise.** Construction of the golf course, camping and RV park, marina, and village would result in the temporary increase in noise levels in the project area. The types of construction equipment used in the project area (e.g., tractor, loader, backhoe) will generate noise levels of 80-90 dBA at a distance of 50 feet (Jones & Stokes 1998). The operation of construction equipment would vary from intermittent to fairly continuous, and many pieces of equipment may operate at the same time. Assuming a bulldozer (87 dBA), backhoe (90 dBA), and front-end loader (82 dBA) are operating simultaneously in the same area, peak construction-period noise could be approximately 94 dBA at 50 feet for the construction sites (Jones & Stokes 1998).

Although construction-related noise levels would occur in the construction areas of the project during the initial construction period, these effects are considered relatively minor for the following reasons: (i) construction noise effects will be temporary, (ii) the most intensive construction activities would occur over a relatively short period of time, and (iii) most construction would occur in areas that are not sensitive to noise.

### **C. Indirect and Cumulative Effects**

Indirect and cumulative effects of the proposed action alternative are nearly identical to those expected for the no action alternative, and have previously been identified and evaluated as part of the original approved CrossTimbers EA approved in 2003. Exceptions to the previously identified indirect and cumulative effects are detailed below.

Cumulative effects from construction of the proposed project include loss of natural habitat. Approximately 121 acres for the golf course would be placed under planned maintenance. Native species of plants and grasses would be used when practical.

Impacts to water quality (surface and ground water) and wildlife (flora and fauna) would depend on the quality of golf course design and maintenance. Excessive application of fertilizers could result in nutrient loading into the lake and/or nitrate contamination of ground water. The use of insecticides and herbicides could result in either temporary or sustained damage(s) to the terrestrial and aquatic ecosystems within and adjacent to the protected area, depending upon the types of product(s) used. Non-point source inputs to the lake and ground water from these applications would be moderated by the frequency of use, quantity per application, assimilation by vegetative ground cover, precipitation duration and frequency, soil drainage characteristics, and depth to bedrock. Because the project has been designed to minimize the use of fertilizers, herbicides, and pesticides by reducing the overall area of managed turf, significant cumulative effects from facility operations are not anticipated. Also, a Turf Management Plan and Integrated Pest Management program would be used to regulate the amount and types of products used.

It is anticipated that the golf course would increase traffic flow to the Tall Chief Cove area by 150 to 200 cars per day. Tall Chief Cove is accessible from the north and west via county road 1215 (Lake Road) off of State Highway 20. Skiatook Point is accessible from the south and east via W. 103<sup>rd</sup> St. from N. 52<sup>nd</sup> W. Ave. and State Highway 11. The Bureau of Indian Affairs (BIA) have extended N. 52<sup>nd</sup> W. Street from W. 103<sup>rd</sup> St. to 75<sup>th</sup> St. North to provide better access from the south to the west side of the lake. The existing campground at Tall Chief Cove and the CrossTimbers Marina are accessible from the lake access road. SEDA is working with county, state, and federal agencies to improve lake access and other roads in the area.

The Skiatook Lake project anticipated much greater development of recreational areas and larger visitor numbers than have occurred to date. The Final Environmental Statement prepared for Skiatook Lake identified a total of seven public use areas to be developed on 1,350 acres of USACE managed lands. The proposed lease area consists of approximately 47% of the acreage identified to be developed at the lake (631 acres of leased lands divided by 1,350 acres identified to be developed) and just over 3% of the total project lands and water comprising the Skiatook Lake project (677 acres of total lease area divided by 20,000 acres of USACE managed lands). Prior to construction an average annual visitation of 1,455,000 people was estimated for the lake, which would have been supported in part by the seven proposed public use areas. Visitation to Skiatook Lake has never approached that volume. Instead, annual visitation at Skiatook Lake has averaged slightly more than 586,000 during fiscal years 1999-2002. Cumulative impacts experienced at Skiatook Lake to date have not reached the levels originally contemplated.

Some land classification actions at Skiatook Lake have taken place in conjunction with the overall CrossTimbers development. As part of the approved original CrossTimbers EA, approximately 80 acres of land were changed from recreation-low density to recreation (20 acres for the CrossTimbers Marina and 60 acres for the adjacent cabin locations). As part of the requirements of the proposed action in this 2006 EA, USACE would agree to update the Skiatook Lake master plan to reclassify approximately 300 acres of undeveloped lands in the eastern portion of the Twin Points recreation area from recreation to wildlife management general as a means of offsetting the loss of hunting lands associated with the

CrossTimbers development. This change in classification would also provide an additional degree of protection from future development considerations.

## **V. MITIGATION REQUIREMENTS**

Much of the SEDA lease area that would be impacted by the CrossTimbers development is situated on lands already classified for recreation or recreation-low density purposes. However, the proposed development includes features such as a golf course, lodge, and cabins that were not originally envisioned for Skiatook Lake. Because they were not identified as anticipated recreation features, the potential impacts of these types of facilities were not considered during the original Skiatook Lake development and coordination with resource agencies under the provisions of the Fish and Wildlife Coordination Act and NEPA.

As part of the mitigation measures identified during preparation of the original EA for the CrossTimbers development, a requirement for 135 acres of terrestrial mitigation was identified based on the intensive use associated with the proposed changes in the types of construction activities and proposed development (see original approved EA and Appendix D). In consultation with SEDA, StateSource, USFWS, and ODWC, a comparable amount and type of terrestrial habitat located at Gouin Point on Skiatook Lake was reclassified from recreation to wildlife management general to meet this mitigation requirement.

Changes to the location of the golf course and camping/RV area under the proposed action in this EA would impact a total of 166 acres of terrestrial habitat that would require mitigation. Nearly all of this impact would be associated with the construction of the golf course and village. This impacted acreage would include the 135 acres already identified and mitigated for as part of the original EA for the CrossTimbers development. In consultation with SEDA, StateSource, USFWS, and ODWC, USACE would reclassify the remaining 120 acres at Gouin Point from recreation to wildlife management general to meet the additional 31 acre mitigation requirement. This change in land classification by USACE would allow preservation of significant old-growth cross-timbers habitat. It would also allow hunting activities and management of habitat for wildlife and non-game species to take place on that portion of the lake, and provide an additional degree of protection for the area from future development. USACE would continue to maintain responsibility for wildlife management activities at Gouin Point in consultation with USFWS and ODWC.

## **VI. FEDERAL, STATE, AND LOCAL AGENCY COORDINATION**

This draft Environmental Assessment is being coordinated with the following agencies having legislative and administrative responsibilities for environmental protection:

U.S. Fish and Wildlife Service  
Oklahoma Department of Wildlife Conservation  
U.S. Natural Resources Conservation Service  
Oklahoma Department of Environmental Quality  
Oklahoma State Historic Preservation Officer  
Oklahoma State Archaeologist  
Osage Nation  
Quapaw Tribe  
Wichita and Affiliated Tribes  
Kiowa Tribe  
Comanche Tribe  
Oklahoma State Conservationist  
Oklahoma Department of Tourism  
Oklahoma Department of Transportation  
Oklahoma Water Resources Board  
Oklahoma National Heritage Inventory  
City of Skiatook  
City of Tulsa  
City of Sand Springs  
City of Sapulpa  
Indian Nations Council of Government

## **VII. MAILING LIST FOR CROSSTIMBERS DEVELOPMENT RELOCATION ENVIRONMENTAL ASSESSMENT**

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## VIII. REFERENCES

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**IX. APPLICABLE ENVIRONMENTAL LAWS AND REGULATIONS**

**TABLE 3**

**RELATIONSHIP OF PLANS TO ENVIRONMENTAL PROTECTION  
STATUTES AND OTHER ENVIRONMENTAL REQUIREMENTS**

Policies	Compliance of Alternative
Federal	
Archeological and Historic Preservation Act, 1974, as amended, 16 U.S.C. 469, <u>et seq.</u> .....	All plans in full compliance
Clean Air Act, as amended, 42 U.S.C. 7609, <u>et seq.</u> ....	All plans in full compliance
Clean Water Act, 1977, as amended, (Federal Water Pollution Control Act) 33 U.S.C. 1251, <u>et seq.</u> .....	All plans in full compliance
Endangered Species Act, 1973, as amended, 16 U.S.C. 1531, <u>et seq.</u> .....	All plans in full compliance
Federal Water Protection Recreation Act, as amended, 16 U.S.C. 661, <u>et seq.</u> .....	All plans in full compliance
Fish and Wildlife Coordination Act, as amended, 16 U.S.C. 661, <u>et seq.</u> .....	All plans in full compliance
Land Water Conservation Fund Act, 1965, as amended, 16 U.S.C. 4601, <u>et seq.</u> .....	All plans in full compliance
National Historic Preservation Act, 1966, as amended, 16U.S.C. 470a, <u>et seq.</u> .....	All plans in full compliance
National Environmental Policy Act, 1970, as amended, 42 U.S.C. 4321, <u>et seq.</u> .....	All plans in full compliance
Native American Graves Protection and Repatriation Act, 1990, 25 U.S.C. 3001-13, <u>et seq.</u> .....	All plans in full compliance
Rivers and Harbors Act, 33 U.S.C. 401, <u>et seq.</u> .....	Not Applicable
Watershed Protection and Flood Prevention Act, as amended, 16 U.S.C. 1001, <u>et seq.</u> .....	Not Applicable
Wild and Scenic Rivers Act, as amended, 16 U.S.C. 1271, <u>et seq.</u> .....	Not Applicable
Water Resources Planning Act, 1965.....	Not Applicable
Floodplain Management (E.O. 11988) .....	All plans in full compliance
Protection of Wetlands (E.O. 11990) .....	All plans in full compliance
Environmental Justice (E.O. 12898) .....	All plans in full compliance
Protection of Children (E.O. 13045).....	All plans in full compliance
Farmland Protection Act, 7 U.S.C. 4201, <u>et seq.</u> .....	All plans in full compliance

Note: Full compliance-Having met all requirements of the statues, Executive Orders, or other environmental requirements for the current stage of planning.

## **X. LIST OF PREPARERS**

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Randy Heckenkemper	Golf Course Designer
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### **NORTHEASTERN STATE UNIVERSITY**

John Lamberton, PhD	Environmental Mediator
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### **ALEXANDER CONSULTING INC.**

Tom J. Alexander, PhD, PG	Principal-in-Charge
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### **OSAGE COUNTY**

Scott Hilton	Commissioner
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# SKIATOOK LAKE

PUBLIC HUNTING AREA

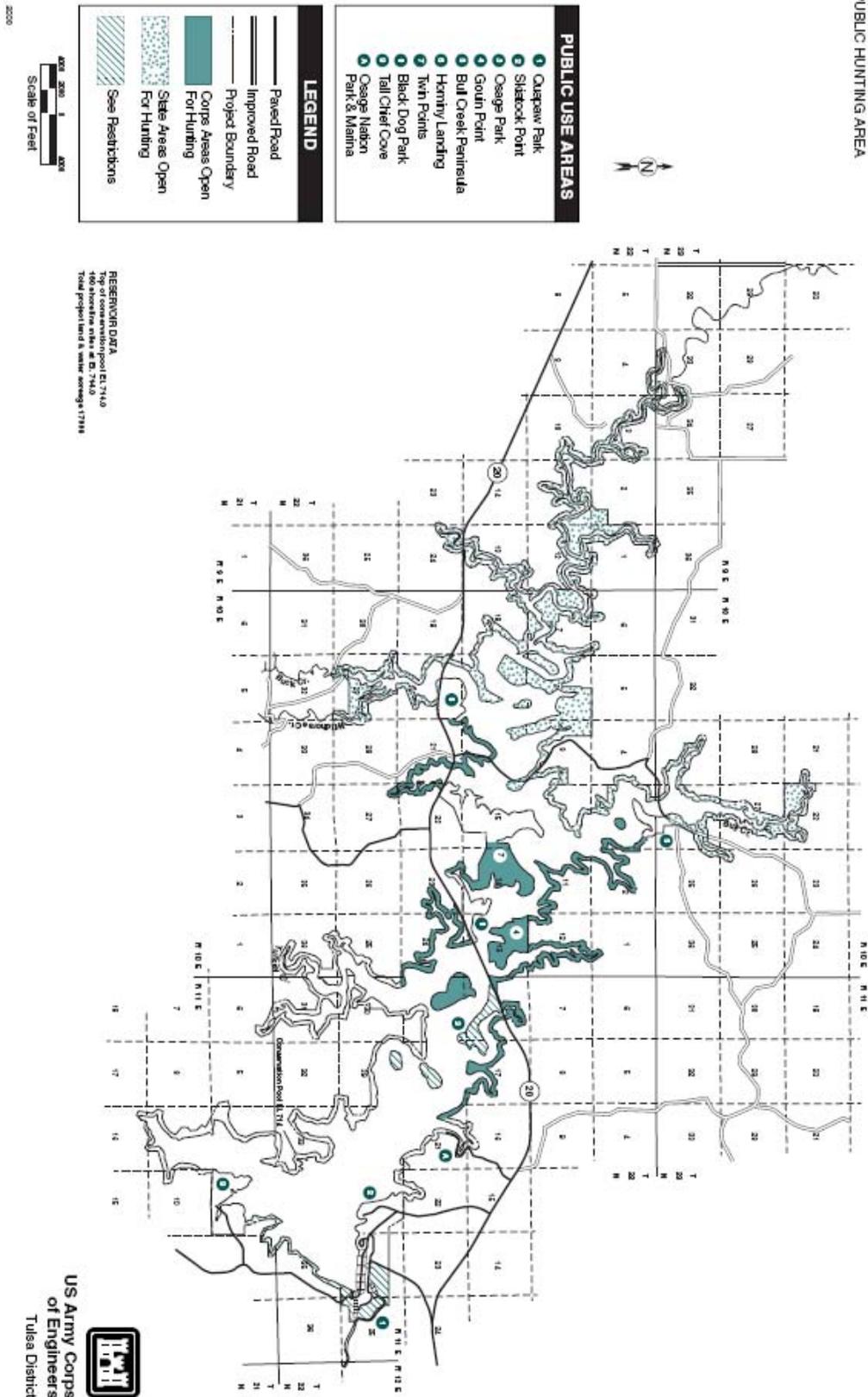
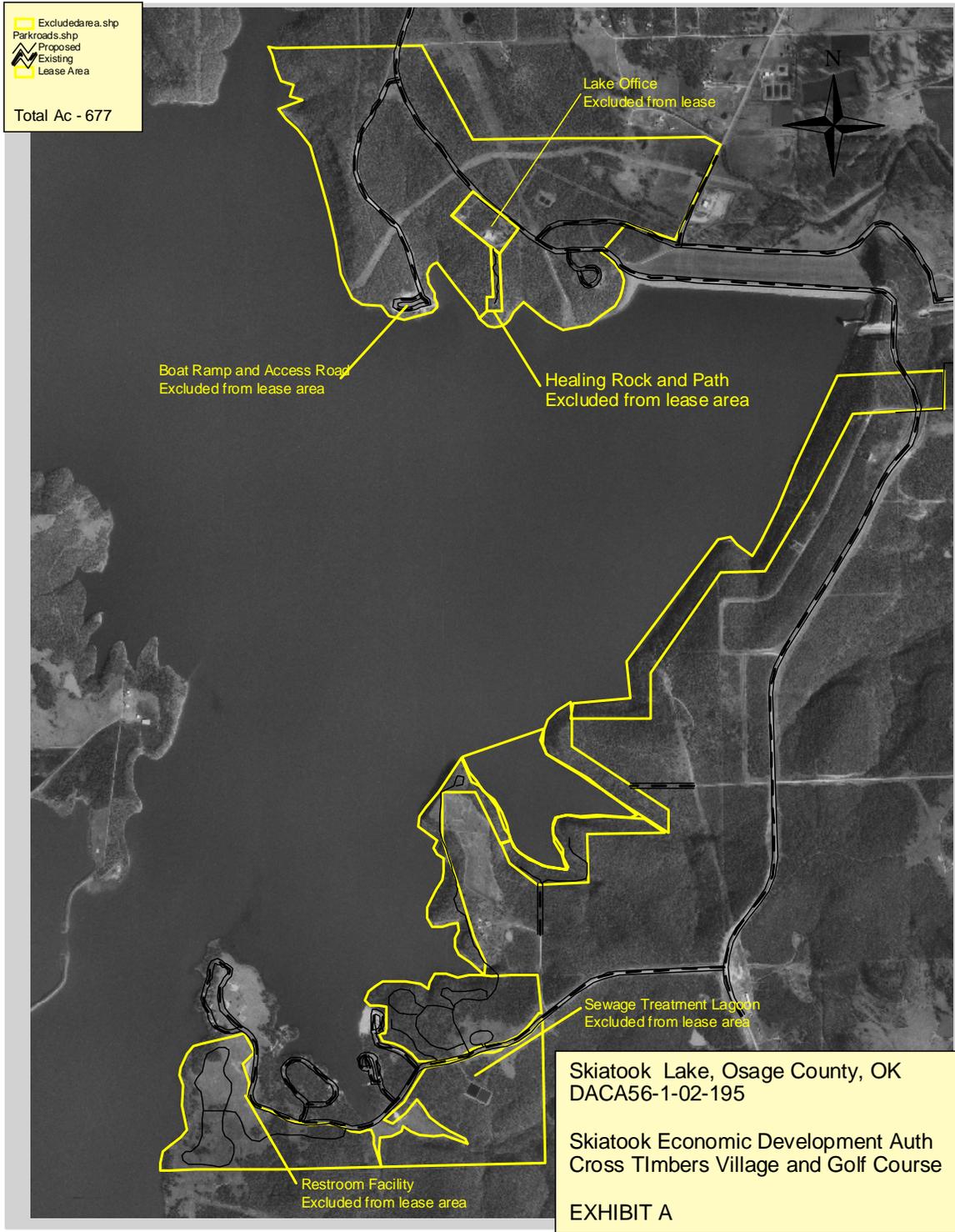


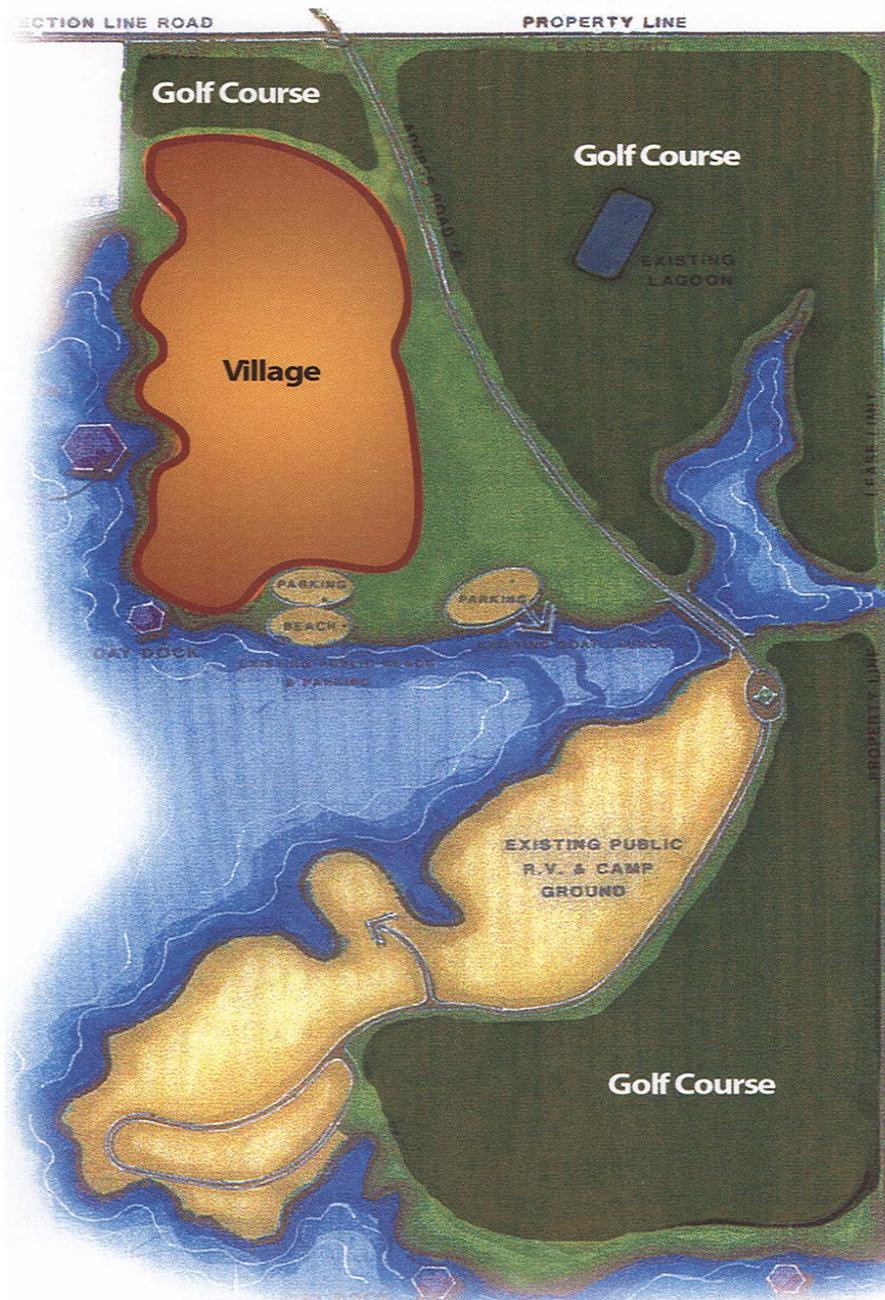
Figure 1. General Vicinity Map, Skiatook Lake, Osage County, Oklahoma



**Figure 2. Skiatook Economic Development Authority Lease Area**



  
**Land Plan**

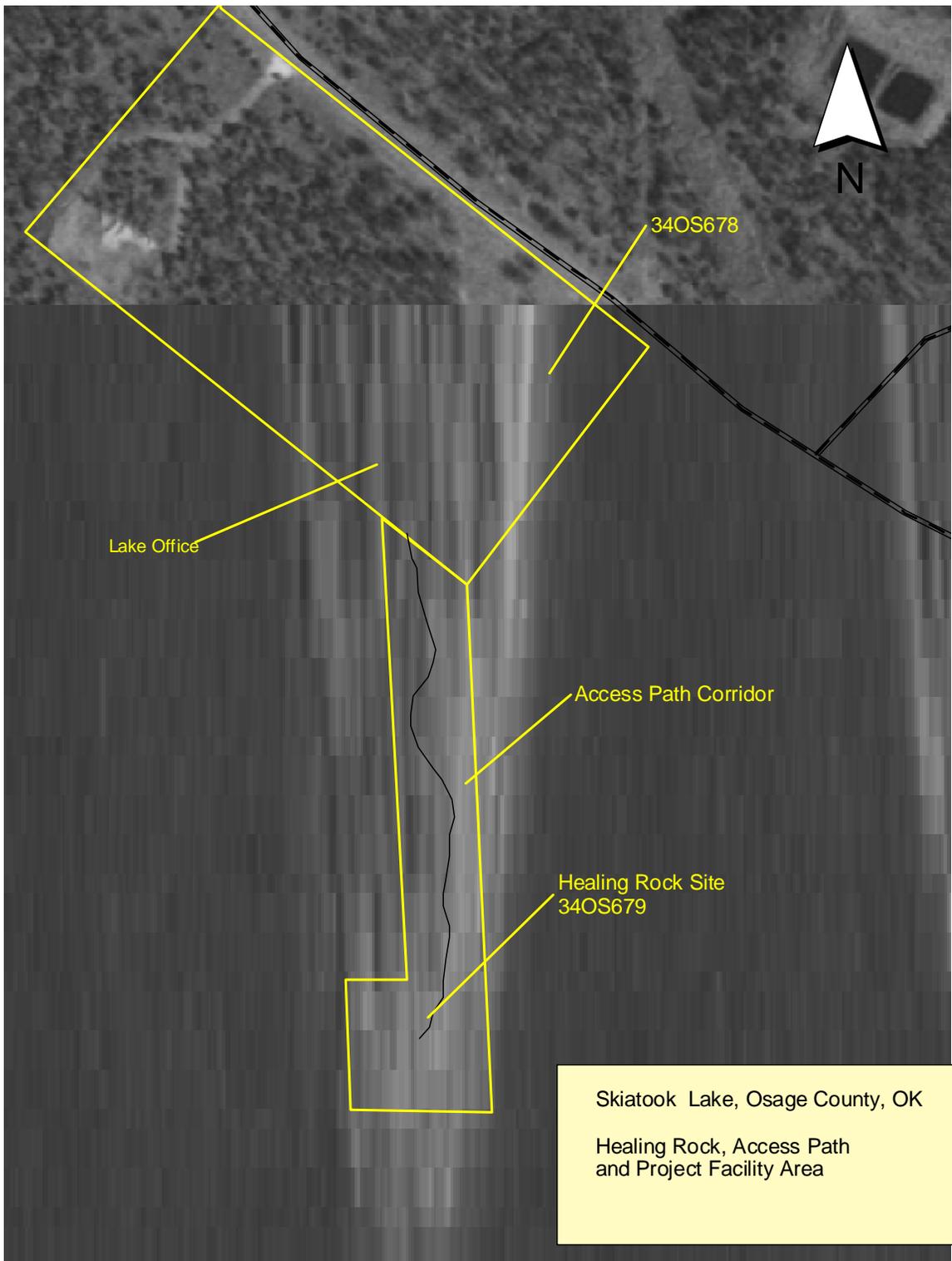


**Uses may be relocated within the lease area with the approval of the USACE**

**Figure 4. Proposed Golf Course at Tall Chief Cove**



**Figure 5. Proposed Camping Area at Skiatook Point**



**Figure 6. Significant Cultural Resources and Area Excluded from SEDA Lease**

# **APPENDIX A**

## **CONSTRUCTION BEST MANAGEMENT PRACTICES FOR MINIMIZING IMPACTS TO THE AMERICAN BURYING BEETLE**

## **Construction Best Management Practices (BMPs) for Minimizing Impacts to the American Burying Beetle (ABB)**

Source: Final Biological Opinion issued to Tulsa District Corps of Engineers by U.S. Fish and Wildlife Service (June 28, 2005)

The following description of construction BMPs for minimizing adverse effects to the ABB is included in the proposed action:

1. The Proponent will evaluate the likelihood of ABBs in the project area by reviewing the Service's county lists of Threatened & Endangered species at:  
<<http://ifw2es.fws.gov/Oklahoma/ctylist.htm>>
2. If the project site is in a county where the ABB *is not* listed, the Proponent will proceed without further precautions with regard to the ABB.
3. If the project site is in a county where the ABB is listed, the Proponent will evaluate the project area for ABB habitat. If the project site is confined to one or more of the following habitats, the Proponent will conclude that the habitat is not suitable for the ABB and proceed without further precautions with regard to the ABB.
  - Land that has already been developed and no longer exhibits surficial topsoil or leaf litter.
  - Land that is tilled on at least an annual basis.
  - Soil that is greater than 70% sand.
  - Soil that is greater than 70% clay.
  - Land where greater than 80% of the soil surface is comprised of rock.
  - Land where greater than 80% of the subsurface soil structure within the top 4 inches is comprised of rock.
  - Land that meets the US Army Corps of Engineers definition of wetland. (However, projects developed in this type of habitat will need to be reviewed by the Corps to ensure compliance with section 404 of the Clean Water Act.)
4. Projects in areas that exhibit suitable habitat for the ABB, *i.e.*, do not exhibit the above characteristics, will be evaluated by the Proponent for the presence/absence of the ABB in the immediate project area. This will be done by reviewing the Service's database of ABB surveys at: <<http://ifw2es.fws.gov/oklahoma/beetle1.htm>>.
5. If a nearby ABB survey (within a five-mile radius of the proposed construction site) is found, the Proponent will apply the survey results to the project site. If both positive and negative surveys are found to be applicable, positive surveys will always be applied over negative surveys.
6. If applicable survey results are negative for ABB occurrences, the Proponent will proceed with the project without further precautions with regard to the ABB.
7. If applicable survey results are positive for the ABB, the Proponent will proceed with the project as follows:

- Whenever possible, the Proponent will postpone construction until the active season of the ABB, *i.e.*, between May 20 and September 20, when nighttime temperatures average above 60°F. The Proponent will begin construction only after implementing the Service's current Baiting Away protocol or current Trapping and Relocating protocol whichever is determined more appropriate.
8. If there are no existing surveys applicable to the proposed construction site and the construction will occur during (or can be postponed until) the active season of the ABB, the Proponent will do either of the following:
    - Assume ABBs are present and utilize the Service's current Baiting Away protocol to proceed with the project.
    - Conduct an ABB survey of the project area.
  9. If an ABB survey of the project area is negative, the project will proceed without further precautions with regard to the ABB.
  10. If an ABB survey of the project area is positive, the Service's current Baiting Away protocol or current Trapping and Relocating protocol will be utilized and then the project will proceed.

# **APPENDIX B**

## **RESOURCE AGENCY COORDINATION INFORMATION**



DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, TULSA DISTRICT  
1645 SOUTH 101ST EAST AVENUE  
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November 16, 2005

Planning and Environmental Division  
Environmental Analysis and Compliance Branch

Mr. Greg Duffy, Director  
Oklahoma Department of Wildlife Conservation  
P.O. Box 53465  
Oklahoma City, OK 73152-3465

Dear Mr. Duffy,

This is to inform you that the Tulsa District has begun evaluating the potential impacts related to the relocation of recreation facilities proposed in a previous environmental assessment (EA) entitled, Environmental Assessment for CrossTimbers Project at Skiatook Lake, Oklahoma dated February 13, 2003, which can be found at the following website: <http://www.swt.usace.army.mil/library/library.cfm> The Skiatook Economic Development Authority (SEDA) and StateSource, LLC have altered development plans presented in the above referenced EA for Skiatook Point and Tall Chief Cove at Skiatook Lake, Oklahoma. The preferred alternative being assessed would include the development of a public golf course at Tall Chief Cove encompassing approximately 121 acres and the development of public camping facilities and an RV park at Skiatook Point encompassing approximately 350 acres.

We are currently in the process of gathering the most current information available regarding federally and state listed species potentially occurring within the project area. The project area consists of USACE property leased to SEDA located in portions of Sections 25, 26, 27, and 35 of Township 22 North, Range 11 East and Sections 2, 3, and 4 of Township 21 North, Range 11 East in Osage County, Oklahoma. We respectfully request that your agency provide a list of the protected species that may occur within or near the site. We also request a description of the sensitive resources (e.g., rare or unique plant communities, conservation landscapes) that you believe may be affected by the proposed project. Any information you may have regarding critical habitat areas for these species would also be greatly appreciated.

If you have any questions or require additional information, please contact Ms. Sandra Stiles at 918-669-7662 or Dr. Tony Clyde at 918-669-7556.

Sincerely,

A handwritten signature in blue ink, appearing to read "Stephen L. Nolen".

Stephen L. Nolen  
Chief, Environmental Analysis  
and Compliance Branch

Enclosure



DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, TULSA DISTRICT  
1645 SOUTH 101ST EAST AVENUE  
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16 November 2005

Planning and Environmental Division  
Environmental Analysis and Compliance Branch

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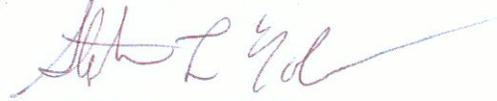
Dear Mr. Dominick,

This is to inform you that the Tulsa District has begun evaluating the potential impacts related to the relocation of recreation facilities proposed in a previous environmental assessment (EA) entitled, Environmental Assessment for CrossTimbers Project at Skiatook Lake, Oklahoma, dated February 13, 2003, which can be found at the following website: <http://www.swt.usace.army.mil/library/library.cfm> The Skiatook Economic Development Authority (SEDA) and StateSource, LLC have altered development plans presented in the above referenced EA for Skiatook Point and Tall Chief Cove at Skiatook Lake, Oklahoma. The preferred alternative being assessed would include the development of a public golf course at Tall Chief Cove encompassing approximately 121 acres and the development of public camping facilities and an RV park at Skiatook Point encompassing approximately 350 acres.

We are currently in the process of gathering the most current information available regarding prime and unique farm land potentially occurring within the project area. The project area consists of USACE property leased to SEDA located in portions of Sections 25, 26, 27, and 35 of Township 22 North, Range 11 East and Sections 2, 3, and 4 of Township 21 North, Range 11 East in Osage County, Oklahoma. We respectfully request that your agency provide an inventory of any prime farmlands which may occur within or near the site.

If you have any questions or require additional information, please contact Ms. Sandra Stiles, 918-669-7662 or Dr. Tony Clyde, 918-669-7556.

Sincerely,

A handwritten signature in red ink, appearing to read "Stephen L. Nolen", with a long horizontal flourish extending to the right.

Stephen L. Nolen  
Chief, Environmental Analysis  
and Compliance Branch

Enclosure



DEPARTMENT OF THE ARMY  
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1645 SOUTH 101ST EAST AVENUE  
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16 November 2005

Planning and Environmental Division  
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Mr. Jerry Brabander, Field Supervisor  
U.S. Fish and Wildlife Service  
222 S. Houston, Suite A  
Tulsa, OK 74127

Dear Mr. Brabander,

This is to inform you that the Tulsa District has begun evaluating the potential impacts related to the relocation of recreation facilities proposed in a previous environmental assessment (EA) entitled, Environmental Assessment for CrossTimbers Project at Skiatook Lake, Oklahoma, dated February 13, 2003, which can be found at the following website: <http://www.swt.usace.army.mil/library/library.cfm> The Skiatook Economic Development Authority (SEDA) and StateSource, LLC. have altered development plans presented in the above referenced EA for Skiatook Point and Tall Chief Cove at Skiatook Lake, Oklahoma. The preferred alternative being assessed would include the development of a public golf course at Tall Chief Cove encompassing approximately 121 acres and the development of public camping facilities and an RV park on Skiatook Point encompassing approximately 350 acres.

In accordance with Section 7 of the Endangered Species Act of 1973, as amended, the District is requesting an official list of Federally listed threatened or endangered species which might be effected by the proposed action. The project area consists of USACE property leased to SEDA located in portions of Sections 25, 26, 27, and 35 of Township 22 North, Range 11 East and Sections 2, 3, and 4 of Township 21 North, Range 11 East in Osage County, Oklahoma. Pertinent information and a description of the proposed action are enclosed herein. If you have any

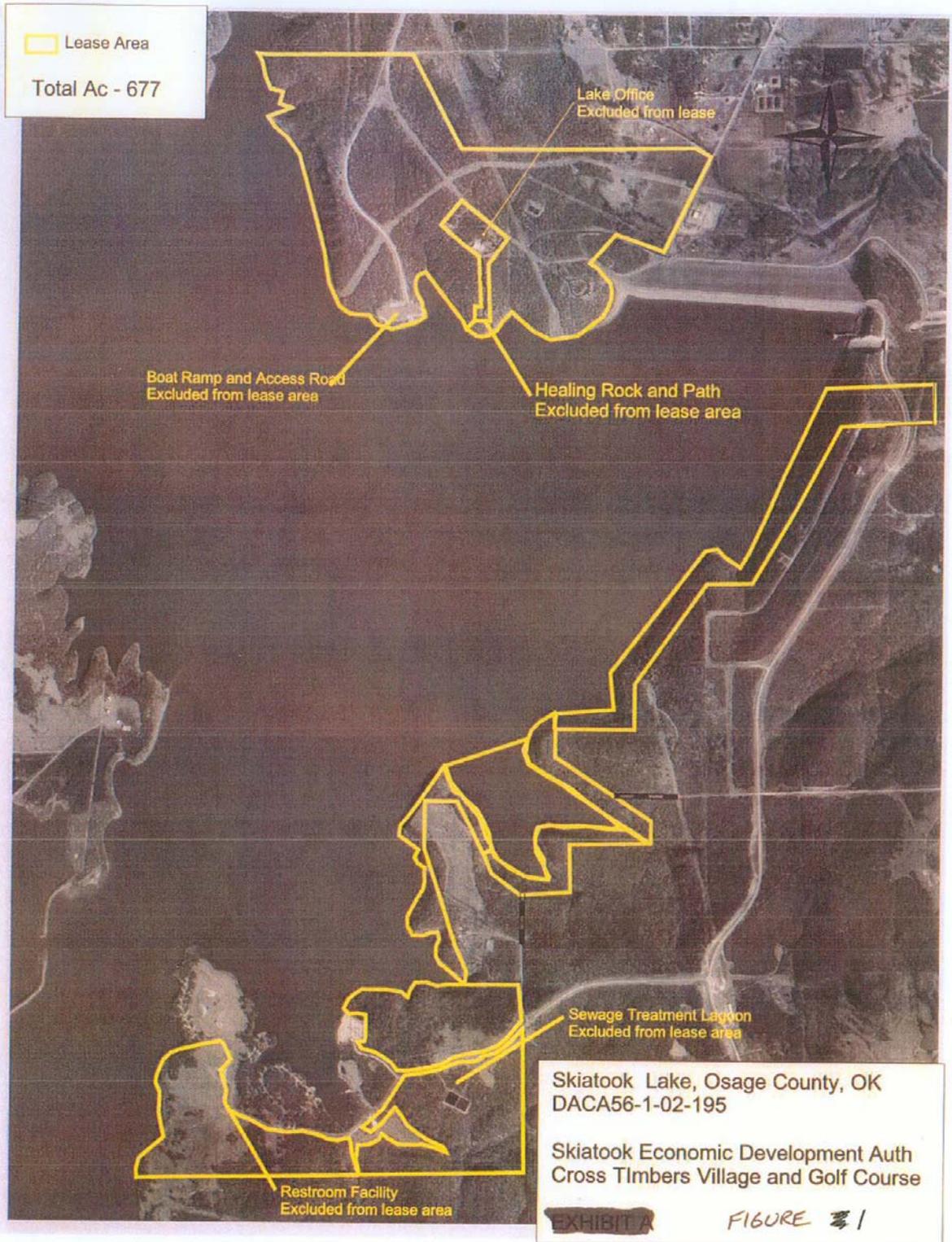
questions or require additional information, please contact Ms. Sandra Stiles, 918-669-7662 or Dr. Tony Clyde, 918-669-7556.

Sincerely,

A handwritten signature in dark ink, appearing to read "Stephen L. Nolen". The signature is written in a cursive style with a large, looped initial "S".

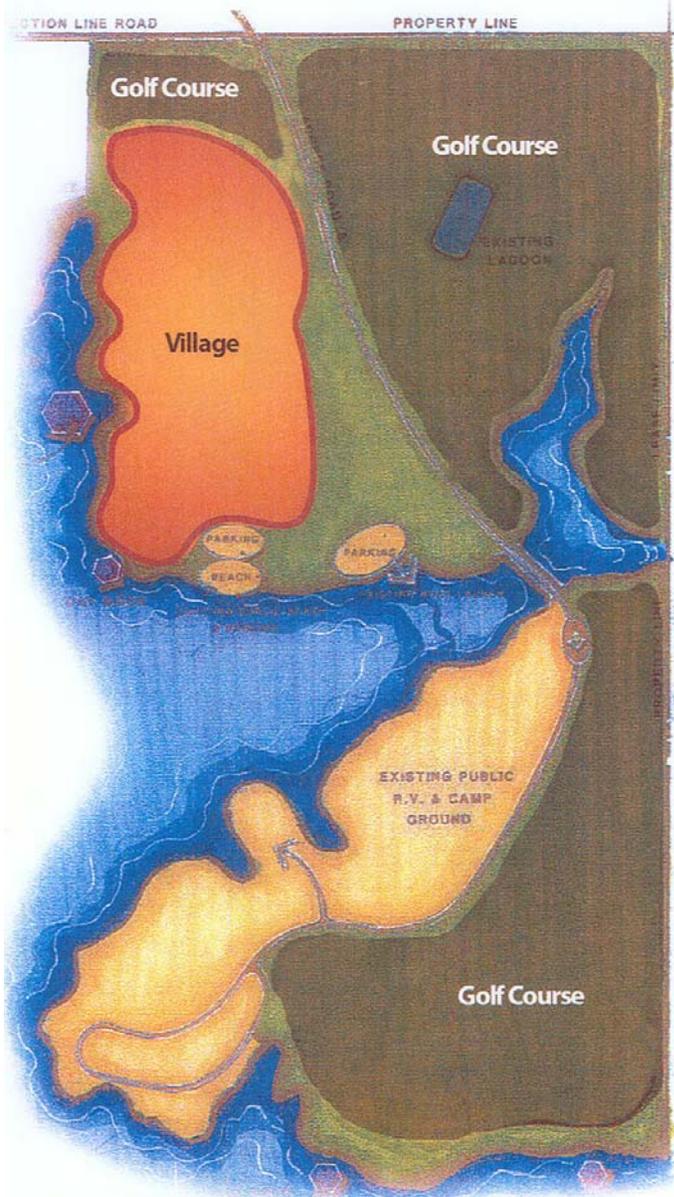
Stephen L. Nolen  
Chief, Environmental Analysis  
and Compliance Branch

Enclosure



  
**CrossTimbers**  
**Land Plan**

FIGURE 2



Uses may be relocated within the lease area with the approval of the USACE

  
**Land Plan**



FIGURE 3

Uses may be relocated within the lease area with the approval of the USACE



United States  
Department of  
Agriculture

Natural  
Resources  
Conservation  
Service

Natural Resource Conservation Service  
1000 W. Main, STE. 102  
RT. 1 Box 650  
PAWHUSKA, OK. 74056

12/12/05

Stephen L. Nolen  
Chief Environmental Analysis and Compliance Branch  
Department of the Army  
Corps of Engineers, Tulsa District  
1645 South 101<sup>ST</sup> East Avenue  
Tulsa, Oklahoma 74128-4609

RE: Environmental Assessment for CrossTimbers Project at Skiatook Lake, Oklahoma

Dear Mr. Nolen,

Enclosed is a list of all the soils in the sections that were listed in the letter of November 16<sup>th</sup>. The Soils Report shows the soil name, percent slope, chance of flooding, depth to rock and other things that might keep it out of being prime farmland. It also has the rating of wheter it is considered prime farmland or not. There are also maps of each of the sections showing where the soils are located. The symbols match those on the Soils Report list.

If you have any questions or want more information, please contact us.

Sincerely,

John Enfield  
Rangeland Management Specialist

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.

## Soils Report

### Farmland Classification

**Soil Survey:** Osage County, Oklahoma

**Survey Status:** -

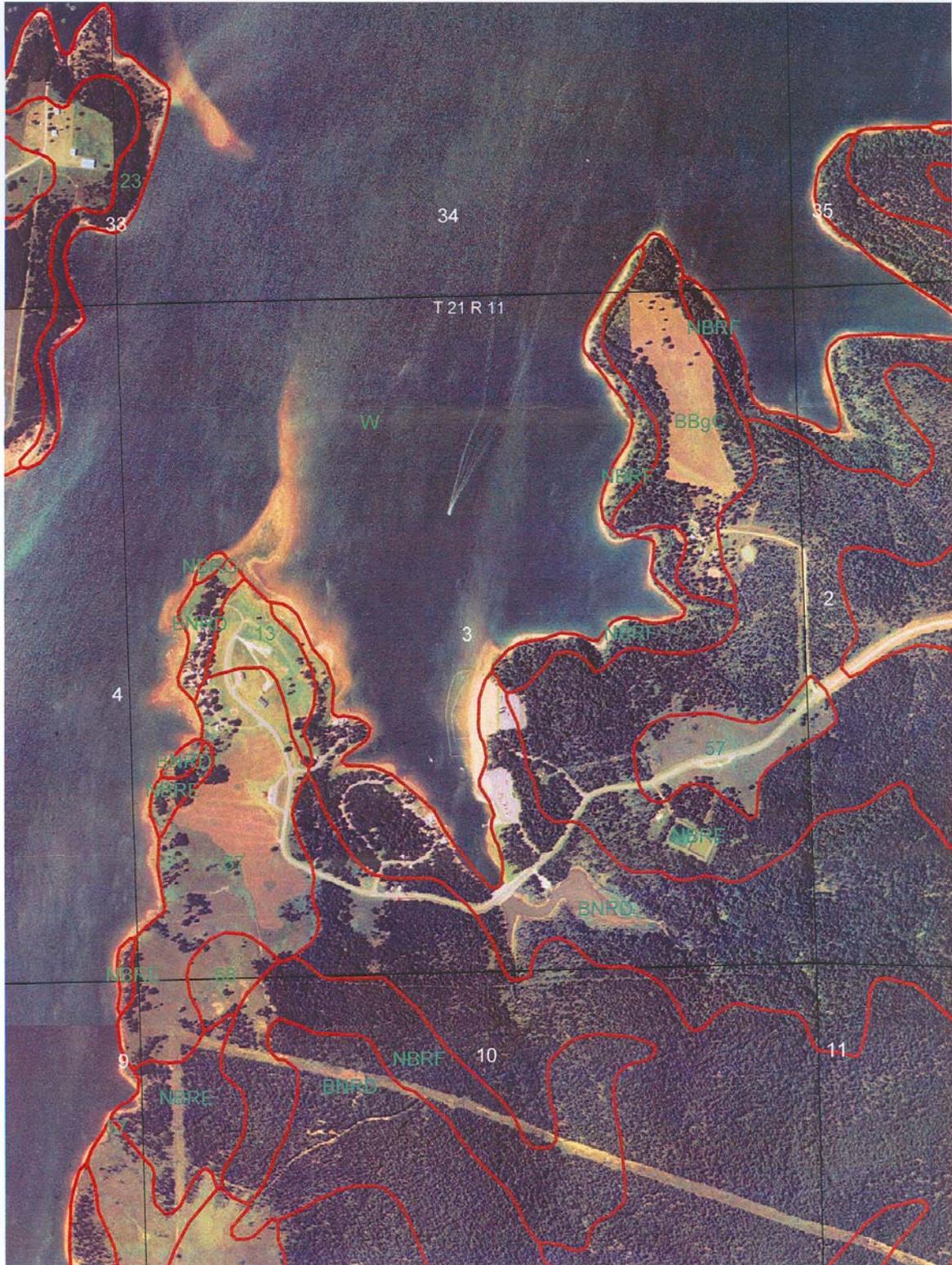
**Correlation Date:** 05/01/1975

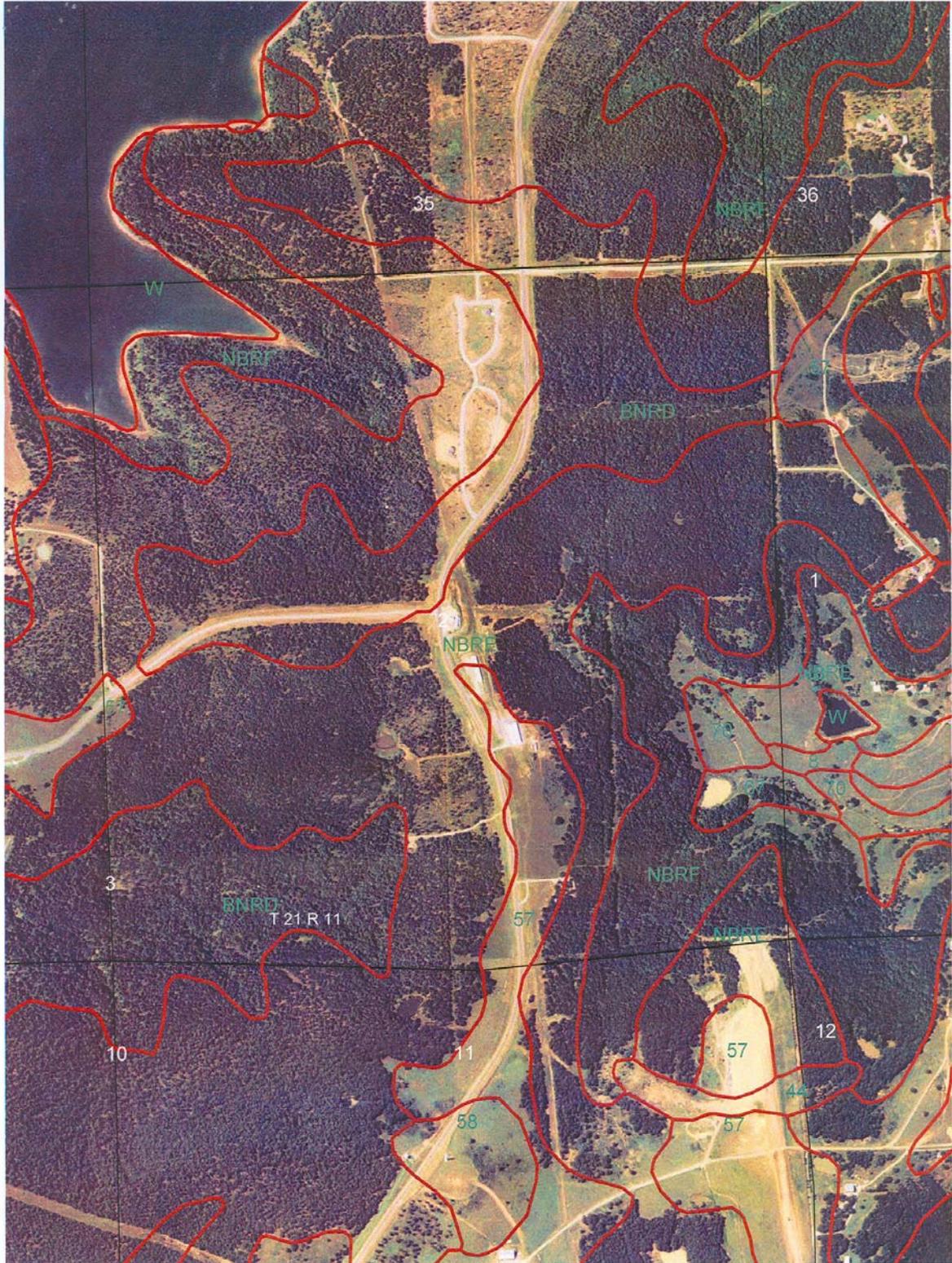
**Distribution Date:** 10/05/2004

**Map**

Symbol	Soil Name	Rating
8	Pocasset fine sandy loam, 0 to 1 percent slopes, occasionally flooded	All areas are prime farmland
9	Pocasset fine sandy loam, 1 to 3 percent slopes, occasionally flooded	All areas are prime farmland
13	Lucien-Coyle complex, 3 to 8 percent slopes	Not prime farmland
23	Foraker-Shidler complex, 12 to 25 percent slopes	Not prime farmland
38	Norge silt loam, 1 to 3 percent slopes	All areas are prime farmland
39	Norge silt loam, 3 to 5 percent slopes	All areas are prime farmland
46	Osage silty clay, 0 to 1 percent slopes, occasionally flooded	All areas are prime farmland
57	Steedman-Lucien complex, 3 to 15 percent slopes	Not prime farmland
58	Steedman-Lucien complex, 15 to 25 percent slopes	Not prime farmland
66	Verdigris silt loam, 0 to 1 percent slopes, occasionally flooded	All areas are prime farmland
67	Verdigris silt loam, 0 to 1 percent slopes, frequently flooded	Not prime farmland
70	Wynona silty clay loam, 0 to 1 percent slopes, occasionally flooded	All areas are prime farmland
BBgC	Bartlesville-Bigheart complex, 1 to 5 percent slopes, very rocky	Not prime farmland
BNRD	Bigheart-Niotaze-Rock outcrop complex, 1 to 8 percent slopes	Not prime farmland
NBRE	Niotaze-Bigheart-Rock outcrop complex, 3 to 15 percent slopes, very stony	Not prime farmland
NBRF	Niotaze-Bigheart-Rock outcrop complex, 15 to 25 percent slopes	Not prime farmland

NBRG      percent slopes, extremely  
                 stony  
                 Niotaze-Bigheart-Rock  
                 outcrop complex, 25 to 45  
                 percent slopes, rubbly      Not prime farmland

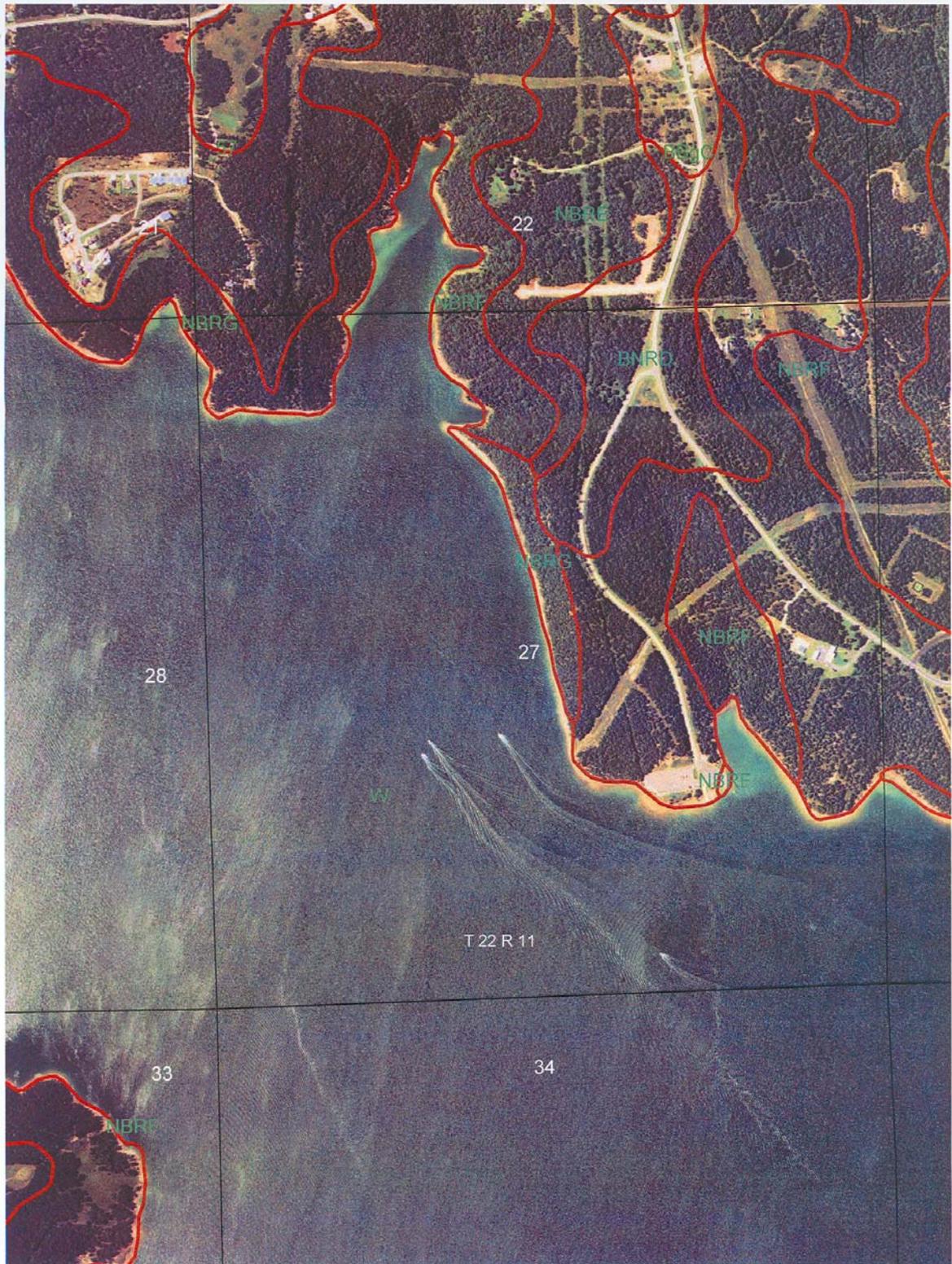


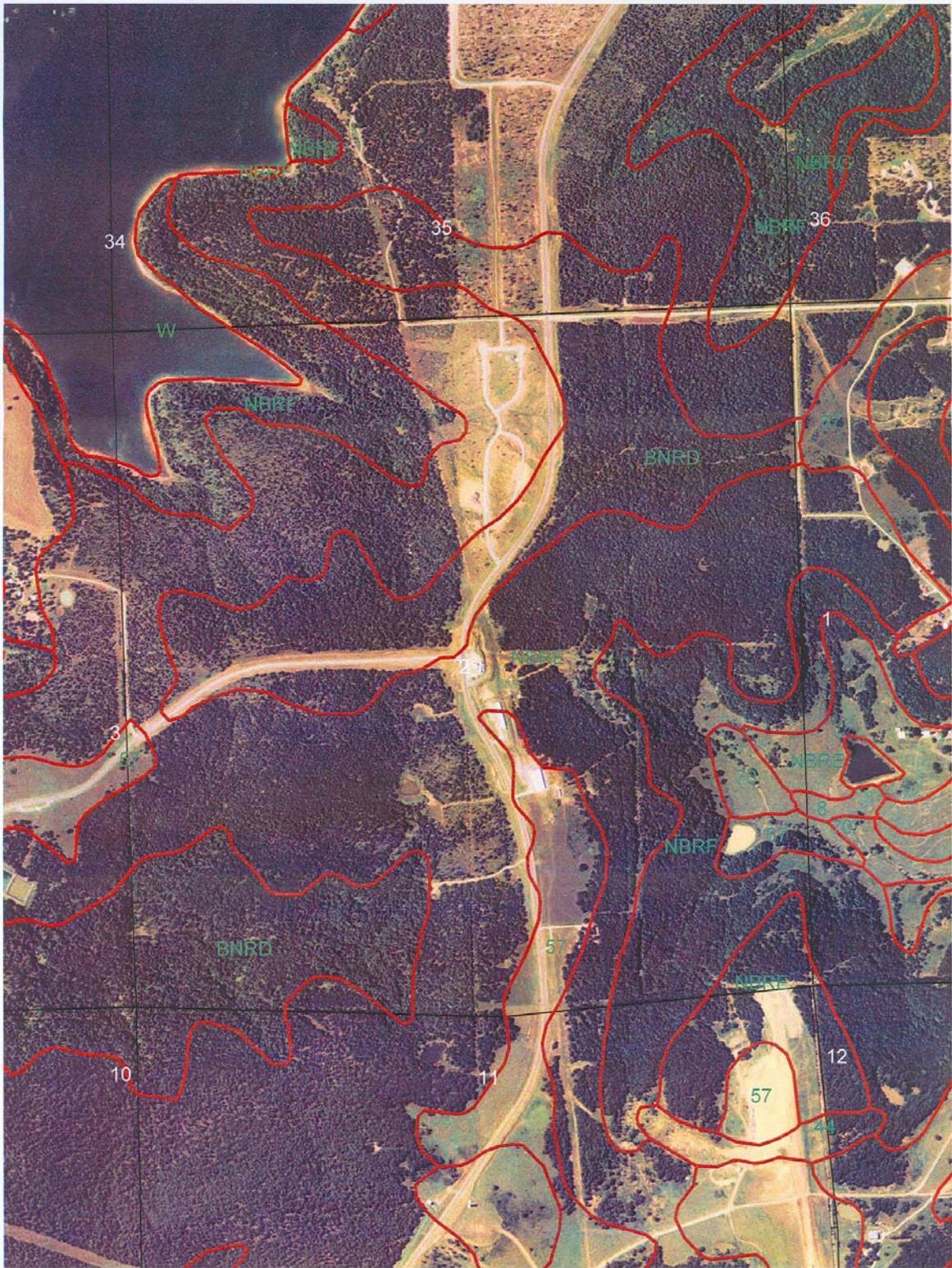














DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, TULSA DISTRICT  
1645 SOUTH 101ST EAST AVENUE  
TULSA, OKLAHOMA 74128-4609

DEC 16 2005

Planning and Environmental Division  
Environmental Analysis and Compliance Branch

Mr. Jerry Brabander  
Field Supervisor  
U.S. Fish and Wildlife Service  
222 South Houston, Suite A  
Tulsa, OK 74127

Dear Mr. Brabander:

This letter is to request initial and informal coordination regarding assessment of the habitat suitability of property located at Skiatook Lake, Osage County, Oklahoma, for use by the American Burying Beetle (*Nicrophorus americanus*), a Federally listed endangered species.

In 2003, the U.S. Army Corps of Engineers, Tulsa District, (Corps) received and approved a request from the Skiatook Economic Development Authority (SEDA) for a lease of approximately 643 acres of land and 46 acres of water in portions of Sections 25, 26, 27, and 35, T22N R11E and Sections 2, 3, and 4, T21N R11E on lands administered by the Corps at Skiatook Lake in Osage County, Oklahoma (enclosed Figure 1). In accordance with their proposed plans for the lease property, SEDA subleased the property to StateSource, LCC, for the private development of public recreation facilities. Development that may occur within the lease area includes construction of a golf course, cabins, conference center, RV and other camping areas, a marina, roads for facility access, and an interpretative hiking trail (enclosed Figure 2).

Since the approval of the sublease and proposed CrossTimbers development plan in 2003, StateSource has recently decided to move the location of the proposed golf course and new camping area. Originally envisioned for construction at Skiatook Point, the CrossTimbers golf course is now proposed to be constructed in the Tall Chief Cove portion of the lease area (enclosed Figure 3). Construction of the golf course in this area will allow golfers easier access to the proposed conference center and marina facilities and will consolidate most of the infrastructure needs associated with the CrossTimbers development

to the south side of the lake. In conjunction with the proposed move of the golf course to the Tall Chief Cove area, the camping development originally proposed for Tall Chief Cove is now being proposed for the Skiatook Point area (enclosed Figure 4). Final designs for the camping area are under development, but may include primitive tent camping, RV camping, rustic cabins, day use docks, and associated roads, restrooms, water, electric, and sewer lines. The Corps will be addressing impacts of these proposed changes with an updated analysis in compliance with the National Environmental Policy Act.

Based on recommendations of your staff provided during our December 5, 2005 meeting, Corps personnel visited the SEDA lease area on December 14, 2005 to identify soils present in the lease area and gather information required for determination of habitat suitability. Investigations focused on the southern portion of the lease area near Tall Chief Cove and Tornado Cove. These areas were chosen due to the ongoing and upcoming construction activities associated with the conference center, cabins, marina parking expansion, and associated road networks. A total of six separate areas were investigated (enclosed Figure 5). In each area, four or more holes were hand excavated using shovels to a depth of between 6 and 12 inches and photographs were taken showing a representative soil profile and the vegetation present in the immediate area (enclosed Figures 6-17). At your request, we are forwarding this information to you so that you may assist us in determining soil suitability for American Burying Beetle use. We would appreciate receipt of your response on the matter so that we may take the appropriate steps to meet requirements under Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq).

Thank you for your help with this request. If you have any questions, please contact Ms. Sandra Stiles, Biologist, at 918-669-7662.

Sincerely,

  
Miroslav P. Kurka  
Colonel, U.S. Army  
District Engineer

Enclosures



In Reply Refer To:  
FWS/R2/OKES/  
2006-1-0031

## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Division of Ecological Services  
222 South Houston, Suite A  
Tulsa, Oklahoma 74127  
918/581-7458 / (FAX) 918/581-7467



January 4, 2006

Colonel Miroslav P. Kurka  
Corps of Engineers  
1645 South 101<sup>st</sup> East Avenue  
Tulsa, Oklahoma 74128-4609

Dear Colonel Kurka:

Thank you for your December 16, 2005, letter to the U.S. Fish and Wildlife Service (Service) requesting coordination regarding assessment of the habitat suitability for the American burying beetle *Nicrophorus americanus* (ABB) at the CrossTimbers development site at Skiatook Lake in Osage County, Oklahoma. The development was proposed by Skiatook Economic Development Authority (SEDA) and StateSource, LLC. (StateSource) and involves the U.S. Army Corps of Engineers (Corps) leasing 643 acres at Skiatook Lake to SEDA and StateSource for development of various projects including a golf course, RV parking, camping areas, cabins, a conference center, marinas, roads, restrooms, utilities, and parking lots. Our comments are submitted in accordance with section 7 of the Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), National Environmental Policy Act (NEPA), and the Fish and Wildlife Coordination Act (FWCA).

The Corps completed the current Environmental Assessment (EA) for this project in 2003. The Service provided comments addressing the draft EA in our August 21, 2002, letter to the Corps. At that time the ABB was not known to occur within Osage County. However, in 2004 The Nature Conservancy provided documentation that the ABB had been collected from the Tall Grass Prairie Preserve in 1999.

On November 16, 2005, the Corps, via written correspondence, provided notification that the proposed project plans had been altered and requested an updated list of federally-listed species which may occur within the project area of influence. The Service notified the Corps, via telephone correspondence, that the ABB is now a species known to occur within Osage County and the Corps should evaluate potential effects to the ABB from the proposed project. The change in project plans and addition of the ABB to the county species list necessitates that the Corps reinstate section 7 consultation with the Service (the Corps' November 16, 2005, letter serves to reinstate consultation).

The proposed project plans also would require changes in land use relative to the plans adopted when the FWCA Report and General Plan were written for the Skiatook Lake Project. These changes also require coordination with the Service and the ODWC (per the FWCA) to develop

Colonel Kurka

2

appropriate mitigation measures, as appropriate. The Corps has informed the Service that they intend to complete a new EA for the proposed changes, as required by NEPA, and any modifications to the proposed action that result from the comments on the draft EA will need to be considered in the section 7 consultation. Changes from the existing project plans should not be implemented until section 7, FWCA and NEPA requirements have been completed. Please keep in mind that mitigation features developed pursuant to the FWCA and NEPA should be incorporated into the proposed action, as described in the revised draft EA, prior to your determination of effect concerning federally-listed species (i.e., fulfillment of section 7 responsibilities).

The endangered ABB historically occurred and currently persists in Osage County, and potentially could occur in and/or around the project area. Suitable vegetation and soil for the ABB are present within Osage County and the surrounding counties. Washington, Tulsa, Rogers, and Creek counties in Oklahoma, and Chautauquau County in Kansas are within the historic range of the ABB and adjacent or in close proximity to Osage County. The state of Kansas has designated Chautauquau and Montgomery counties as critical habitat for the ABB (Kansas Department of Wildlife and Parks 2000). Current ABB records of occurrence include Osage, Tulsa, Rogers and Montgomery counties.

The ABB has been captured via baited pitfall traps in a variety of habitats, including grasslands, grazed pasture, bottomland forest, riparian zones, and oak-hickory forest (Creighton *et al.* 1993; Lomolino and Creighton 1996; Lomolino *et al.* 1995; NatureServe Explorer 2003; and U.S. Fish and Wildlife Service 1991). The ABB once occurred throughout the eastern United States, but today is restricted to less than approximately 10 percent of its former range. The historic and current ranges of the ABB, and other related ABB life history information can be obtained from our ABB web site: <<http://ifw2cs.fws.gov/oklahoma/beetle1.htm>>.

On December 5, 2005, the Service met with the Corps to discuss the proposed project. The Corps provided an overview of the proposed project changes and requested assistance with evaluating potential impacts to the ABB. The Service recommended that the Corps conduct a habitat assessment to determine if suitable vegetation and soils were present within the proposed project area. The Corps' December 16, 2005, letter provided this information. The Service has reviewed the information supplied in the letter, as well as the topographic maps, soil maps, soil and vegetation photographs, and soil descriptions provided with the letter. We have also reviewed the current and historical ABB data in and around Osage County.

In addition, Service and Corps personnel visited the site on December 22, 2005, to evaluate the overall site conditions and habitat suitability for the ABB. Several additional soil samples were taken. A minimum of 49 soil samples were evaluated during this site visit and the Corps' previous habitat assessment. The majority of the project area contains potentially suitable soil and vegetation to support the ABB. However, soil does not appear to be suitable for the ABB along the lake shoreline and landward about 50 feet due to the high clay content and compactness of the soil. There also are isolated patches across the project area where the soil does not appear to be suitable for the ABB due to high clay content or soil structure. However, these isolated patches are small (diameters of a few or several feet) and appear to be exceptions to the typical soils identified by the Osage County Soil Survey. More detailed information concerning potential habitat suitability has been provided to Corps personnel.

Colonel Kurka

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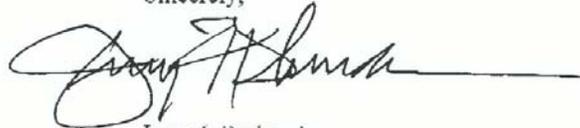
Section 7(a)(2) of the ESA requires that any action authorized, funded or carried out by a federal agency be reviewed for the potential to jeopardize the continued existence of any federally-listed species, or destroy or adversely modify designated critical habitat. It is incumbent upon the federal action agency to make this determination. In the event that a federal action agency determines that its action may affect a federally-listed species, the agency is required to consult with the Service regarding the degree of impact and measures available to avoid or minimize the adverse effects. The Service is then responsible for concurring or not concurring with the federal action agency's determination. If the Corps determines this proposed project may affect federally-listed species, formal consultation should be requested.

The revised draft EA, in addition to the effect determination, should describe the project in detail, including implementation methods, a timeline, a discussion of adverse and beneficial effects, and a mitigation plan detailing avoidance, minimization, and/or compensation measures to be implemented to offset any adverse impacts. Currently, the Corps has not made a determination as to any effects to federally-listed species, nor has an assessment or mitigation plan been provided to the Service. Again, please bear in mind that mitigation for project-related impacts identified during FWCA and NEPA-related analyses should be incorporated into project plans prior to determining whether the proposed action may affect federally-listed species.

During our December 5, 2005, meeting, the Corps informed the Service that some construction disturbance had already occurred and is ongoing. During our December 22, 2005, site visit, the Service was able to evaluate the extent of the construction disturbance and take soil samples. Disturbance has occurred in the areas designated as The Village and marina. Potentially suitable soil for the ABB is present in The Village site that has been disturbed. Please review information provided under separate cover concerning irreversible and irretrievable commitment of resources prior to completion of coordination requirements. The Service cannot further address the extent of potential impacts to federally-listed species and other fish and wildlife resources without additional information regarding the acreage disturbed and method and timing of disturbance.

The Service requests a meeting with the Corps, SEDA, and StateSource to discuss project specifications, potential impacts to federally-listed species and other important fish and wildlife resources, and conservation and mitigation measures available to avoid or minimize potential adverse impacts. Please contact Hayley Dikeman at 918-382-4519 to schedule a meeting or address any questions. We appreciate the opportunity to review the proposed project and provide comments. Please include the project number at the top, left of the front page in any future reference to this proposed action.

Sincerely,



Jerry J. Brabander  
Field Supervisor

cc: Director, ODWC, Oklahoma City, OK  
Attn: Natural Resources Section

HMD\plh;21440-2006-1-0031 Skiatook Lake 12-19-05 jjb.lhd 1-4-2006

## References

- Creighton, J.C., M.V. Lomolino, and G.D. Schnell. 1993. Survey methods for the American burying beetle (*Nicrophorus americanus*) In Oklahoma and Arkansas. Oklahoma Biological Survey, Norman, Oklahoma.
- Kansas Department of Wildlife and Parks. 2005. American Burying Beetle (*Nicrophorus Americanus*). [http://www.kdwp.state.ks.us/news/other\\_services/threatened\\_and\\_endangered\\_species/threatened\\_and\\_endangered\\_species/species\\_information/american\\_burying\\_beetle](http://www.kdwp.state.ks.us/news/other_services/threatened_and_endangered_species/threatened_and_endangered_species/species_information/american_burying_beetle)
- U.S. Fish and Wildlife Service. 1991. American Burying Beetle (*Nicrophorus americanus*) Recovery Plan. Newton Corner, Massachusetts. 80 pp.

# **APPENDIX C**

## **CULTURAL RESOURCES COORDINATION INFORMATION**



DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, TULSA DISTRICT  
1645 SOUTH 101ST EAST AVENUE  
TULSA, OKLAHOMA 74128-4609

January 12, 2005

Planning, Environmental, and Regulatory Division  
Environmental Analysis and Compliance Branch

Cherokee Nation of Oklahoma  
P.O. Box 948  
Tahlequah, OK 74465

Dear Sirs:

In accordance with 36 CFR 800, Protection of Historic Properties, the purpose of this letter is to initiate consultation regarding a proposed change in the CrossTimbers development plan at Skiatook Lake in Osage County, Oklahoma.

In 2003 the U.S. Army Corps of Engineers, Tulsa District, (COE) received and approved a request from the Skiatook Economic Development Authority (SEDA) for a lease of approximately 643 acres of land and 46 acres of water in portions of Sections 25, 26, 27, and 35, T22N R11E and Sections 2, 3, and 4, T21N R11E on lands administered by the COE at Skiatook Lake in Osage County, Oklahoma (Figures 1 and 2). In accordance with their proposed plans for the lease property, SEDA sub-leased the property to StateSource, LCC for the private development of public recreation facilities. Development that may occur within the lease area includes construction of a golf course, cabins, conference center, RV and other camping areas, a marina, and an interpretative hiking trail (Figures 3 and 4).

Since the approval of the sub-lease and proposed CrossTimbers development plan in 2003, StateSource has recently decided to move the location of the proposed golf course and new camping area. Originally envisioned for construction at Skiatook Point, the CrossTimbers golf course is now proposed to be constructed in the Tall Chief Cove portion of the lease area (Figure 5). Construction of the golf course in this area will allow golfers easier access to the proposed conference center and marina facilities, and will consolidate most of the infrastructure needs associated with the CrossTimbers development to the south side of the lake. In conjunction with the proposed move of the golf course to the Tall Chief Cove area, the camping development originally proposed for Tall Chief

Cove is now being proposed for the Skiatook Point area (Figure 6). Final designs for the camping area are under development, but may include primitive tent camping, RV camping, rustic cabins, day use docks, and associated roads, restrooms, water, electric, and sewer lines.

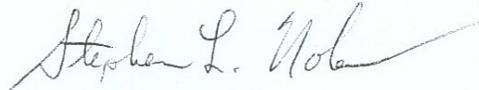
As a result of previous cultural resource surveys and consultations with the Quapaw, Osage, and other interested Native American tribes in 2002 and 2003, the COE identified two significant cultural resources in the vicinity of the CrossTimbers development (Figure 7). Site 34OS678 is a small burned rock mound approximately 10 meters in diameter and 0.5 meters in height located in the mowed front yard of the COE Skiatook Lake office. Because of the undisturbed nature and likelihood that the mound contains important prehistoric archeological information, we have determined that site 34OS678 is eligible for listing on the National Register of Historic Places (NRHP). This site, along with the Skiatook Lake office compound, has been excluded from the SEDA lease and will not be impacted by any proposed construction associated with the CrossTimbers development.

The other NRHP eligible cultural resource identified in the vicinity of the CrossTimbers development is Healing Rock (34OS679). Healing Rock is a large upright rock located on a ridge point near Skiatook Point. Originally located in Hominy Creek valley, the rock was moved to its present location by the COE at the request of the Quapaw and Osage tribes in 1986 in order to prevent the rock from being inundated by Skiatook Lake. Healing Rock is a traditional cultural property of significance to the Quapaw and Osage tribes due to association with some of the first Native American Church activities held in Osage County. Consultation in 2002 and 2003 between the COE, SEDA, and the Quapaw and Osage tribes lead to the current SEDA lease boundary which excludes both Healing Rock and the access trail.

In order to assist us in the assessment of the potential impacts of the proposed development change on cultural resources, we are requesting information that the Cherokee Nation is willing to share on any concerns that you may have regarding the potential impacts to cultural resources from the proposed change in the CrossTimbers development plan at Skiatook Lake.

Thank you for your help with this request. If you have any questions, please contact Mr. Louis Vogeles, Archeologist, at 918-669-4934.

Sincerely,

A handwritten signature in cursive script that reads "Stephen L. Nolen". The signature is written in dark ink and is positioned above the typed name.

Stephen L. Nolen  
Chief, Environmental Analysis  
and Compliance Branch

Encls



DEPARTMENT OF ARMY  
CORPS OF ENGINEERS, TULSA DISTRICT  
1645 SOUTH 101<sup>ST</sup> EAST AVENUE  
TULSA, OKLAHOMA 74128-4609

January 12, 2005

Planning, Environmental, and Regulatory Division  
Environmental Analysis and Compliance Branch

Mr. John Berrey, Chairman  
Quapaw Tribe of Oklahoma  
P.O. Box 765  
Quapaw, OK 74363

Dear Chairman Berry:

In accordance with 36 CFR 800, Protection of Historic Properties, the purpose of this letter is to initiate consultation regarding a proposed change in the CrossTimbers development plan at Skiatook Lake in Osage County, Oklahoma.

In 2003 the U.S. Army Corps of Engineers, Tulsa District, (COE) received and approved a request from the Skiatook Economic Development Authority (SEDA) for a lease of approximately 643 acres of land and 46 acres of water in portions of Sections 25, 26, 27, and 35, T22N R11E and Sections 2, 3, and 4, T21N R11E on lands administered by the COE at Skiatook Lake in Osage County, Oklahoma (Figures 1 and 2). In accordance with their proposed plans for the lease property, SEDA sub-leased the property to StateSource, LCC for the private development of public recreation facilities. Development that may occur within the lease area includes construction of a golf course, cabins, conference center, RV and other camping areas, a marina, and an interpretative hiking trail (Figures 3 and 4).

Since the approval of the sub-lease and proposed CrossTimbers development plan in 2003, StateSource has recently decided to move the location of the proposed golf course and new camping area. Originally envisioned for construction at Skiatook Point, the CrossTimbers golf course is now proposed to be constructed in the Tall Chief Cove portion of the lease area (Figure 5). Construction of the golf course in this area will allow golfers easier access to the proposed conference center and marina facilities, and will consolidate most of the infrastructure needs associated with the CrossTimbers development to the south side of the lake. In conjunction with the proposed move of the golf course to the Tall Chief Cove area, the camping development originally proposed for Tall Chief

Cove is now being proposed for the Skiatook Point area (Figure 6). Final designs for the camping area are under development, but may include primitive tent camping, RV camping, rustic cabins, day use docks, and associated roads, restrooms, water, electric, and sewer lines.

As a result of previous cultural resource surveys and consultations with the Quapaw, Osage, and other interested Native American tribes in 2002 and 2003, the COE identified two significant cultural resources in the vicinity of the CrossTimbers development (Figure 7). Site 34OS678 is a small burned rock mound approximately 10 meters in diameter and 0.5 meters in height located in the mowed front yard of the COE Skiatook Lake office. Because of the undisturbed nature and likelihood that the mound contains important prehistoric archeological information, we have determined that site 34OS678 is eligible for listing on the National Register of Historic Places (NRHP). This site, along with the Skiatook Lake office compound, has been excluded from the SEDA lease and will not be impacted by any proposed construction associated with the CrossTimbers development.

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In order to assist us in the assessment of the potential impacts of the proposed development change on cultural resources, we are requesting information that the Quapaw Tribe is willing to share on any concerns that you may have regarding the potential impacts to cultural resources from the proposed change in the CrossTimbers development plan at Skiatook Lake.

Thank you for your help with this request. If you have any questions, please contact Mr. Louis Vogeles, Archeologist, at 918-669-4934.

Sincerely,



Stephen L. Nolen  
Chief, Environmental Analysis  
and Compliance Branch

Encls

Copy furnished:  
Mr. Steve Ward  
Conner and Winters  
3700 1<sup>st</sup> Place Tower  
15 East 5<sup>th</sup> Street  
Tulsa, OK 74103



DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, TULSA DISTRICT  
1645 SOUTH 101ST EAST AVENUE  
TULSA, OKLAHOMA 74128-4609

January 12, 2005

Planning, Environmental, and Regulatory Division  
Environmental Analysis and Compliance Branch

Kaw Tribe of Oklahoma  
P.O. Drawer 50  
Kaw City, OK 74641

Dear Sirs:

In accordance with 36 CFR 800, Protection of Historic Properties, the purpose of this letter is to initiate consultation regarding a proposed change in the CrossTimbers development plan at Skiatook Lake in Osage County, Oklahoma.

In 2003 the U.S. Army Corps of Engineers, Tulsa District, (COE) received and approved a request from the Skiatook Economic Development Authority (SEDA) for a lease of approximately 643 acres of land and 46 acres of water in portions of Sections 25, 26, 27, and 35, T22N R11E and Sections 2, 3, and 4, T21N R11E on lands administered by the COE at Skiatook Lake in Osage County, Oklahoma (Figures 1 and 2). In accordance with their proposed plans for the lease property, SEDA sub-leased the property to StateSource, LCC for the private development of public recreation facilities. Development that may occur within the lease area includes construction of a golf course, cabins, conference center, RV and other camping areas, a marina, and an interpretative hiking trail (Figures 3 and 4).

Since the approval of the sub-lease and proposed CrossTimbers development plan in 2003, StateSource has recently decided to move the location of the proposed golf course and new camping area. Originally envisioned for construction at Skiatook Point, the CrossTimbers golf course is now proposed to be constructed in the Tall Chief Cove portion of the lease area (Figure 5). Construction of the golf course in this area will allow golfers easier access to the proposed conference center and marina facilities, and will consolidate most of the infrastructure needs associated with the CrossTimbers development to the south side of the lake. In conjunction with the proposed move of the golf course to the Tall Chief Cove area, the camping development originally proposed for Tall Chief

Cove is now being proposed for the Skiatook Point area (Figure 6). Final designs for the camping area are under development, but may include primitive tent camping, RV camping, rustic cabins, day use docks, and associated roads, restrooms, water, electric, and sewer lines.

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The other NRHP eligible cultural resource identified in the vicinity of the CrossTimbers development is Healing Rock (34OS679). Healing Rock is a large upright rock located on a ridge point near Skiatook Point. Originally located in Hominy Creek valley, the rock was moved to its present location by the COE at the request of the Quapaw and Osage tribes in 1986 in order to prevent the rock from being inundated by Skiatook Lake. Healing Rock is a traditional cultural property of significance to the Quapaw and Osage tribes due to association with some of the first Native American Church activities held in Osage County. Consultation in 2002 and 2003 between the COE, SEDA, and the Quapaw and Osage tribes lead to the current SEDA lease boundary which excludes both Healing Rock and the access trail.

In order to assist us in the assessment of the potential impacts of the proposed development change on cultural resources, we are requesting information that the Kaw Tribe is willing to share on any concerns that you may have regarding the potential impacts to cultural resources from the proposed change in the CrossTimbers development plan at Skiatook Lake.

Thank you for your help with this request. If you have any questions, please contact Mr. Louis Vogeles, Archeologist, at 918-669-4934.

Sincerely,

A handwritten signature in cursive script that reads "Stephen L. Nolen".

Stephen L. Nolen  
Chief, Environmental Analysis  
and Compliance Branch

Encls



DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, TULSA DISTRICT  
1645 SOUTH 101ST EAST AVENUE  
TULSA, OKLAHOMA 74128-4609

January 12, 2005

Planning, Environmental, and Regulatory Division  
Environmental Analysis and Compliance Branch

Mr. Gary McAdams, President  
Wichita and Affiliated Tribes of Oklahoma  
P.O. Box 729  
Anadarko, OK 73005

Dear President McAdams:

In accordance with 36 CFR 800, Protection of Historic Properties, the purpose of this letter is to initiate consultation regarding a proposed change in the CrossTimbers development plan at Skiatook Lake in Osage County, Oklahoma.

In 2003 the U.S. Army Corps of Engineers, Tulsa District, (COE) received and approved a request from the Skiatook Economic Development Authority (SEDA) for a lease of approximately 643 acres of land and 46 acres of water in portions of Sections 25, 26, 27, and 35, T22N R11E and Sections 2, 3, and 4, T21N R11E on lands administered by the COE at Skiatook Lake in Osage County, Oklahoma (Figures 1 and 2). In accordance with their proposed plans for the lease property, SEDA sub-leased the property to StateSource, LCC for the private development of public recreation facilities. Development that may occur within the lease area includes construction of a golf course, cabins, conference center, RV and other camping areas, a marina, and an interpretative hiking trail (Figures 3 and 4).

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In order to assist us in the assessment of the potential impacts of the proposed development change on cultural resources, we are requesting information that the Wichita and Affiliated Tribes are willing to share on any concerns that you may have regarding the potential impacts to cultural resources from the proposed change in the CrossTimbers development plan at Skiatook Lake.

Thank you for your help with this request. If you have any questions, please contact Mr. Louis Vogeles, Archeologist, at 918-669-4934.

Sincerely,

A handwritten signature in cursive script that reads "Stephen L. Nolen".

Stephen L. Nolen  
Chief, Environmental Analysis  
and Compliance Branch

Encls



DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, TULSA DISTRICT  
1645 SOUTH 101ST EAST AVENUE  
TULSA, OKLAHOMA 74128-4609

January 12, 2005

Planning, Environmental, and Regulatory Division  
Environmental Analysis and Compliance Branch

Mr. Jim Roan Gray, Chief  
Osage Nation of Oklahoma  
627 Grandview Avenue  
Pawhuska, OK 74056

Dear Chief Gray:

In accordance with 36 CFR 800, Protection of Historic Properties, the purpose of this letter is to initiate consultation regarding a proposed change in the CrossTimbers development plan at Skiatook Lake in Osage County, Oklahoma.

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In order to assist us in the assessment of the potential impacts of the proposed development change on cultural resources, we are requesting information that the Osage Nation is willing to share on any concerns that you may have regarding the potential impacts to cultural resources from the proposed change in the CrossTimbers development plan at Skiatook Lake.

Thank you for your help with this request. If you have any questions, please contact Mr. Louis Vogeles, Archeologist, at 918-669-4934.

Sincerely,

A handwritten signature in black ink that reads "Stephen L. Nolen". The signature is written in a cursive style with a long, sweeping underline that extends to the right.

Stephen L. Nolen  
Chief, Environmental Analysis  
and Compliance Branch

Encls

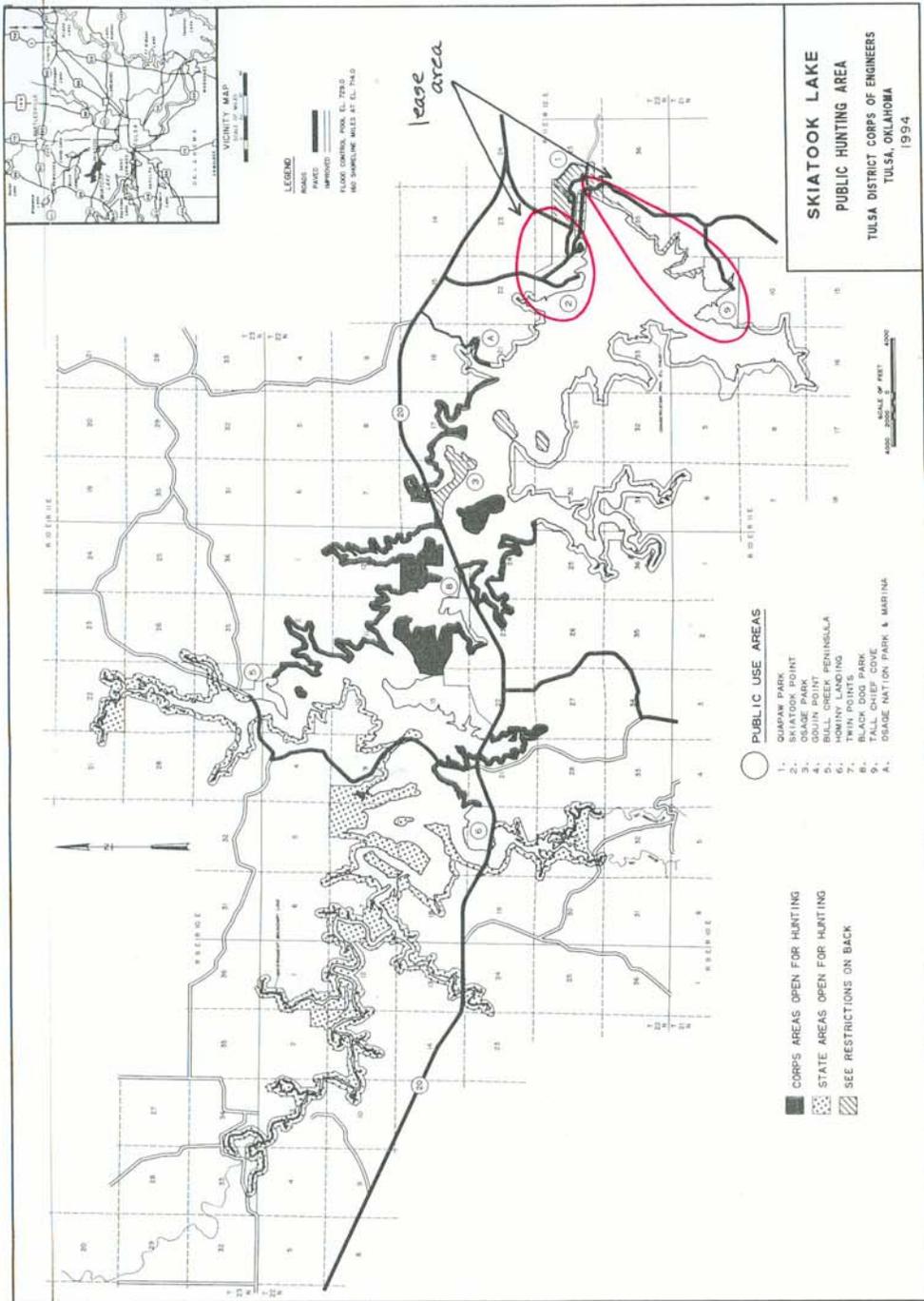


FIGURE 1  
General location of  
SEDA lease at  
Skia took Lake

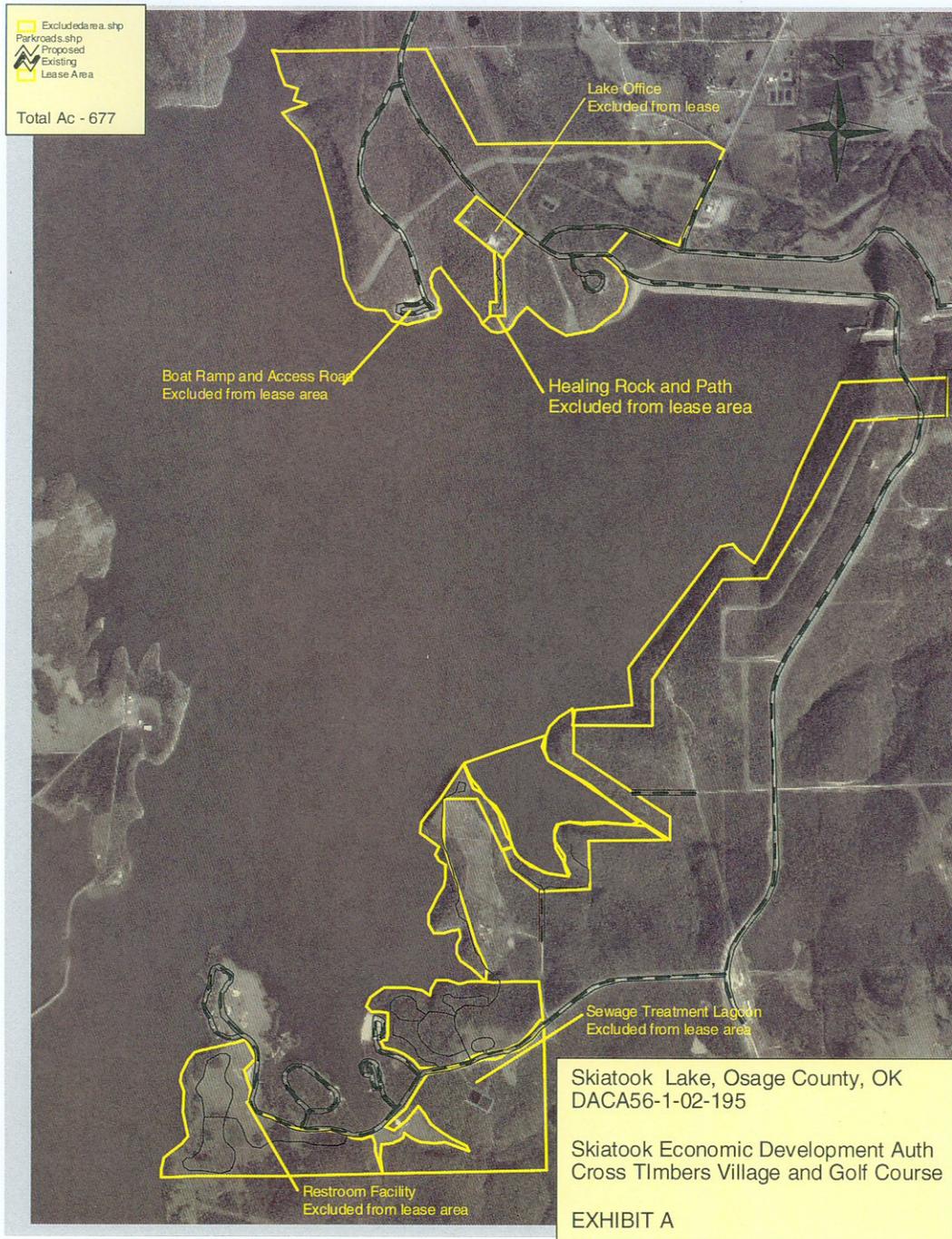


FIGURE 2

SEDA lease at Skiatook Lake

**FIGURE 3**  
*Original CrossTimbers development plan,  
 South side of Skiatook Lake*

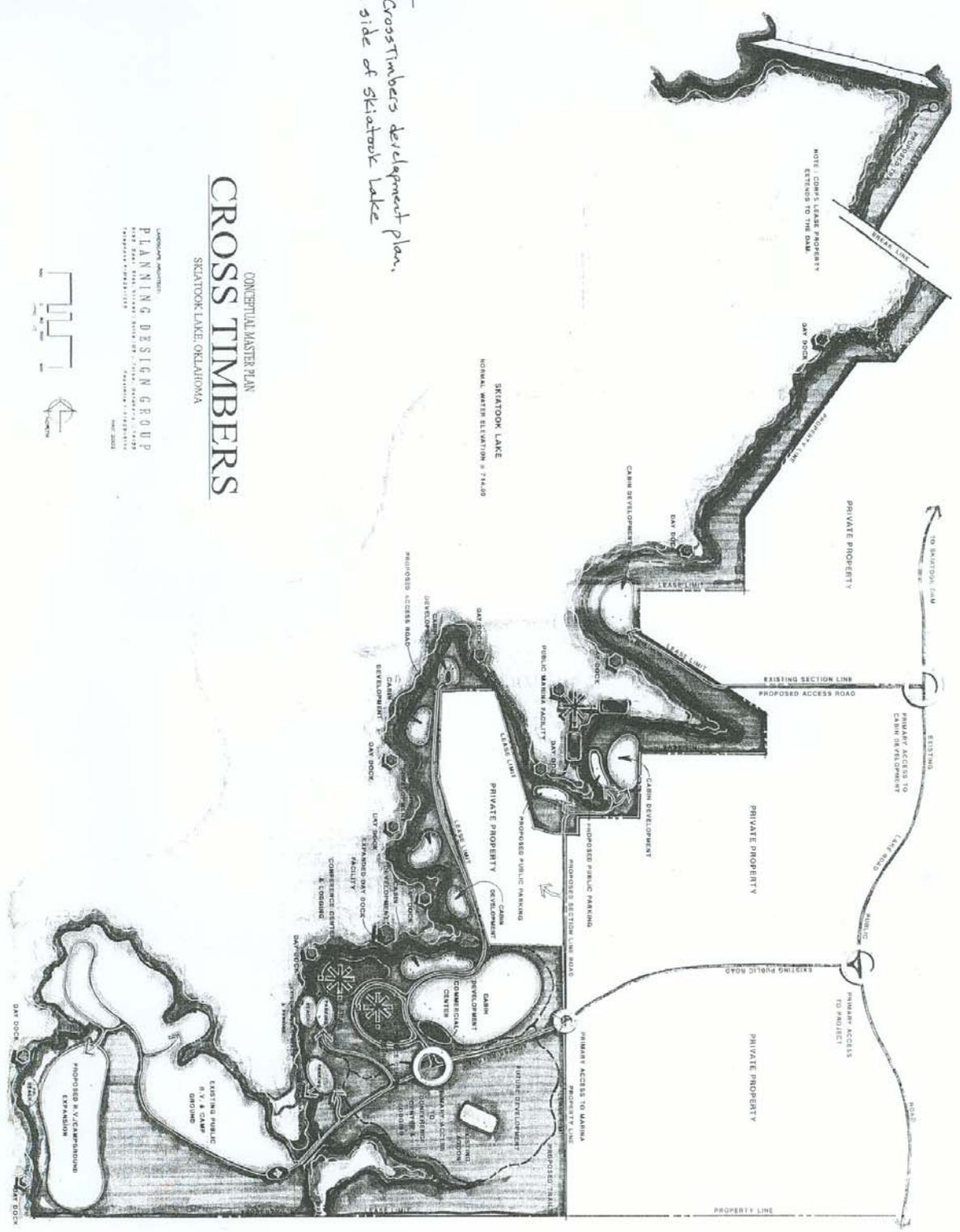


FIGURE 4  
Original location of  
golf course



  
**CrossTimbers**  
**Land Plan**

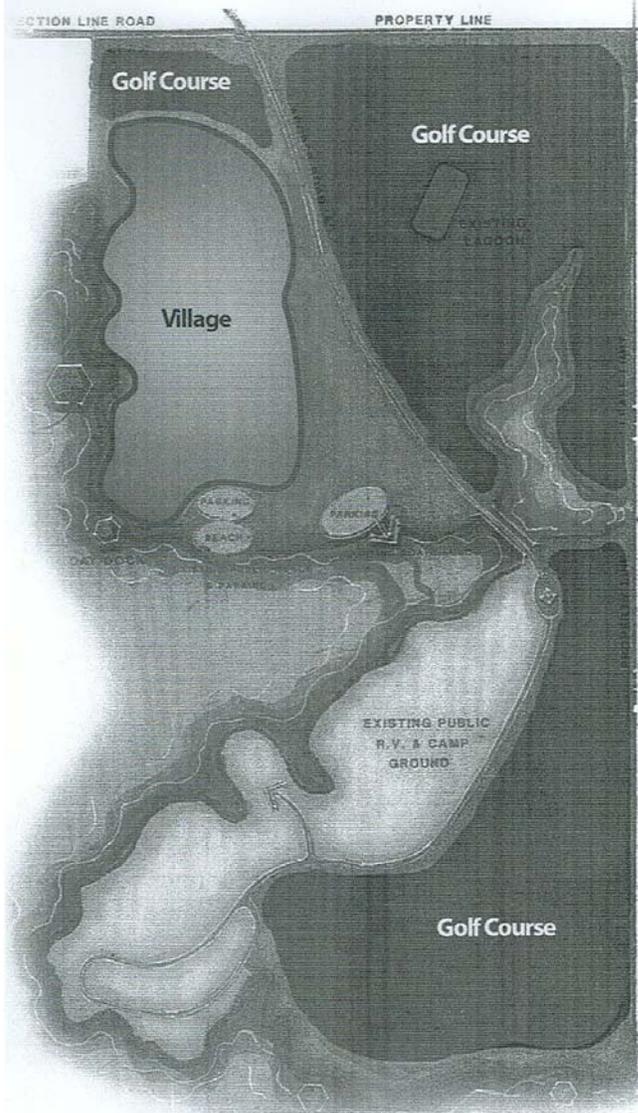


FIGURE 5  
Proposed new location  
of golf course

Uses may be relocated within the lease  
area with the approval of the USACE

 **CrossTimbers**  
**Land Plan**

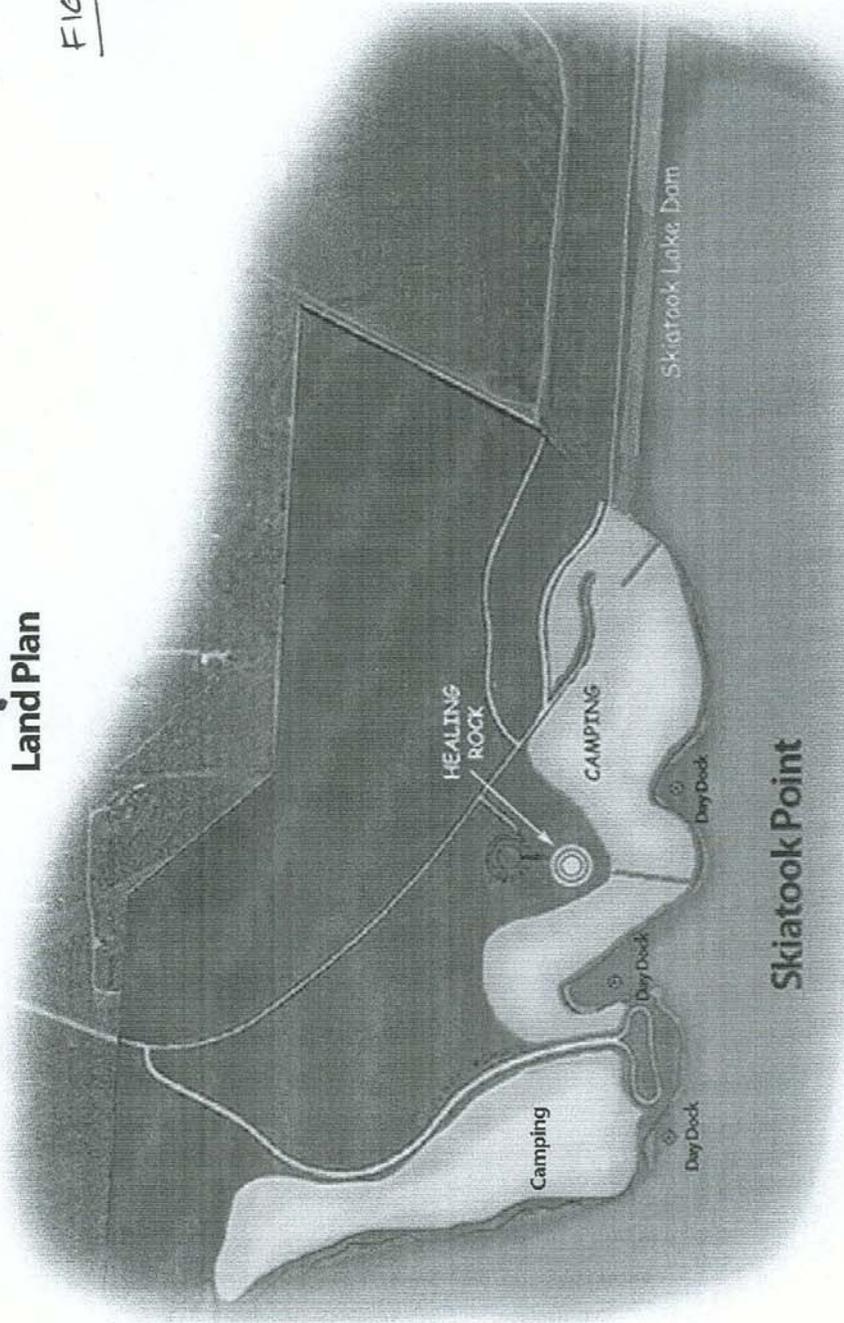


FIGURE 6  
Proposed new location  
of camping area

Uses may be relocated within the lease area with the approval of the USACE



FIGURE 7  
Significant cultural resources and area excluded  
from SEDA lease

**JIM GRAY**  
Principal Chief  
**KENNETH H. BIGHORSE**  
Assistant Principal Chief



**MEMBERS OF COUNCIL**  
MARK FREEMAN Jr.  
TERRY MASON MOORE  
HARRY ROY RED EAGLE  
JODIE SATEPAUHOODLE  
JERRY SHAW  
PAUL R. STABLER  
DUDLEY WHITEHORN  
JOHN W. WILLIAMS

**OSAGE TRIBAL COUNCIL**

**RECEIVED**

**JAN 20 2005**

**REGULATORY**

January 19, 2005

US Army Corps of Engineers  
Attn: Regulatory Branch  
Attn: Larry Hogue, P.E.  
1645 South 101<sup>st</sup> East Ave.  
Tulsa, OK 74128-4609

RE: Public Notice No. OKR2013755 (Addendum); Also see attached letter

To Whom It May Concern:

The Osage Tribe of Oklahoma has evaluated the above reference sites, and we have determined that the site could have religious or cultural significance to the Osage Tribe being our former reservation & homeland. However, if construction activities should expose Osage archeological materials, such as bone, pottery, chipped stone, etc., we ask that construction activities cease, and this office be contacted so that an evaluation can be made.

Should you have any questions, you can reach me at (918) 287-5446.

Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Anthony P. Whitehorn".

Anthony P. Whitehorn  
Tribal Enterprise Manager

Osage Tribal Council, P.O. Box 779, Pawhuska, OK 74056, (918) 287-5432, FAX (918) 287-2257



DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, TULSA DISTRICT  
1645 SOUTH 101ST EAST AVENUE  
TULSA, OKLAHOMA 74128-4609

January 12, 2005

Planning, Environmental, and Regulatory Division  
Environmental Analysis and Compliance Branch

RECEIVED

JAN 18 2005

OSAGE TRIBAL COUNCIL

Mr. Jim Roan Gray, Chief  
Osage Nation of Oklahoma  
627 Grandview Avenue  
Pawhuska, OK 74056

Dear Chief Gray:

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In order to assist us in the assessment of the potential impacts of the proposed development change on cultural resources, we are requesting information that the Osage Nation is willing to share on any concerns that you may have regarding the potential impacts to cultural resources from the proposed change in the CrossTimbers development plan at Skiatook Lake.

# QUAPAW TRIBE OF OKLAHOMA

P.O. Box 765  
Quapaw, OK 74363-0765

(918) 542-1853  
FAX (918) 542-4694

January 27, 2005

John H. Roberts  
Tulsa District, Army Corps of Engineers  
1645 S. 101st East Avenue  
Tulsa, Oklahoma 74128

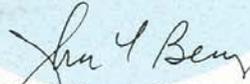
Re: Section 106 Issues Relating to the CrossTimbers Development Plan at Skiatook Lake

Dear John:

I am in receipt of the January 12, 2005, letter received from Stephen Nolen concerning the Corps of Engineers' development plan at Skiatook Lake. I am writing to you to convey the continuing interest and willingness of the Quapaw Tribe of Oklahoma (O-Gah-Pah) to participate in consultation with the Corps concerning this project. As we have mentioned in the past, our particular concern is for the Healing Rock which, as we understand it, will be subjected to more foot traffic as a result of a proposed campground in the area.

Please contact me at your convenience so we can discuss the Corps' plans to protect the Healing Rock from potential damage.

Sincerely,



John L. Berrey, Chairman  
Quapaw (O-Gah-Pah) Tribe of Oklahoma

JLB/wah

cc: Carrie V. Wilson, Cultural Resources Director, Quapaw Tribe



DEPARTMENT OF ARMY  
CORPS OF ENGINEERS, TULSA DISTRICT  
1645 SOUTH 101<sup>ST</sup> EAST AVENUE  
TULSA, OKLAHOMA 74128-4609

November 30, 2005

Planning and Environmental Division  
Environmental Analysis and Compliance Branch

Mr. John Berrey, Chairman  
Quapaw Tribe of Oklahoma  
P.O. Box 765  
Quapaw, OK 74363

Dear Chairman Berrey:

In accordance with 36 CFR 800 (Protection of Historic Properties), the purpose of this letter is to notify you of proposed changes in the CrossTimbers development plans within the Skiatook Economic Development Authority lease at Skiatook Lake in Osage County, Oklahoma.

As you are aware, the Skiatook Economic Development Authority (SEDA) was granted a lease on approximately 643 acres of land and 46 acres of water at Skiatook Lake in Osage County, Oklahoma (Figure 1). SEDA subsequently subleased this property to StateSource, LCC for the private development of public recreation facilities on the property, including a golf course, marina and boat service, trails, RV sites, cabins, and a village, and this development was coordinated with the Quapaw Tribe and approved through an Environmental Assessment (EA) signed by our District Commander in February 2003.

There has been a recent request from StateSource to modify the previously approved plans for a portion of the CrossTimbers development. Specifically, the requested change involves the relocation of the proposed golf course and the camping and RV areas. StateSource is proposing to move the golf course from Skiatook Point to the Tall Chief Cove area of the lake, and move the camping and RV areas from Tall Chief Cove to Skiatook Point (Figures 2 and 3). As part of this proposed development change we are requiring the preparation of a new EA in order to assess the environmental impacts of the proposal. We are interested in reopening consultation with the Quapaw Tribe regarding any concerns that you may have on the impacts of this change in proposed development to traditional cultural properties (e.g. Healing Rock) or other cultural resources, and would like to schedule a meeting on-site at Skiatook Lake to discuss this proposal as soon as possible.

Thank you for your continued interest in this project. We look forward to hearing from you soon. If you have any questions, please contact Mr. Louis Vogele, Archeologist, at 918-669-4934.

Sincerely,

*Gene Lilly*

Susan J. Haslett, P.E.

*FOR* Chief, Planning and Environmental  
Division

Enclosures



DEPARTMENT OF ARMY  
CORPS OF ENGINEERS, TULSA DISTRICT  
1645 SOUTH 101<sup>ST</sup> EAST AVENUE  
TULSA, OKLAHOMA 74128-4609

November 30, 2005

Planning and Environmental Division  
Environmental Analysis and Compliance Branch

Mr. Jim Roan Gray, Chief  
Osage Nation of Oklahoma  
627 Grandview Avenue  
Pawhuska, OK 74056

Dear Chief Gray:

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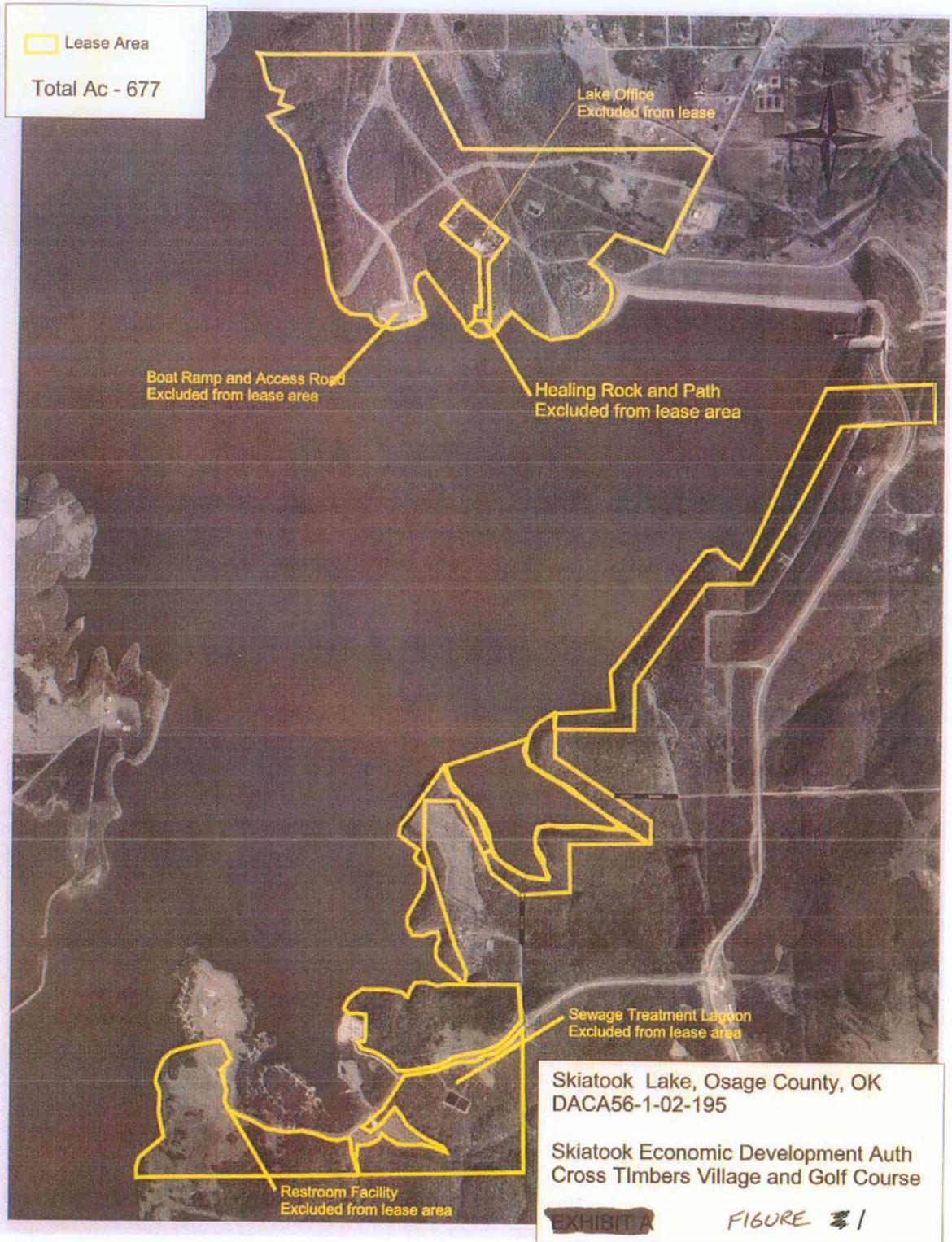
Sincerely,

*Gene Lilly*

Susan J. Haslett, P.E.

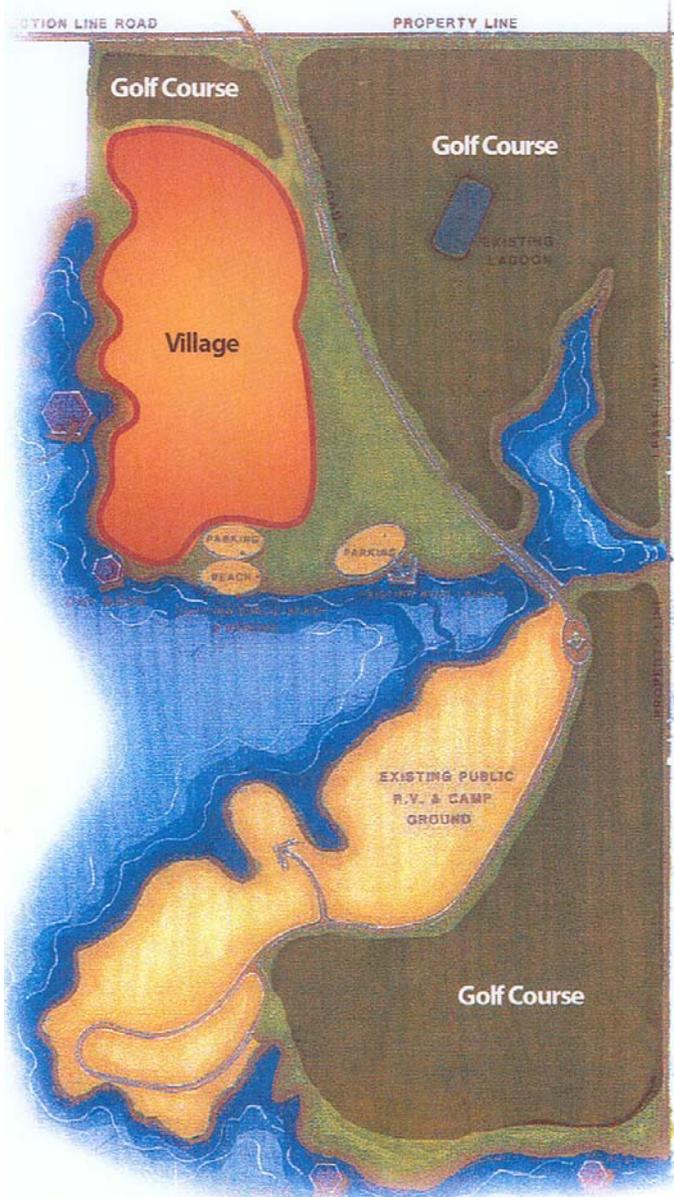
*For* Chief, Planning and Environmental  
Division

Enclosures



  
**CrossTimbers**  
**Land Plan**

FIGURE 2



Uses may be relocated within the lease area with the approval of the USACE

  
**Land Plan**



FIGURE 3

Uses may be relocated within the lease area with the approval of the USACE

# **APPENDIX D**

## **CROSTIMBERS ENVIRONMENTAL MANAGEMENT PLAN**



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Part I - Old Growth Tree Inventory . . . . . 3

Part II - Inadvertent Discovery of  
Cultural Resources Plan . . . . . 21

Part III - Aquatic & Terrestrial Mitigation Plan . 25

**PART I**

**Old Growth Tree Inventory**

CrossTimbers Resort (Phase I)

Skiatook Lake, OK

Prepared by  
EMP Development Team

November 17, 2003

**Old Growth Tree Inventory  
CrossTimbers Resort (Phase I)  
Skiatook Lake, OK**

1. Purpose. To identify and map candidate old growth trees within the CrossTimbers Resort Recreation Lease, Skiatook Lake, OK.

2. Background.

A condition of the Environmental Assessment (EA) for CrossTimbers Resort requires old growth forest to be mapped and incorporated in the Environmental Management Plan (EMP).

The CrossTimbers lease area is primarily composed of upland woods interspersed with native tall-grass prairie. Post Oak and Blackjack Oak, and others tree and shrub species grow on rocky land. Understory vegetation consist of small annuals or succulent perennials with very short tap roots, or shallow spreading roots. Sandstone or limestone caps are prevalent on many of the hills in this region. Soils associated with these caps are mostly thin sandy soils. The terrain varies from flat to very steep slopes (40%) with rocky outcrops.

The project area contains a unique habitat type, the Cross Timbers. This vegetation type is dominated by Blackjack Oak, Post oak and Black Hickory (*Carya texana*), with an understory dominated by little bluestem. Subdominants include big bluestem, side-oats grama, hairy grama (*Bouteloua hirsuta*), purple lovegrass (*Eragrostis spectabilis*), sand lovegrass (*E. trichodes*), Scribner's panicum, Indian-grass, longleaf dropseed and Texas needlegrass (*Nasella leucotricha*) (*Stipaleucotricha*) as understory, and hackberry (*Celtis* spp.) as an overstory species.

One component of this habitat type is "old growth" or ancient Cross Timbers. Tree ring investigations indicate that the ancient cross timber community has remained relatively unchanged following the last glacial period some 6,000 years ago (Stahle et.al., 2000). Due to the rapidly declining trends in this habitat type the value and function of the old growth Cross Timbers is of special importance. It has been estimated that portions of the project area have a 77 % chance of containing old growth Cross Timbers (Therrell and Stahle 1998).

3. Survey Procedures

EMP Development Team Members:

Dr. John Lamberton	Environmental Management Consultant
Dustin Huff	State Source
Blu Hulsey	Town of Skiatook (SEDA)
Jeff London	Consultant, Registered Forester
Greg Bersche	Corps of Engineers
Jim Harris	Corps of Engineers

The lease area on the southeast side of the lake was mapped first. This area contains the camping area, village, and the marina (Project Development Phase I). Skiatook Point and the area south of Tall Chief Cove road will not be mapped until such time that the development of that part of the lease area is more imminent.

The mapping project started in the campground area near the John Zink Ranch and proceeded northeastward to the Spillway. The survey methods varied depending on forest density and size. In dense forested areas, parallel transect lines ranging from 100 to 150 feet wide were used to ensure sufficient coverage. In low density or narrow strips where visual contact could be maintained by team members, the distances were adjusted to maintain coverage.

The field surveys started on Thursday, September 25 and completed on October 30, 2003. The procedures for the mapping project were jointly planned and agreed upon by the CrossTimbers EMP Development Team and the USACE. Survey zones were established to identify the extent of daily survey progress and do not necessarily represent a specific forest type or site condition.

The USACE team members, Jim Harris and Greg Bersche, reviewed and monitored the Ancient Timber mapping process on a continuous basis during the exercise. Due to the continuous participation by the USACE team, a survey zone was considered adequately mapped at the end of each day by mutual agreement of the CrossTimbers EMP Development Team and the USACE team.

For the purpose of this survey Old Growth or Ancient Timber are defined as those Post Oak trees over 200 years old. The Ancient Cross Timbers Consortium describes the Ancient Cross Timbers forest type (Post Oak and Blackjack Oak) as a forest type that tends to dominate dry, rocky positions, and includes Post Oak trees 200- to 500-years old. It includes dense forest, open woodland, glades, and savannas. Although there is some variation in the literature defining the age range of "Ancient Timber", this survey used a conservative estimate of 200 years.

In this survey, candidate Ancient Trees are defined as those trees displaying physical characteristics common to Ancient Timber. Characteristics of candidate trees include but are not limited to diameter in relation to soil quality; nubs or scars from branch loss; and treetops that are gone or partially gone. Information including the nutrient conditions and the topography of the area immediately surrounding a tree (such as the presence and quantity of sandstone or limestone rocks) contributed to the determination that a tree is an Ancient Timber candidate. Selected candidate trees were cored to determine age and estimated growth rates for a specific site. Remaining candidate trees were not aged as part of this survey. If there is a conflict between known candidate trees

and the project's land use plan, additional cores will be used to determine if it qualifies as an "Ancient Tree".

No dead trees were mapped.

#### 4. Survey Collection

GPS Equipment. A hand held Global Positioning System (GPS) unit, eTrex Vista manufactured by Garmin, was used to obtain the approximate locations of individual candidate trees. The level of accuracy varied depending on the clear view of the sky with satellite reception. The Wide Area Augmentation System (WAAS) was enabled to receive data for correcting differentials in the GPS satellite signals. The manufacture cautions the user that it is not to be used for precise measurements.

##### Individual Tree Collection Data

\* Diameter Breast Height (DBH). Individual tree diameter was taken at 4.5 ft above ground and measured to the nearest inch.

\* Height. Individual tree height was estimated to the nearest 5 ft.

\* Growth Rate. Non-destructive core samples, 5mm diameter, were extracted from selected old trees to determine the total age of a tree and establish a growth rate for different sites.

\* Tree and Site Characteristics. Visual observation of the trees characteristics was used to identify candidate trees. Typical tree and site characteristics included but were not limited to diameter in relation to soil quality; presence of nubs or scars from branch loss; large trunk scars, and tree tops that were gone or partially gone.

Note: There was an abundance of broken tops that resulted from tornados in the late 1980's and severe drought in the 1950's.

\* Digital Photographs. Digital photographs were taken of selected trees that exhibited unique and common characteristics of Old Growth trees. Each photo was identified according to the individual tree identification number.

Mapping Software. ArcView GIS Programs (versions 8.1 and 3.2) software was used to plot various tree locations, identify lease boundaries, survey zones and land use plans. All map projections are based on UTM NAD 83 Zone 14N in feet.

#### 5. Survey Results

**General Results.** There were a total of 783 Post Oak trees surveyed in the area scheduled for initial development. This survey report

covers approximately 30% of the lease area. Based on average tree growth rates for specific areas, tree age was estimated by multiplying the growth rate by the tree radius ( $\text{Rate} * \text{DBH}/2$ ). Growth rates were selected based on core samples and site location. Core samples were taken from approximately 21 trees (3%). Intact core samples could not always be extracted due to heart rot and the outer rings were used as a basis for estimating growth. Core samples were identified and retained by the Corps of Engineers, Skiatook Lake Office.

**Candidate Tree Selection Criteria.** During the inventory process it became apparent that site conditions and rates of growth varied through out the survey area. Factors noted during the survey that seemed to influence growth rate included slope aspect (north-facing vs. south-facing), soil type and depth, underlying bedrock type and depth, proximity to exposed surface rock, slope of the terrain, density of surrounding vegetation, and the overall condition of the tree related to its ability to procure and process soil nutrients. As the survey progressed, diameter selection criteria were modified as a result of these factors. Example: a 14" DBH tree growing on steep, rocky, north facing slope was considered to be a candidate tree because it had a slower growth rate and estimated to be over 200 years old. Conversely, a similar size tree in better growing conditions would have a faster growth rate and therefore be approximately 140 years old.

Growth rates and diameter were not the only factors in identifying candidate trees. Trees that exhibited other physical characteristics typical of old growth timbers were also included as criteria as previously discussed.

**Survey Zone 1** - Area 1 is approximately 47 acres located south of Tall Chief Cove campground. The terrain is gradual sloping with open grassland and isolated stands of trees. Most of the trees are located along shoreline or drainage areas. Lower stands of timber have been subject to inundation as part of the projects flood control operations. A total of 32 trees were inventoried in this area ranging from 12 - 26 inches DBH and a mean of 17.1" DBH. One tree was aged in this area and the growth rate for this area is approximately 20 years per inch.

**Survey Zone 2 & 3** - These areas include approximately 62 acres located from the swimming beach and boat ramp to the southern boundary line. This area is scheduled to be developed for the Village area and will include a conference center, store and cabins. The terrain varies from gentle sloping to very steep along the shoreline with some open grassland. Most of the area is mix hardwood forest type. Density varied from light to heavy with several open stands and savannahs. A total of 64 trees were inventoried in this area ranging from 10" to 28" DBH and a mean of 17.6" DBH. Three (3) trees were aged in this area and the growth rate for this area varied from 16 to 25 years per inch depending on

the site location. The mean growth rates for this area are 16 and 20 years per inch. The 16 yr/inch growth rate is for trees located on flat to gentle sloping terrain and 20 yrs/inch growth rate for steep, rocky slopes. The 20 yrs/in growth rate is comparable to those rates found in adjacent zones with similar slopes and growing conditions.

**Survey Zone 4** - This area is a relative narrow strip of land between the proposed Village area and the Marina. Planned development for this area is cabin sites along the north shore and the marina development in the cove (Tornado Cove) to the north. It is approximately 39 acres with terrain that varies from relative flat to very steep along the shoreline. There are small points on the north shore that have gentle slopes while the remaining area is steep and rocky. The area in the marina cove is typically steep and rocky. Most of the tree cover in this area consists of Post Oak - Blackjack Oak forest type that varies from heavy to moderate density. A small portion is an old field with invading wood species. A total of 33 trees were inventoried in this area with diameters ranging from 15" to 26" DBH and a mean of 19.5" DBH. Five (5) trees were cored in this area and rates ranged from 15 - 25 years per inch. The mean growth rate for this area is 20 years per inch.

**Survey Zone 5** - This area is a narrow strip of land located on the north shore of the marina cove. This area is planned as part of the marina development. It is approximately 14 acres with steep and rocky terrain. Forest cover consists of dense Post Oak and Blackjack Oak with few openings. Total trees inventoried are 82 in this area with diameters ranging from 11" to 21" in DBH and a mean of 14.2" DBH. Four trees were cored and growth rates ranged from 20 to 26 years per inch. The mean growth rate for this area is 25 years per inch.

**Survey Zone 6 & 7** These areas consist of a narrow strip of land located between the marina cove and Skiatook Spillway. This area is planned for low density development such as nature trails. It is approximately 32 acres with steep and rocky terrain. Forest cover consists of dense Post Oak and Blackjack Oak with few openings. Total trees inventoried are 220 in this area with diameters ranging from 12" to 28" DBH and a mean of 15.9 DBH. Four trees were cored and growth rates ranged from 20 to 26 years per inch. The mean growth rate for this area is 25 years per inch.

**Survey Zone 8** - This area consist of a narrow strip of land located south of Skiatook Spillway. This area is planned for low density development such as nature trails. It is approximately 34 acres and varies from steep and rocky terrain along the shoreline to relative flat on top. Forest cover consists of dense Post Oak and Blackjack Oak with few openings on steep slopes to open savannahs on top. Total trees inventoried are 352 in this area with diameters ranging from 12" to 23" in DBH and a mean of 15.2" DBH. Four trees were

cored and growth rates ranged from 20 to 30 years per inch. The mean growth rate for this area is 25 years per inch on steep slopes and 16 on top.

Appendix A  
Tables

Survey Summary

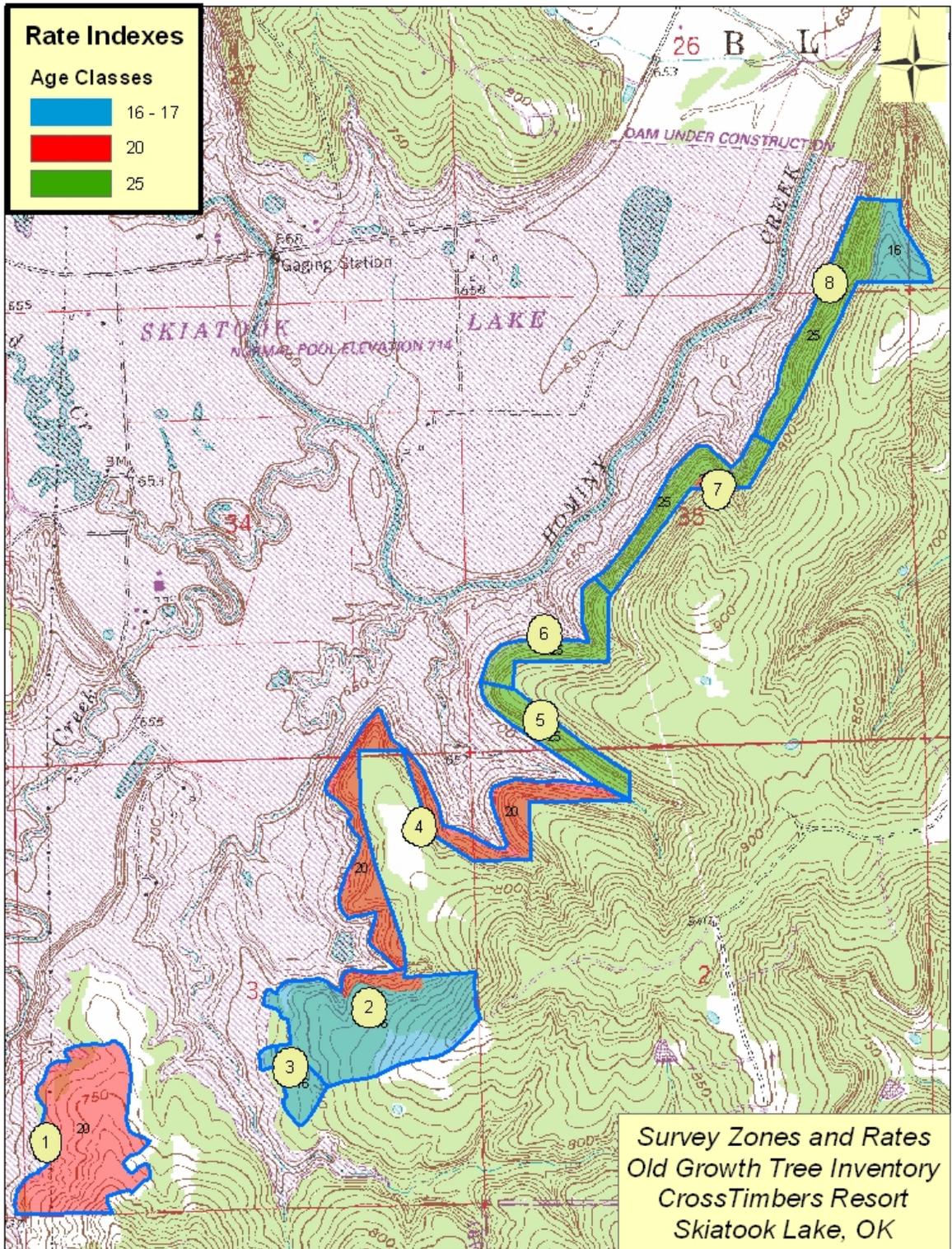
Survey Zones	Number of Trees	Acres	Min Growth Rate	Max Growth Rate	Mean Growth Rate	Age Index	Trees => 200 Yrs. Old
Zone 1	32	47	20	20	20	20	7
Zone 2	63	55	16	25	19	16 & 20	4
Zone 3	1	7				16	1
Zone 4	33	39	15	25	20	20	13
Zone 5	82	14	20	25	23	25	22
Zone 6	72	14	22	26	24	25	42
Zone 7	148	18	23	23	23	20 & 25	62
Zone 8	352	34	16	30	17 & 25	17 & 25	83
Total	783	328	-			-	234

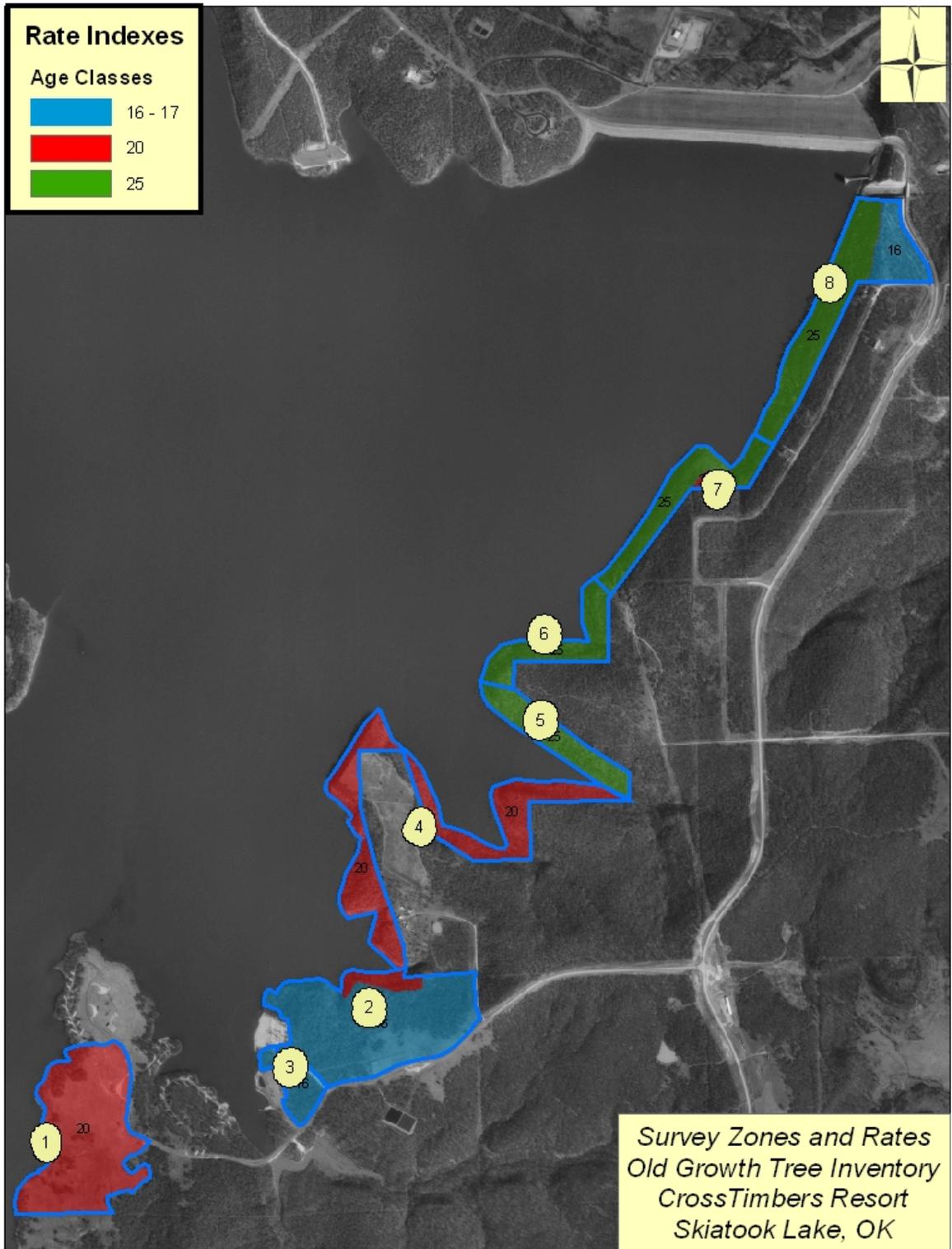
Note: Multiple Age Indexes used in some areas due to different site conditions. Age Index 25 used for portions of Zones 6, 7 and 8 located along steep slopes.

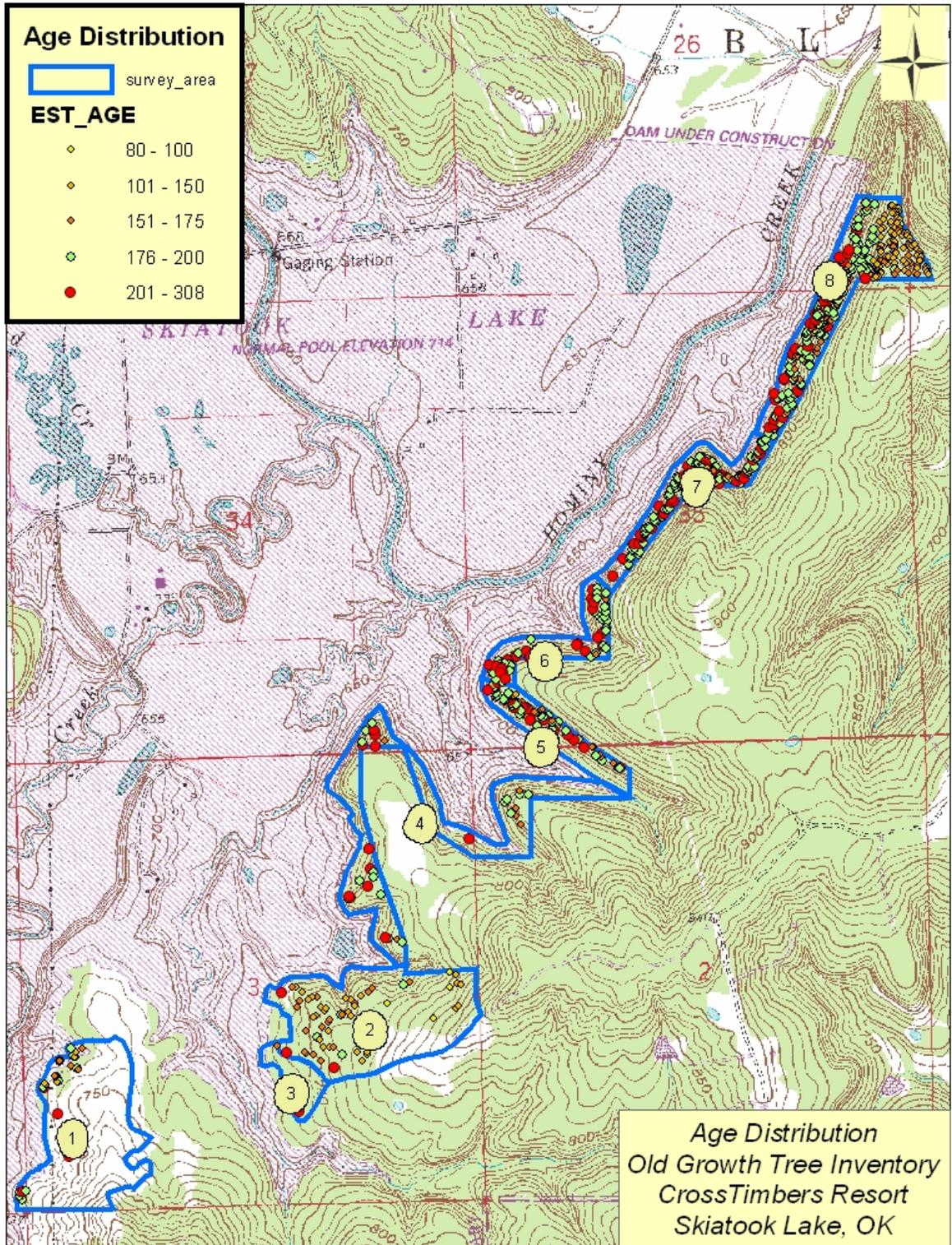
Trees Per Survey Zone

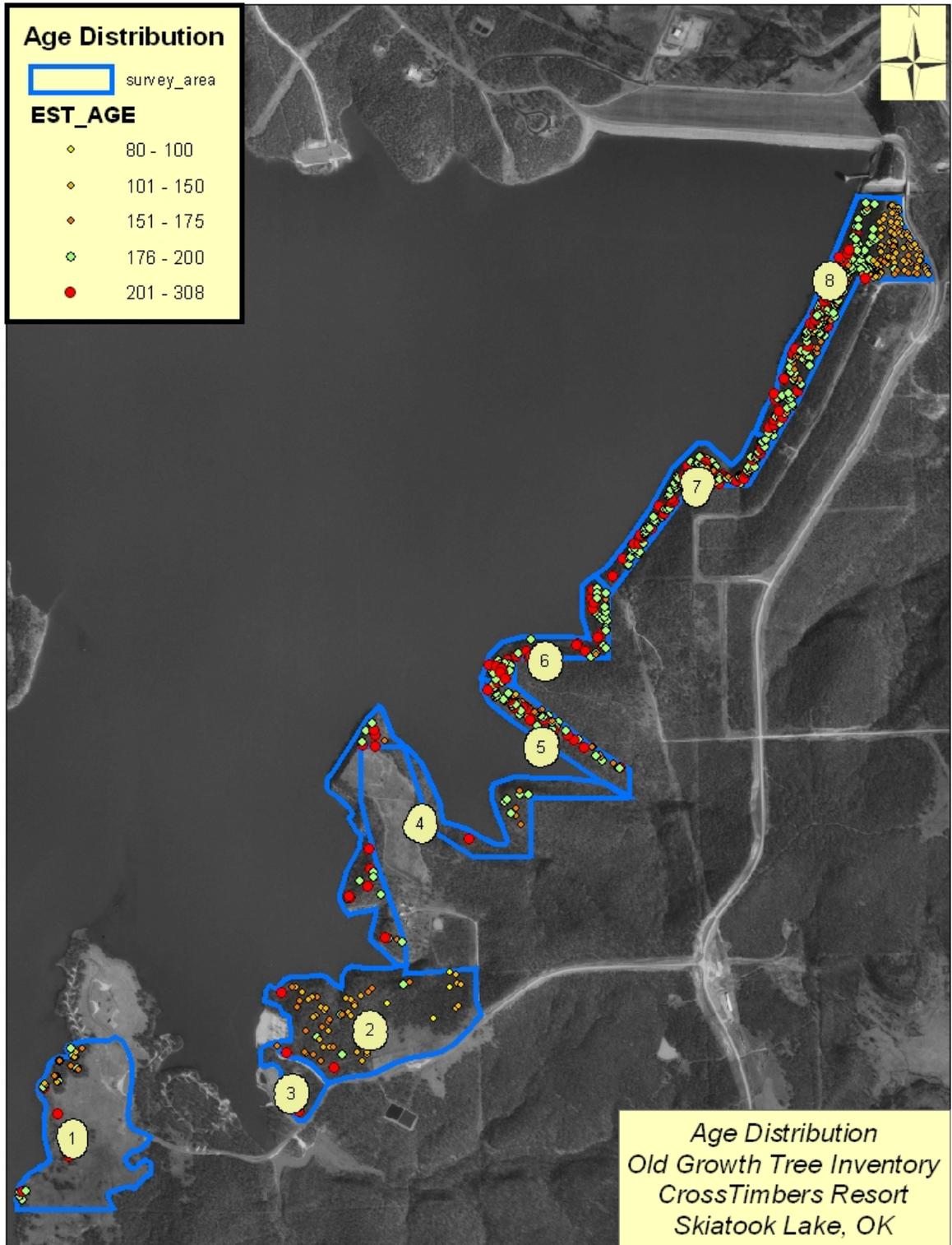
DBH	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8			Total Trees
10	0	1	0	0	0	0	0	0			11
11	0	0	0	0	4	0	0	0			15
12	2	3	0	0	10	0	1	16			44
13	3	1	0	0	16	3	10	50			96
14	3	8	0	0	18	11	44	91			189
15	0	0	0	2	12	16	26	51			122
16	6	11	0	4	7	11	34	74			163
17	4	3	0	2	7	11	9	27			80
18	7	13	0	3	5	8	14	24			92
19	0	4	0	8	2	3	5	10			51
20	3	13	0	3	0	1	2	4			46
21	0	0	0	2	1	1	1	3			29
22	3	3	0	4	0	5	1	1			39
23	0	0	0	2	0	1	1	1			28
24	0	0	0	2	0	0	0	0			26
25	0	0	0	0	0	0	0	0			25
26	1	3	0	1	0	0	0	0			31
27	0	0	0	0	0	0	0	0			27
28	0	0	1	0	0	1	0	0			30
Total	32	63	1	33	82	72	148	352			783

Appendix B  
Survey Maps









Appendix C  
Photographs

## Core Sampling



## Characteristics of Old Growth Trees



Old "Nubs" indicated old limb scar healing



## PART II

### Inadvertent Discovery of Cultural Resources Plan

#### **Purpose:**

Project construction and operation may lead to the inadvertent discovery of cultural resources within project boundaries. Protecting cultural resources is a priority during the development and operation of the CrossTimbers Resort and Golf Course and is embodied in the project policy regarding cultural resources:

"To be effective stewards of cultural resources located on CrossTimbers Resort and Golf Course grounds, by proactively establishing guidance and procedures for the management of cultural resources, developing relationships with interested stakeholders, and providing support to contractors concerning cultural resource awareness and policy compliance."

#### **Scope:**

The CrossTimbers Cultural Resource Inadvertent Discovery Plan contains criteria to ensure proper protection and management of cultural resources inadvertently discovered on the CrossTimbers Resort and Golf Course grounds. It incorporates actions necessary to comply with the law, identification of reporting requirements for "inadvertent discoveries", and training required to ensure contractors and project staff understand responsibilities and foster a stewardship ethic within the CrossTimbers Resort and Golf Course.

#### **Cultural Resources:**

"Cultural resources" are buildings, structures, archeological resources, sites, districts, objects, traditional cultural properties, and other evidence of past human life ways.

#### **Cultural Resources Management Team:**

The CrossTimbers Environmental Management Planning Team will manage the CrossTimbers Inadvertent Discovery of Cultural Resources Plan. Concerns about the Plan should be directed to Dr. John Lamberton or Dustin Huff. The EMP Team will have the following responsibilities concerning the inadvertent discovery of cultural resources during the construction and operation of the project:

- a. Conduct training to assure that contractors are aware of the Inadvertent Discovery Plan;

- b. Ensure that all construction activities are in compliance with applicable cultural resource regulations and laws;
- c. Implement provision steps for inadvertent discoveries of cultural resources;
- d. Coordinate consultation with the USACOE in the event of an inadvertent discovery of cultural resources.

### **Policy**

*In the event that cultural resources are encountered during any construction or excavation activities, the activity must stop and a member of the CrossTimbers EMP Team must be notified in person or by phone. Failure to report discovery of cultural resources may result in the violation of federal laws and regulations, which may lead to project delays and individual fines and penalties.*

### **Procedures**

*CrossTimbers staff, contractors, and sub-contractors conducting work on the CrossTimbers project will be made aware of their responsibilities concerning the inadvertent discovery of cultural resources during construction and implementation of other ground-disturbing activities related to CrossTimbers development and operation.*

*A. Any construction or ground-disturbing activity, as noted above, shall be halted immediately in the event of any of the following:*

- *Discovery of items such as pottery, bottles, arrowheads, stone flakes, bullets, structures or portions of structures (including foundations), bones of any type, or any portion or piece of any of the foregoing items.*
- *Discovery of evidence of past fill operations, dumping, or trash disposal which may include materials such as metal, wooden objects, glass, ceramics, etc., of historic age.*

*B. In the event that any of the foregoing items are encountered, activities affecting those items shall be halted immediately and a member of the CrossTimbers EMP Team shall be contacted promptly for appropriate guidance. Current members of the CrossTimbers EMP Team members are:*

- *Dr. John Lamberton, EMP Team Leader, 918.382.9650*
- *Dustin Huff, Project Manager / StateSource, L.L.C., 918.607.1886*

### **TRAINING**

*It is the policy of the CrossTimbers Resort and Golf Course that cultural resource training will be provided to all direct contractors of StateSource, L.L.C. and employees who carry out some or all of CrossTimbers' cultural resource compliance*

responsibilities. The purpose of this training is to increase awareness and knowledge of CrossTimbers' cultural resource stewardship responsibilities. Completion of this training will be a requirement for all direct contractors and employees of StateSource, L.L.C

Upon completion of this training, participants will be able to:

- Recognize a potential cultural resource.
- Understand CrossTimbers' policy and procedures for identifying and protecting cultural resources.
- Locate and receive assistance from CrossTimbers EMP Team members.
- Document and safeguard potential cultural resource locations.
- Describe steps to be taken when cultural resources are encountered.

The CrossTimbers EMP Team, following guidance provided by USACOE cultural resource professionals, will provide Cultural Resource Training. The training will include cultural resource identification and proper provisions for handling inadvertent discoveries of cultural resources.

**Contractors, Subcontractors, and Project Staff:**

Please read the Inadvertent Discovery of Cultural Resources Plan and sign this statement:

I hereby certify that I have read the CrossTimbers Inadvertent Discovery Of Cultural Resources Plan. I have completed the Training Program for the Plan and completely understand my duties and responsibilities under this Plan while I am involved in the construction, operation, and maintenance of the CrossTimbers Project on Skiatook Lake.

Signed: \_\_\_\_\_

Company: \_\_\_\_\_

Date: \_\_\_\_\_

### Part III

#### Aquatic & Terrestrial Mitigation Plan for the CrossTimbers Resort & Golf Course on Skiatook Lake

##### Introduction

Historically, the USACE (Corps) has created lakes for various uses including flood control, water supply, water quality, navigation, fish and wildlife management, power, and recreation. Although Skiatook Lake was created for several of the aforementioned uses, recreational use was a major component of the master plan for the Lake. Recreational development was contemplated through land use allocations assigned to Corps property when Skiatook Lake was created. These land use allocations are classified as wildlife management, recreation lands, recreation low density, recreation intensive, and project operations.

##### The CrossTimbers Development

The CrossTimbers Resort and Golf Course is located on approximately 700 acres of Corps property on Skiatook Lake. There are four land use allocations within the CrossTimbers leased property: recreation low-density, recreation lands, recreation intensive, and project operations. Under the land use allocation criteria detailed in the Skiatook Lake Master Plan, all of the CrossTimbers development meets the land use criteria except for the Marina and cabins slated for the leased property running north from the Tall Chief Cove area, through Tornado Cove, including the land on the point at the northwest entrance to the Cove, herein referred to as the "Tornado Cove Area". The Marina and cabins constitute a more intense recreation activity than is contemplated by the recreation low density land use allocated to the Tornado Cove Area. Thus, the proposed development in the CrossTimbers land plan exceeds the land use allocation for the Tornado Cove Area. The exceedance applies to approximately 40 land acres and 20 lake acres that comprise the anticipated footprint for the Marina. The exceedance for the Tornado Cove Area will be mitigated.

There is also an undefined difference between the recreational activities planned for Skiatook Point and the project operations land use allocated for approximately 75 acres of the leased premises on Skiatook Point. There may be an

interpretative exceedance between the recreational activities planned for Skiatook Point and the criteria for recreational activities contemplated by the project operation land use allocation. Although the exceedance is vague and may not actually exist, the CrossTimbers project stipulates that the exceedances, whether real or interpreted, will be mitigated.

### **Mitigation**

Mitigation for the loss of wildlife habitat due to anticipated recreational development occurred at the time Skiatook Lake was created. Mitigation compensation was "banked" or "credited" in the form of land use criteria allocated on Corps property. Since most of the CrossTimbers development is designed within the criteria for land use on Corps property, mitigation compensation is achieved through banked mitigation credits. Additional mitigation compensation applies to instances in which proposed recreation activities exceed the land use allocations included in the Skiatook Lake Master Plan. The only exceedance in the CrossTimbers development from any land use allocation criteria in the leased premises occurs within the Tornado Cove Area and impacts approximately 60 acres of proposed development. Mitigation compensation will occur by exchanging 60 acres in the Tornado Cove Area with 60 acres reallocated to recreation low density use on a portion of Corps property allocated for recreation intensive use, i.e., Gouin Point, Twin Points, etc.

In order to abate any future confusion regarding the usage of approximately 75 acres of leased premises allocated for project operations on Skiatook Point, the project operations acreage will be added to the 60 acres in the Tornado Cove Area for which mitigation compensation will occur. At a mitigation ratio of one to one, approximately 135 acres impacted by land use exceedances in the CrossTimbers leased premises will be exchanged for 135 reallocated acres on another part of CORPS property on Skiatook Lake. Should more than 135 acres be reallocated as part of this mitigation compensation, each acre over 135 will be "banked" for any future mitigation compensation needs of the CrossTimbers development on Skiatook Lake.

The CrossTimbers Aquatic & Terrestrial Mitigation Plan will compensate for project impacts by replacing or providing substitute resources or environments in the following ways:

## Terrestrial Mitigation

1. Reallocate a minimum of 135 acres with similar habitat value on Skiatook Lake from recreation intensive usage to recreation low intensity usage such as Gouin Point, Twin Points, etc.

Aquatic Mitigation - It is anticipated that there will be an increase in the aquatic habitat value of Tornado Cove through the following mitigation compensation measures:

1. Chain over timber in Tornado Cove to increase the area of lake bottom covered by timber.
2. Establish fish attractors that may include the following:
  - Christmas trees solicited from the Skiatook community on a voluntary basis for three years.
  - Oak trees and understory from project construction.
  - The structure of the Marina.

### **CrossTimbers EMP Best Management Practices**

In addition to the in-kind mitigation compensation outlined earlier in this document, the best management practices and procedures outlined in the CrossTimbers Environmental Management Plan naturally promote continuous mitigation of developmental impacts through numerous out-of-kind mitigation alternatives. These alternatives may include designing the project to protect fish and wildlife resources and promoting public access to these resources; locating structures and infrastructure in the least environmentally damaging sites; and selectively clearing trees or other habitat manipulation. They may include seeding, fertilizing and treating areas as necessary to restore fish and wildlife resources; planting shrubs and trees and other vegetation to speed recovery; controlling polluted spoil areas; restocking fish and wildlife resources in repaired areas; and by returning areas within the lease to native conditions through management activities, which may include thinning of trees, controlled burn, etc. They may also include periodic monitoring of the development to assure continuous environmental stewardship and proper training of project personnel in the construction and operations of the facility to preserve fish and wildlife resources. They may further include environmental management planning and certification programs including but not limited to LEEDS, Fire Safety Programming, and Clean Marina designation.

### **Banked Mitigation**

The CrossTimbers development intends to bank mitigation credits through the execution of its Environmental Management Plan for future project needs upon Corps approval. Banking of habitat value for the express purpose of compensation for unavoidable future losses will be considered to be an additional mitigation measure.

**Project Number:** 1

**EMP Project Title:** Ancient Timbers Mapping (Old Growth Tree Inventory).

**Associated Environmental Aspect:** Construction Activities.

**Target/Goal:** To map the Ancient Timbers (Old Growth Tree Inventory) on the leased property. The inventory will provide a guide for CrossTimbers land planning so that the final project footprint will minimally impact Old Growth trees in the leased area. The land planners will superimpose the Old Growth Tree Inventory maps over the proposed land plan such that project components, i.e., conference center, Marina, retail stores, restaurants, golf course, etc., will be located in those areas which minimally impact the Ancient Timbers to the extent practicable and feasible.

**Scope:** Entire Development.

**Reference Documents:** CrossTimbers Environmental Assessment and SEDA/StateSource Lease with USACOE.

**Definitions:** Old Growth Trees (Ancient Timbers): Although there appears to be little agreement on just how old an Ancient Timber should be to be classified as Ancient, the Ancient Cross Timbers Consortium describes the Ancient Cross Timbers forest type (Post Oak and Blackjack Oak) as a forest type that tends to dominate dry, rocky positions, and includes Post Oak trees 200 to 500-years old.

**Primary Stakeholder Responsibilities:**

- SEDA/StateSource – project review.
- USACOE – project review.
- CrossTimbers Environmental Management Team – conduct a phased Old Growth Tree inventory on the leased property prior to construction.

**Procedure:** See Appendix 1, Old Growth Tree Inventory, CrossTimbers Resort, (Phase I).

**Time Frame:** The Ancient Timbers Mapping will occur in three phases.

**Phase I:** Completed September – October, 2003.

**Work Instructions**

The work instructions were developed and agreed upon by the USACOE and the CrossTimbers EMP Development Team.

Date: 10.15.03 - 2<sup>nd</sup> Amendment to the Document submitted on 9.08.03.

To: Mr. Jim Harris

From: The CrossTimbers EMP Development Team  
Mr. Blu Hulsey, SEDA  
Mr. Dustin Huff, StateSource  
Dr. John Lamberton, EMP Consultant and Team Leader  
Mr. Jeff London, Professional Forester

We are pleased that we will begin officially mapping the Ancient Timbers as required in the SEDA lease. As a part of the information and language that will comprise sections of the CrossTimbers EMP, we are reconfirming the following work instructions upon which we agreed for the first three preliminary mapping exercises:

- a. The Ancient Timbers mapping project begins the data collection phase of the first of four components required by the USACE in the CrossTimbers EMP. The CrossTimbers EMP component development process began on September 1, 2003 with a completion timetable of approximately December 1, 2003.
- b. The mapping project will begin on Thursday, September 25, at 9:30 a.m. at the Corps office on Skiatook Lake. The procedures for the mapping project were jointly planned and agreed upon by the CrossTimbers EMP Development Team and the USACE after thoroughly vetting the work procedures outlined in this memo during three preliminary mapping exercises involving you, Greg Bersche, Dustin Huff, Jeff London, and Dr. John Lamberton.
- c. The CrossTimbers Development Team consisting of Blu Hulsey, Jeff London, John Lamberton, and Dustin Huff, will survey candidate Ancient Timbers. Jeff London, a registered professional forester, will map candidate Ancient Timbers with a state-of-the-art GPS unit that will be used to collect the mapping data for the CrossTimbers EMP.
- d. As an exercise of the policy approved by the USACE concerning the mutual cooperation necessarily inherent in the public/private relationship that forms the basis for the Demonstration Lake Project on Skiatook Lake, a USACE team of Jim Harris and Greg Bersche will review the Ancient Timber mapping exercise on a continuous basis during the exercise. Due to the continuous review process by the USACE team, a lease area will be considered adequately mapped at the end of each day by mutual agreement of the CrossTimbers EMP Development Team and the USACE team.
  - Ancient Timbers will be defined as those Post Oak trees over 200 years old. Candidate Ancient Timber will be defined as those trees displaying characteristics that may qualify them to be Ancient Timber. Characteristics of candidate trees include but are not limited to diameter in relation to soil quality; nubs or scars from branch loss; and treetops that are gone or partially gone. Information including the nutrient conditions and the topography of the area immediately

surrounding a tree (such as the presence and quantity of sandstone or limestone rocks) will contribute to the determination that the tree is an Ancient Timber candidate. Candidate trees will be cored to determine which trees actually qualify as Ancient Timber at future times deemed appropriate and necessary by the mapping team.

- e. No dead trees will be mapped.
- f. The mapping project will begin in the campground area near the John Zink Ranch and will move northeastward in 100-foot increments unless the terrain dictates otherwise. The 100-foot measurement increments may be increased and/or decreased depending upon the terrain of the lease area.
- g. The lease area on the southeast side of the lake that will contain the camping area, village, and the marina (Project Development Phase I) will be mapped first. Skiatook Point will not be mapped until such time that the development of that part of the lease area is more imminent.
- h. Candidate Ancient Timbers will not be cored to determine their age until a conflict develops between the final CrossTimbers land plan and the actual location of candidate Ancient Timbers.

**Phase II:** Will begin December 2003 and completed during the subsequent 180-day period.

- a. Initial Schedule: 9 a.m. Thursday, December 18, 2003, and 9 a.m. Friday, December 19, 2003
- b. Meet at the Skiatook Lake Corps office.
- c. Greg Bersche, Jeff London, and John Lamberton will map on Thursday. Jim Harris, Dustin Huff, Jeff London, and John Lamberton will map on Friday. Blu Hulseby will join the team as his schedule allows.
- d. The leased area south of Tall Chief Cove Road will be mapped. Jeff London estimates that the Phase II map area is slightly over 100 acres in size. He has also estimated that at 200 ft. transit widths, it will require 15 to 16 transits to complete Phase II. His estimate to complete Phase II is two full days of mapping.

**Phase III:** Initiated and completed during 2004.

**Expenses:** \$25,000.

**Environmental Benefit:** The environmental benefit will be the preservation of the Ancient Timber natural resources on leased property.

**Project Number:** 3

**EMP Project Title:** Aquatic and Terrestrial Mitigation Plan

**Associated Environmental Aspect:** Construction

**Target/Goal:** Mitigate for the aquatic and terrestrial footprint of the CrossTimbers project on the acres that exceed the existing land use allocations.

**Process:**

### **Terrestrial Mitigation**

Terrestrial mitigation will occur by compensating for 135 acres of the CrossTimbers development that exceeds the land use allocations for the leased property on Skiatook Lake. The compensation transaction will involve reallocating a minimum of 135 acres with similar habitat value on Skiatook Lake from recreation intensive usage to recreation low intensity usage such as Gouin Point, Twin Points, etc.

### Aquatic Mitigation

The aquatic habitat of Tornado Cove will increase in value by utilizing the following mitigation compensation measures:

- Chaining over timber in Tornado Cove to increase the area of lake bottom covered by timber.
- Establishing a minimum of two fish attractors that may include the following: Christmas trees solicited from the Skiatook community on a voluntary basis for three years; and Oak trees and understory from project construction.
- Utilizing the structure of the Marina to provide additional aquatic habitat.

**Expenses:** \$10,000

**Environmental Benefit:** Compensate for the aquatic and terrestrial footprint of the CrossTimbers project on the acres that exceed the existing land use allocations.

# **APPENDIX E**

## **PUBLIC COMMENTS RECEIVED REGARDING DRAFT ENVIRONMENTAL ASSESSMENT**

From: bcwood0885 [bcwood0885@sbcglobal.net]  
Sent: Monday, March 27, 2006 8:52 AM  
To: Nolen, Stephen L SWT  
Subject: golf course

Dear Mr. Nolen,

As residents of Beverly Hills Lake Estates Two, we would prefer that the golf course remain at the original location. Switching the location of the camp ground and golf course, puts the campground closer to residential areas, and will possibly decrease the value of our property values.

Sincerely,

Robert and Carolyn Wood  
14410 Giorgio Drive  
Skiatook, OK 74070  
918-396-7658

From: Dennis Lenox [mailto:dlenox@americanbankok.com]  
Sent: Monday, March 27, 2006 3:31 PM  
To: Nolen, Stephen L SWT  
Subject: GOLF COURSE

MR. NOLEN.

WE ARE LAND OWNERS IN THE CROSS OAKS SUB-DIVISION, IN SKIATOOK , OK. WE  
THINK THE GOLF COURSE SHOULD SATY IN THE SAME PLACE AS PLANED SEVERAL  
YEARS AGO.

DENNIS AND SHERRY LENOX

From: Paul Kallenberger [mailto:PKallenberger@trustok.com]  
Sent: Tuesday, March 28, 2006 10:13 AM  
To: Nolen, Stephen L SWT  
Subject: Cross Timbers Development

Mr. Nolen,

I am writing to discuss and to object to the change in plans for Cross Timbers on Skiatook Lake. My primary objection concerns the move of the proposed golf course from Skiatook Point to the Tall Chief Cove area. My comments are as follows:

1. The original plan gained the additional support of the people of Skiatook and the Skiatook Lake neighborhoods because the golf course was located closer to the Skiatook population center at Skiatook Point.
2. The Tall Chief area golf course relocation proposal will make it more difficult for the Skiatook residents and most of the Skiatook Lake residents to use the golf course facilities.
3. At Skiatook Point, the golf course will have a quiet and majestic view of the lake and the valley below the lake. The Tall Chief location will have a view of existing camp grounds, a sewage lagoon, more noise and certainly more nearby traffic.
4. Locating campgrounds on Skiatook Point would seem to isolate the RV users from the Cross Timber facilities and these users might as well be camping at other Skiatook Lake campgrounds as far as use of the Cross Timber area is concerned. Campground users enjoy walking, swimming, etc. Most of these facilities will be in the main Cross Timbers area and not at Skiatook Point. Skiatook Point receives a strong south wind in the summer. It would not be safe to swim in this area, and the boat launch facilities are certainly more dangerous to use in the summer than the more protected Tall Chief area. Nor will most Skiatook Point campers be able to tie up boats on the shoreline because of these strong south winds.
5. Putting Campgrounds in the Skiatook Point will increase the traffic flow, crime and vandalism in that area. Currently, these safety problems are present in and about the Tall Chief campground, swimming beach and boat ramp areas. It makes sense to isolate these safety problems to one area and provide the necessary security to this one area than to spread the safety issues to two areas. I suspect that even the Lake's Corps office will require around the clock security as a result of the

campground traffic. The Healing Rock will be a prime target for vandalism and graffiti. Now, it is easy to maintain and secure. With the golf course, it would be easy to maintain and secure. With the campgrounds, I would anticipate that the Sheriff's office, the Corps or Cross Timbers will need to provide 24/7 guards to this sacred Indian area. The Osage County Sheriff's Department will now need to maintain deputies at both public use locations as they now provide security for only the Tall Chief area.

I hope my comments will be useful.

Paul E. Kallenberger

150 Giorgio Drive

Skiatook, OK 74070

918 396-0499

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From: Mary Short [msshort@direcway.com]

Sent: Tuesday, March 28, 2006 8:22 PM  
To: Nolen, Stephen L SWT  
Subject: Cross Timbers Golf Course

Dear Mr. Nolen,

As residents of Beverly Hills Lake Estates II for almost six years, we would prefer that the golf course remain at the original location. Switching the location of the camp ground and golf course, puts the campground closer to residential areas, and will possibly decrease the values of property in our neighborhood. When we chose to live here, one of the considerations given to living here was that it was across the lake from large campgrounds with much activity and noise.

Thanks for allowing us a say in this matter.

Sincerely,

Steve and Mary Short  
14450 Giorgio Drive  
Skiatook, OK 74070  
918-396-9192



## Oklahoma Archeological Survey

THE UNIVERSITY OF OKLAHOMA

March 29, 2006

Stephen L. Nolen  
Chief, Environmental Analysis and  
Compliance Branch  
Department of the Army  
Corps of Engineers, Tulsa District  
1645 South 101<sup>st</sup> East Avenue  
Tulsa, OK 74128-4609

Re: *Environmental Assessment of the Proposed Relocation of the Golf Course and  
Camping/RV Area, Crosstimbers Development Project, Skiatook Lake, Osage  
County, Oklahoma.*

Dear Mr. Nolen:

I have completed a review of the above referenced environmental assessment. I previously commented on the draft EA in a letter dated March 31<sup>st</sup>, 2003. In this letter, I noted that the "Healing Rock" was a traditional property and I would defer comment on eligibility decision to the Corps of Engineers and the concerned tribes. At this point, the Healing Rock will be protected from development plans and will meet the concerns of the tribes. I also noted in my letter that 34OS678 would require further evaluation to determine eligibility to the National Register. It is acknowledged in the EA that protection will be afforded the site and it will be considered as potentially eligible. I did not see further mention of the two historic archaeological sites (34OS676 and 34OS677) recorded during the cultural resource inventory of the project. I had deferred opinion on their eligibility and project effect to the State Historic Preservation Office. I assume that the two sites have been adequately treated in regard to concerns of the Preservation Office.

This review has been conducted in cooperation with the State Historic Preservation Office, Oklahoma Historical Society.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert L. Brooks".

Robert L. Brooks  
State Archaeologist

Cc: SHPO  
Osage Nation  
Quapaw Tribe

## KEVIN CLOUGH

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P.O. Box 1055  
Owasso, OK 74055

March 29, 2006

Mr. Stephen L. Nolen  
Chief, Environmental Analysis and Compliance Branch  
United States Army Corps of Engineers, Tulsa District  
1645 South 101<sup>st</sup> East Avenue  
Tulsa, OK 74128-4609

Dear Stephen,

Thank you for allowing my input upon the proposed changes to the CrossTimbers development on Federal lands at Skiatook Lake in Osage County, Oklahoma regarding the location of there Golf Course and camping area. At this point I remain concerned with any changes to the established plans and would not support the change.

The neighborhood in which I reside borders the CrossTimbers leased land on both the East and North sides "East Ridge Estates". My concern with changes to the Master Plan is what has currently happened to date with CrossTimbers developers and the area of land that borders our sub-division and Skiatook Lake. (Area 8 and northern portion of Area 7 of The Old Timber Inventory report). In all meetings and available architectural renderings ([www.CrossTimbers.biz](http://www.CrossTimbers.biz)) of CrossTimbers plans it has been indicated a shoreline hiking trail would be developed. This hiking trail was shown to follow the contour of the lake and provide an excellent means to recreate along the lake and observe the ancient cross timbers prairie habitat in a recreation-low density use area.

However, CrossTimbers developers bulldozed a road along the fence line (9'6" wide) which borders all existing backyards along the West side of our neighborhood. This road (trail) we have later found was constructed prior to any determination of:

- 1.) Why was the road (Trail) moved from the shoreline to our backyards without any neighborhood input from East Ridge Estates.
- 2.) What type of trail surface will be used.
- 3.) What type of security program will be in place, as of today no security is in place.
- 4.) What liability will homeowners whom share one half of the road (Trail) border have to take on.
- 5.) What will be done with all the trees which were knocked down while bulldozing the road (trail). We hope they do not burn them unattended as was done in other CrossTimbers construction.
- 6.) What will happen to the fence that was undercut in many areas and knocked down in some. My yard was undercut up to 1'6" in many areas.

Along with the CrossTimbers road (trail), developers built a wooden structure over the major drainage area of our neighborhood. This wooden structure was constructed by pushing boulders into the existing drainage obstructing the flow area from 15'6" wide to

7'1" wide. This structure borders our neighborhood and will decrease the storm run-off water flow. The decreased water flow and back up of silt will damage private property. Two trees were cut down and removed from private property while building this structure.

I am very impressed with the extent of work required to make changes to this original Environmental Assessment and it's effect upon the environment and socio-economic issues. With so much work required to change the location of a golf course and an camping area in two areas which have little or no common borders with existing residential areas I wonder why is the same detail is not required for changes to land that actually borders existing residential areas. This road (Trail) was cleared and now provides an easy and unsecured access to my family and our home of nine years.

I also do not recommend the change in location of the golf course because it's new location will border and be very close to the Red Castle Gun Club. The Red Castle Gun Club was organized in 1963 and is beneficial to all member families and the local community. The possible noise from the gun range may be distracting to golfers and cause potential issues with yet another neighbor to the CrossTimbers Resort.

Sincerely,



Kevin Clough

From: Stephanie Upton [s-upton@sbcglobal.net]  
Sent: Friday, March 31, 2006 1:30 PM  
To: Nolen, Stephen L SWT  
Subject: Skiatook Chamber of Commerce

Mr. Stephen Nolen,

I'm writing in reference to the CrossTimbers Development Project at Skiatook Lake. The proposal is for the relocation of the Golf Course and Camping/RV Area at Skiatook Lake which is located in Osage County. It is important to the region of the success of CrossTimbers for this proposal to be accepted. If accepted, it will provide economic development, tax benefits, and most importantly jobs in Oklahoma. The Skiatook Chamber supports this proposal and the a U.S. Army Corps of Engineers.

Stephanie Upton  
Director, Skiatook Chamber of Commerce  
918-396-3702 office  
918-698-3702 cell  
"Be Extraordinary, not ordinary"

From: Don England [done@northville.com]  
Sent: Friday, March 31, 2006 10:47 AM  
To: Nolen, Stephen L SWT  
Subject: FW: Crosstimbers - Relocation of campgrounds at Skiatook lake

Dear Mr. Nolen,

As a major property owner at The Estates at Cross Timbers, I strongly recommend the relocation of the existing camp ground located at Skiatook Lake to allow the development of the Golf Course on that site. It just makes sense to move the campground to the proposed site and replace with the Golf Course. This will be much more appropriate to the residential development that is proceeding. Everyone wins with this change as the campers and residents will avoid future conflicts over their specific uses of this area of the lake. Thank you for your consideration in this matter.

Regards,

Don England

From: Lisa Burn [lisa@buffaloland.com]  
Sent: Friday, March 31, 2006 10:03 AM  
To: Nolen, Stephen L SWT  
Subject: CrossTimbers

Mr. Nolen,

My husband and I are owners of two lots in Phase I. We feel like this development/community is going to be great for the State of Oklahoma. We would like to see the CrossTimbers Golf Course be moved to Tallchief Cove. We strongly support StateSource, LLC. in this decision.

Thank you for your time.

Lisa & Blaine Burn

From: Marc Kodack [mkodack@adelphia.net]  
Sent: Saturday, April 01, 2006 8:36 PM  
To: Nolen, Stephen L SWT  
Subject: Comments on the Environmental Assessment for Skiatook Lake

Dear Mr. Nolen,

Following are my comments on the Environmental Assessment of The Proposed Relocation of The Golf Course and Camping/RV Area, CrossTimbers Development Project, Skiatook Lake, Osage County, Oklahoma. My concerns with the entire EA are based on missing information that should appear in the document. Information on the project from the State Historic Preservation Officer/State Archaeologist is missing. Actual surveys to determine the presence/absence of the burying beetle have not been conducted.

In-depth discussion of Environmental Justice with supporting Census data is not presented. And, the absence of the turf management plan because of its possibly effect on water quality in Skiatook Lake together make the issuance of a Finding of No Significant Impact premature. Until the missing information is included and the public have had the opportunity to then evaluate that information, the potential/real effects of the project on the environment cannot be determined than is currently possible with the EA as written.

Sincerely yours,

Marc Kodack  
129 Lighthouse Lane  
Winchester, Virginia 22602

Page 8, B. Preferred Alternative (Proposed Action) and page 21 Threatened and Endangered Species. If the burying beetle (ABB) is a Federally-listed endangered species and may be present with the proposed project area, how can adverse impacts be minimized after construction begins if the beetle is present? By the start of construction it may be too late to "minimize" any adverse effects.

Why is a survey being delayed until after construction begins? Is the beetle present the project area? If the answer is unknown, how can a post-construction survey gather baseline data untainted by the construction work? In a letter from Mr. Jerry J. Brabander to COL Kurka, Mr. Brabander says that some construction activity may already have begun in the Village and marina areas. How has this been resolved with the U.S. Fish and Wildlife Service? Is coordination still on-going?

Page 8, B. Climate. Every environmental assessment must be a separate stand alone document in order for reviewers and the public to evaluate if all the information necessary to make a decision on whether the proposed action will or will not adversely effect the environment. References to the 2003 EA and information contained in that document must be included. Thus, the 2003 EA should have been included as a separate appendix.

Page 18, Environmental Justice. Where is information presented on what populations would be affected? Where is the census data to show what populations may be present in the surrounding area? Would a golf course and marina be used by these underserved populations? Where is that discussion?

Page 21-22, 9. Cultural Resources. Have the visual effects to the two eligible properties been assessed? Degradation of the surrounding landscape that is visible from these properties could adversely effect their current eligibility to the National Register of Historic Places. What does the Oklahoma State Historic Preservation Officer and State Archaeologist say about the proposed plans? What do they say about visual intrusions to these eligible properties?

Page 24. There is an extended discussion about turf management. However, turf management is to appear in a not-as-yet-written part of the Cross-Timbers Environmental Management Plan. How can the a reviewer or the public evaluate what is planned if the turf management portion of the EMP does not yet exist, particularly since run-off may affect water quality in the lake? How will the turf management plan contents be enforced if it is written after NEPA compliance is completed? The EA must contain all the information.

Page 25, Air Quality. What are the temporary changes in air quality that will occur in the construction zone? Will these temporary changes, such as increased levels of sulphur and nitrogen oxide from the combustion of diesel fuel, have an adverse effect on local air quality? Where is this discussion in the EA?

On page 9 the following is written "The Tall Chief Cove camping facilities are used at a 100% rate on weekends (turning away a number of individuals during the peak recreation season). Crystal Bay Marina, located on the north shore of the lake, operates at approximately 90% capacity during the boating season (May through September). The recently opened Cross Timbers Marina is currently operating at approximately 95% capacity.

Ye the following is from page 26.

"The Skiatook Lake project anticipated much greater development of recreational areas and larger visitor numbers than have occurred to date. The Final Environmental Statement prepared for Skiatook Lake identified a total of seven public use areas to be developed on 1,350 acres of USACE managed lands. The proposed lease area consists of approximately 47% of the acreage identified to be developed at the lake (631 acres of leased lands divided by 1,350 acres identified to be developed) and just over 3% of the total project lands and water comprising the Skiatook Lake project (677 acres of total lease area divided by 20,000 acres of USACE managed lands). Prior to construction an average annual visitation of 1,455,000 people was estimated for the lake, which would have been supported in part by the seven proposed public use areas. Visitation to Skiatook Lake has never approached that volume. Instead, annual visitation at Skiatook Lake has averaged slightly more than 586,000 during fiscal years 1999-2002. Cumulative impacts experienced at Skiatook Lake to date have not reached the levels originally contemplated."

If the places mentioned on page 9 have a use rate of from 90-100%, how these area experienced the cumulative impacts mentioned in the last sentence quoted from the page 26 paragraph given above? If the Skiatook Lake project anticipated more people, how is this reconciled with the 90-100 % use rate?

From: slzingerman@cox.net  
Sent: Sunday, April 02, 2006 9:45 PM  
To: Nolen, Stephen L SWT  
Cc: krefting@peoplepc.com; msshort@direcway.com  
Subject: oppose the Cross Timbers campground relocation

I am a home owner in the Beverly Hills subdivision on Georgio Drive (lot 7). The proposal locates the RV/campground on the North side of the dam in close proximity to residential homes bordering on the corps lands. My major concern is the security of the area on the corps lands. We all are very aware of the consumption of alcohol in campgrounds and the devil may care attitude to lands within the campground and the adjacent lands. I do not feel confident that adequate security will be provided to protect the homeowners properties. In addition I am concerned that additional unsightly trash will appear around the lake in addition to a higher risk of fires.

In conclusion, I do not recommend that the relocation be adopted.

Thank you for seriously considering my concerns....James Zingerman

From: Bruce Krefting [krefting@peoplepc.com]  
Sent: Sunday, April 02, 2006 11:07 AM  
To: Nolen, Stephen L SWT  
Subject: I oppose the Cross Timbers proposal

Thanks for sending me the CD with the complete Environmental Impact statement. I OPPOSE the proposed change for several reasons:

\* I don't believe this proposal has been very well presented to the Lake Skiatook area public. One ad in the Skiatook Journal may be legally sufficient but hardly allows for widespread review and discussion. As the president of the Beverly Hills Lake Estates II neighborhood of 27 property owners located close to Cross Timbers, not a single owner has told me they had seen the single ad - all were unaware of the proposed change. I met with a board member of the Santa Barbara Cove association, another nearby neighborhood on Skiatook Lake of almost 30 property owners, had also not heard of the proposal - and he was COMPLETELY AGAINST the proposal. I also think the size of this Environmental Impact document meant many could not review the proposal (rural Osage County residents around Lake Skiatook typically have just dial-up internet access. A 141-page documents is simply too big to be downloaded or viewed at 26.6K download speed. I would urge the Corp to hold a series of public comment meetings that are well advertised to truly get the feel of the local population to this proposed change.

\* I am against moving the golf course to a location so far from the lake as described in the proposal (the layout is not well described in the proposal which reinforces in my mind the pending "plain-ness" of the new course). Oklahoma has many fine golf courses but few with as many beautiful lake views as promised in the original site. Moving the course away from the lake will make this course just another golf course. I prefer the numerous lake views and challenging elevation changes in the original proposal as this would make the Cross Timbers course one of the most beautiful courses in the region - perhaps the country - and be a significant boast to our local economy. The proposed change will not benefit the community anywhere near as much.

\* I am against moving the campground to the north side of the dam. This change will cause security issues with campers too far from after-hours security. With the easy access from the Skiatook Point Landing road, I'm concerned about drinking campers or drinking boat landing users roaming through the Corp access without any available security. As a home owner with property adjacent to the Corp property along Skiatook Lake, I am concerned about drinking campers roaming the Corp property far beyond the Cross Timbers leased areas causing security and property destruction issues for all nearby residents. I think the State Patrol will tell you of many concerns they've had to address from drinking boaters and campers using the Tall Chief access to the lake. Security around the campground must be complete - for the benefit of the nearby property owners and the other campers.

\* Finally, I oppose the proposed change based on the increased risks of fires started by campers roaming far from the leased area unsupervised. A fire started below our property in Corp land with the prevalent southerly winds this winter would have burned down my home before any fire department could have reached us. Our neighborhood in rural Osage County is served by the City of Skiatook Fire Department that must negotiate a steep climb on Highway 20 to reach our neighborhood. I estimate a single fire truck would need at least 15 minutes to reach our neighborhood, hardly sufficient as our homes are just a hundred yards from the lake edge and even less to Corp property. The fire danger alone with

our southerly winds is enough to highly recommend that the campground area MUST be kept on the south side of the dam per the original design (fires out of control there would burn themselves out when they reached the lake). The campground cabins needs to be well supervised with Cross Timbers staff and after-hours security available to ensure destructive behavior is quickly halted.

If I have sent this response to the incorrect email address, please forward it to the correct email address by the April 5 deadline.

I would also like to be put on the notification list for any future proposals that impact the Corp's property around or on Lake Skiatook.

In conclusion, I am OPPOSED to the proposed change and urge the Corp to reject it. I also recommend that any future proposed changes be better advertised to area resident with mailings and multiple ads to ensure the local neighbors are well informed.

Bruce Krefting  
14389 Giorgio Drive  
Skiatook, OK 74070  
918-361-7338

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<http://www.peoplepc.com>

Golf course & campground planning at Skiatook LakeFrom: McKay, Allan B.  
[Allan.B.McKay@conocophillips.com]  
Sent: Monday, April 03, 2006 2:34 PM  
To: Nolen, Stephen L SWT  
Subject: Golf course & campground planning at Skiatook Lake

Dear Mr. Nolen,

We have been made aware there is a proposal to alter the previous agreement of February 13, 2003 and move both the golf course and camping/RV locations. This news has come as a bit of a shock, since it seems we, along with others in our Beverly Hills Phase II subdivision, were not privy to the request as is evidenced by our names not appearing in your "Cross Timbers Draft EA Final Mar2006" document (pages 29 to 31).

We have just moved to Oklahoma and built a new home on Skiatook Lake. We spent considerable time evaluating whether to build on the lake or live in Tulsa. We made the decision to have a house built on Skiatook Lake for many reasons. One reason we took into consideration was the proposed location for the approved Cross Timbers Golf course. Our feeling at the time of purchasing the property was the location of the golf course would add value to the property. We are now concerned the opposite impact on our values will occur with the replacement of a golf course with a campground.

I do not see in the EA Mar2006.pdf document any reason given to change locations of the golf course and campgrounds. The lack of clear information explaining the reason for the change makes this proposal seem like a bate and switch on the part of Cross Timbers. First they get approval for a project in 2003 and then they come back and make changes with very little notification about hearings to communities that would be impacted.

Many people have invested their savings in properties based on the existing approved development plans of the Department of the Army. A decision to allow this change to be made after so many people and developers have invested in Skiatook Lake is hardly fair or reasonable.

I would ask that you consider having a meeting so people that have a investment in Skiatook Lake properties, and would be impacted, can hear first hand why this request has been made. This meeting should also explain the potential impact a campground would have on Skiatook Point and property values nearby.

Thank you for taking time to consider these points and if you have any points of clarification, I would appreciate hearing them.

Allan McKay  
ConocoPhillips  
Director, Global Network Security Services  
1-918-661-7965 Work or 1-832-715-2116 Cell  
Internet: Allan.B.McKay@ConocoPhillips.com

Proposal by CrossTimbersFrom: Mark Schell [mark.schell@unitcorp.com]  
Sent: Monday, April 03, 2006 10:25 AM  
To: Nolen, Stephen L SWT  
Subject: Proposal by CrossTimbers

Mr. Nolen:

I am writing to express my support for the proposal by CrossTimbers to relocate their proposed golf course as set out in the Draft EA I recently received.

As you may know, I am the Trustee of a Trust that owns 16 acres in the immediate vicinity of the recently completed CrossTimbers Marina. As a result, I am very familiar with the development activities associated with the CrossTimbers operations as well as its impact on the surrounding area. I believe that this development, including that proposed in the Draft EA, is a much needed step to further the public's use and enjoyment of Skiatook Lake.

If you have any questions regarding my support for the project, please feel free to contact me.

Mark E. Schell  
Senior Vice President and General Counsel  
Unit Corporation  
7130 South Lewis, Suite 1000  
Tulsa, Oklahoma USA 74136  
E-mail: mark.schell@unitcorp.com  
Telephone: 918-493-7700  
Facsimile: 918-496-6302  
Mobile phone: 918-691-5222

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From: Yandell, Glenn [Glenn.Yandell@bakerpetrolite.com]  
Sent: Monday, April 03, 2006 8:09 AM  
To: Nolen, Stephen L SWT  
Subject: Golf course & campground planning at Skiatook Lake

Dear Mr. Nolen,

I own a house on Giorgio Drive overlooking Skiatook Lake. I was recently notified by members of our home owner's association that the Corps might make siting changes for a previously approved golf course and a campground in the Tall Chief Cove/Skiatook Point area. Because all major developments within a few miles of our property could have an impact on both our property values and our quality of life, I request that this issue be given proper scrutiny before any changes are approved. I intend to live in my Skiatook Lake home until I die, so these issues are certainly of interest to me!

In order to insure that all concerned parties have a voice in proposed Corps supervised or approved developments, I think it would be best to hold a public, open meeting to advise property owners of the development plans and to give them information of the time line for the proposed developments. Following this information sharing meeting, it could be decided whether or not there is enough public concern to hold additional meetings in which interested parties would have an opportunity to voice their support or objections to the plans.

I appreciate your consideration of this request for an informational meeting, Mr. Nolen. If you have any further information you wish to share with me, please use the contact information below.

Glenn D. Yandell

Maintenance Manager

Baker Petrolite Corporation

800 Birch Lake Road

Barnsdall, OK 74002

Office - 918-847-2522 ext. 209

Fax - 516-213-7388

Mobile - 918-724-5481

email - glenn.yandell@bakerpetrolite.com

From: DPKENDALL@aol.com  
Sent: Monday, April 03, 2006 8:08 AM  
To: Nolen, Stephen L SWT  
Subject: Plans for Skiatook Lake

Dear Mr Nolen,

We, along with others in the Beverly Hills neighborhood, are very concerned about the possibility of changing the camp grounds to this side of the lake, and the golf course to the other side.

I do know that Bruce Keeling sent you a letter stating the reasons why, and we are totally in agreement with him.

We were concerned that you decided to lease the land for \$1 in the first place, but now things have changed from the first plan and we feel that the neighbors should be concerned, and it should not be all one sided on behalf of Cross Timbers.

Please give our thoughts some consideration.

Thanks so much,  
David and Debbie Kendall  
14390 Giorgio Drive  
Skiatook, OK 74070-1250  
918-396-2251

April 2, 2006

Mr. Stephen L. Nolen  
Chief, Environmental Analysis and Compliance Branch  
U.S. Army Corps of Engineers  
Tulsa District  
1645 South 101st East Avenue  
Tulsa, OK 74128-4609

Dear Mr. Nolen:

With all due respect for the U. S. Army Corp of Engineers for all their tremendous work across the Nation and the City of Skiatook, which umbrellas SEDA under the Town of Skiatook, I would like to submit the following comments and observations in reference to the CrossTimbers Development Environmental Assessment dated March 20, 2006.

Some items of significantly troubling nature occur to me:

1. The apparent fast tracking, carte blanche authority to operate granted to StateSource Limited Liability Corporation with blanket "Finding of No Significant Impact." The ability to change plans/uses at will. "Rubber stamping" these leases, assessments, rezonings, mitigations and deviations. Due process?

2. The lack of independent, comparable assessments. On or around March 1, 2006, I contacted the Tulsa Corps Office for information on the project. I was referred to Mr. Harris. Mr. Harris informed me that if I wanted information on the project, I would need to go through StateSource or make the request through their office using the Freedom of Information Act. He informed me there was a new EA due out around March 15th and promised me a copy of the EA when it came out in draft form. On March 22nd, I called Mr. Harris back again and told him I had not received a copy despite the fact that they were out and others had received theirs. Mr. Harris relayed that the applicant distributed the assessment. He again promised to see that I got one that afternoon, but to date I have not received such. Puzzling concerning the response deadline of April 5, 2006, to the Corps Office, not the applicant.

3. The lack of public input on all matters since the beginning of the project other than controlled, orchestrated "forums" including this assessment, the distribution thereof and deadlines responses.

4. No standards for/need/use/development/assessment/short and long-term maintenance, privacy, and/or security of 5 or 6 miles "interpretative hiking trails."

5. Lack of contact of adjoining landowners as referred to in attached Corps CrossTimbers website message. Only adjoining landowners whose land the project wished to purchase for housing development, etc. were contacted. Trails were moved from shoreline and bulldozed in without contact or input.

6. What is most troubling is the high-density development in a concentrated area of the lake and the effects on the lake. Personal observation from several years' use of the lake and living in the area seems as though since the project began, pleasure craft on the lake have increased three-fold or so. Most significantly, last summer with bigger, faster boats and jet skis. By the time traffic increases another three times, it will be too late to deal with and/or reverse. This seems due to a relatively small desirable lake located near a large city. The public was coming to this lake in increasing numbers with or without this project. I've seen lakes in California when we went water-skiing in the 1960s where boats were directed in circular patterns on the lake with restricted areas and speed limits.

Of a larger concern is the pollution of the lake and the environment. At loose count (East Ridge Estates, CrossTimbers, Catalina Cove, and a new development on the other side of Lake Road), there are some 400 housing lots with more planned. Then you have the camping areas of Tall Chief and CrossTimbers all along the shoreline to the dam and Skiatook Point development on the other side. The village with all of its amenities (cabins, restaurants, shops, conference centers, repair shops, docks, chapel, cottages, lodging (?), etc.) then throw in the golf course. I have trouble understanding "No Significant Impact" in significant areas. With tarantulas, scorpions, brown spiders, ticks, mosquitoes, etc, etc, and lawn/shrubs/flowers at all these places, the insecticide/fertilizer runoff, combined with soil erosion, all into the immediate concentrated area of the lake. I just wonder. Sediment and nutrient levels are bound to suffer. Some of our most treasured lakes in the country are scrambling to reverse effects of these and other facets of rapid development over the past 50-70 years (the effective time of the lease).

Many resort projects on many Oklahoma lakes have been enthusiastically introduced in the last 50-60 years. Many, if not all, have at some time fallen on hard times, and many have gone into receivership—ending up run down or an eyesore to the community, looking for investors to come in and reinvigorate the concept. Things easily done can be difficult/impossible to undo. Here we go again at Lake Texoma with a similar project to invigorate a park/resort with a more accurate reported figure of \$350 million than the Skiatook Project's reported \$10 million. Their golf courses are already in place. With the rotation of officers/personnel in agencies from the bottom to the top spots every few years (2 district commanders at the Corps, 4 SEDA chairmen since the beginning of the CrossTimbers project and similarly up the chain of command) coupled with the LLC status of the private principal involved makes for changing levels of commitment/priorities/support. However, ultimate responsibility/liability does not change. SEDA's liability can't afford much of a challenge with an annual grant budget of \$1,300. An LLC can always cut their losses and run. Announced budget cuts and reduction of local Corps office staff at Skiatook Lake are a concern.

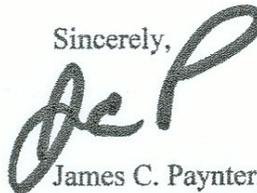
"Finding of No Significant Impact" begs significant difference of opinion as significant impact is already felt with the sacrifice of the most pristine cove with visible natural flooded

timbers, wildlife habitat, and assessable photogenic, panoramic views of the entire southeastern end of Skiatook Lake from Lake Road. Considered by any who have seen it as one of the most beautiful lakes they've seen. I know from experience, in many states, the aesthetic and historical value to tourism makes it illegal to cut/"chainover" these timbers. In the 1970s outside Anchorage, Alaska, we raised the ire of the Dept. of Tourism, Parks and Recreation by cutting a dead standing flooded timber for firewood. Holy Smokes! In the recent past, I know of the lake Corps office threatening a \$2,000 fine for cutting a single oak sapling in the pictured real cross timbers on the leased land. Now it needs to be over 200 years old to be safe! How priorities fluctuate. The cove was traded off for boat docks and a public, private, privately funded and operated, gated community. This permanent loss of this scenic public cove, like the loss of a life, cannot be mitigated. These docks are placed in a historically vulnerable and aptly named Tornado Cove. Doesn't the EA refer to 100 slips in the docks, artist's rendering showed 9 slips in the newspaper? Aren't there 400/500 slips there now? Plans to double that?

I suggest leaving the golf course in the original location that was proposed to the public before signing the lease. It is more assessable to the town of Skiatook and has nice views of the lake. By moving the campgrounds to the other side of the dam, campers are banished from the village, the boat docks and nearby swimming. Boat launch from Skiatook Point is difficult at best on a calm day, much less a frequent windy day. Put the public trail from Skiatook Point around in front of Beverly Hills and through the Crystal Bay Marina area. I am certain these areas would appreciate some of the developing as well as drawing from Skiatook/Hominy and North.

I am not presently opposed to the project. I am cautiously optimistic about it. I support planned, lasting, shared community growth. Some of the work to date on the project is of a quality nature. However, I also find some of the aspects of development notably questionable and rather unsettling. There seems to be uncontested authority to make changes and rubber stamp them, and proceed with reckless abandon.

Sincerely,



James C. Paynter, Jr.  
Homeowner, East Ridge Estates

Attachments (color photos of public view from Lake Road of Tornado Cove before (with real cross timbers)/after project started (with man made CrossTimbers); Corps CrossTimbers Project web page article referencing contact of adjoining landowners never made)

[Back](#)



U.S. Army Corps  
of Engineers

Skiatook Lake - Pilot Lakes Demonstration Program

Crosstimbers Project

**Background**

The Skiatook Lakes Demonstration project is part of the Corps of Engineers' response to the President's blue-ribbon panel appointed in 1998 to conduct the national recreation study.

The district recommended the Skiatook Lake for inclusion in the national demonstration program because of its undeveloped recreation potential. Through the program, the district could move forward to identify sponsors who would be willing to make the financial investments necessary to bring new and improved recreation opportunities to the lake.

The **Draft Environmental Assessment** was submitted on May 28, 2002 for internal review and comments. Comments were provided to Skiatook Economic Development Authority (SEDA) for preparation of the final draft EA that was coordinated with appropriate agencies and made available for public review and comments.

Dr. Henry, Tulsa University, submitted the draft Cultural Survey Report on May 13, 2002. The report was reviewed by Tulsa District's Planning Environmental and Regulatory Division. It was submitted to State Historic Preservation Office (SHPO) for comments.

A public workshop was conducted by SEDA on May 15, 2002 to provide public opportunity to discuss the proposal. Adjacent property owners and community leaders were contacted about the project. Results were mostly positive. SEDA received several letters of support from various state and local sources. A letter from Governor Keating expressed his enthusiasm for the lease.

The application for recreation lease was submitted by SEDA on May 15, 2002. Conditions were within the district's authority and did not require waivers. Parallel reviews were performed by District elements to reduce overall review timeframes.

*Community leaders (2) maybe.*  
*Adjacent property owners. No for No Recreates*  
*Note "Contacted"*

Record of News Coverage

**Project Status and Activities**

The National Recreation Lakes Coalition Home Page

On February 18, 2003 the district commander, COL Robert Suthard, Jr., announced in a **news release** that a Finding of No Significant Impact was signed on February 13, 2003. The document's signing came at the conclusion of the environmental analysis process that included consultation with the Quapaw and Osage Tribes regarding culturally significant artifacts and areas. That consultation removed certain lands from the lease and ensured future protection and maintenance.

\*Washington, D.C. - Legislation to enhance greatly the recreational opportunities at hundreds of man-made, federally-managed lakes was introduced by U.S. Senator Blanche Lincoln (D-AR) and U.S. Representative Nathan Deal (R-GA) on March 14. The National Recreation Lakes Act of 2001 notes that nearly 1,800 lakes created by federal dams draw almost one billion recreation visits annually, prompt more than \$44 billion in recreation spending and, even more importantly, deliver countless treasured family memories. The legislation would increase these benefits significantly.

**Note: The Environmental Assessment for the Crosstimbers Project at Skiatook Lake follows:**

\*The legislation reflects findings and recommendations resulting from the National Recreation Lakes Study Commission, created by Congress in

**FINDINGS OF NO SIGNIFICANT IMPACT (FONSI) FOR CROSSTIMBERS PROJECT AT SKIATOOK LAKE, OKLAHOMA** — (Note: This links to the entire 345 page report in PDF format, 18.452KB. The following links are for individual sections of this report.)

[http://www.swt.usace.army.mil/library/Skiatook%20-%20Pilot%20Lakes%20Demonstration%20Program/...](http://www.swt.usace.army.mil/library/Skiatook%20-%20Pilot%20Lakes%20Demonstration%20Program/) 3/8/



From: Ron Miller [ron\_miller@swbell.net]  
Sent: Tuesday, April 04, 2006 9:04 AM  
To: Nolen, Stephen L SWT  
Subject: Environmental Assessment

Proposed relocation of the CrossTimbers Golf Course.

As a resident who has lived in the Beverly Hills Development on Lake Skiatook for the past 6 years, I strongly agree with the move of the CrossTimbers Golf Course from Skiatook Point area to the Tall Chief Cove area.

I believe that CrossTimbers is developing a first class resort on Lake Skiatook and keeping the Golf Course together with the rest of the development is a very positive move. With the addition of the new McGill's restaurant, Cottages, expanded Marina, and the upcoming Village area, CrossTimbers is creating one of the finest facilities in Oklahoma.

Also, creating more camping area at the Skiatook Point Ramp will be very beneficial to the Lake, which for the past several years has seen the two main camping facilities completely full during the summer season .

This is exactly what the area North of Tulsa has needed for several years and CrossTimbers is doing an excellent job to enhance the whole area.

Ron Miller  
14655 Tiffany Lane  
Skiatook, Ok 74070



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April 4, 2006  
TJA-06-022

Mr. Stephen L. Nolen  
Chief, Environmental Analysis and Compliance Branch  
U.S. Army Corps of Engineers (USCOE), Tulsa District  
1645 S. 101<sup>st</sup> East Avenue  
Tulsa, OK 74128

**Re: Comments on the Proposed Relocation of Golf Course and Camping/RV Area  
CrossTimbers Development Project  
Skiatook Lake, Osage County, Oklahoma**

Dear Mr. Nolen:

I appreciate the opportunity to provide comments to you and USCOE regarding the proposed relocation of the golf course and Camping/RV area at CrossTimbers. Prior to providing my comments, however, I feel that it is both pertinent and appropriate to provide you with a summary of my academic and professional background.

Academically, I completed my Bachelor of Science Degree in Geology from Oklahoma University (OU) in 1979. I received a Hydrology Certificate from Oklahoma State University (OSU) in 1989. I received a Master's Degree in Civil Engineering (MSCE) from OSU in 1996. I completed my Doctorate of Philosophy (Ph. D.) in Environmental Science from OSU in 1999. I convey this background information to you because my doctoral research and dissertation is quite relevant to the golf course.

Professionally, while taking graduate courses at night, I worked for 2 environmental engineering consulting firms here in the Tulsa area. Upon completing my studies, I started my own consulting firm and have been working in that capacity since March 2000.

In addition to providing consulting services, I am an Adjunct Professor in the Geoscience Department at Tulsa University (TU) where, for 4 years, I taught night courses in Hydrology and Hydrogeology (GEOL 4513, GEOL 6513). I am scheduled to co-teach a new course this Fall Semester at TU.

Due to its relevance, please allow me the opportunity to re-address my doctoral work. The title of my dissertation is, ***"An Evaluation of Management Strategies for a Nursery Irrigation Recycling System Designed for Pollution Control"***. My research consisted of evaluating the design efficiencies of eight (8) catch basins and retention ponds at Greenleaf Nursery in Eastern Oklahoma. Greenleaf Nursery was then and is still the largest potted plant nursery in the State (~800 acres). As you may know, the nursery is located on a hill immediately adjacent to the Illinois River (which is designated as a Scenic River) and the northern portion of Lake Tenkiller. The nursery applies large amounts of concentrated time-

release (osmocote) nitrogen, phosphorus, and potassium (N-P-K) fertilizers to the plants via direct application of solid pellets and dissolved in sprinkler irrigation systems. As such, the owners of Greenleaf were concerned about the fate, transport, and adverse affects of those nutrients to receiving receptors.

For ~1 year, I sampled and analyzed surface/runoff water from the following areas at Greenleaf: (i) “inflow” water that flowed from the container fields to the retention lagoons, (ii) water contained in the retention lagoons and (iii) “outflow” water that flowed from the retention lagoons to adjacent water bodies. About half of all surface water samples were collected during or immediately following rainstorm events. As such, I was able to evaluate and determine which retention pond parameters (i.e. design, type of construction, depth, geometric shape, holding capacity, etc) captured and contained the greatest concentration of nutrients and, thus, provided the greatest amount of protection to the receiving water bodies. To summarize, past academic research has provided me with significant insight on how to build retention lagoons that afford the greatest protection to adjacent water bodies from N-P-K enriched runoff waters.

Based on my involvement and recent completion of this project's Environmental Assessment (EA), combined with my current professional relationship with the developers of the CrossTimbers Project and the USCOE, it is anticipated that I will be retained by StateSource in the near future to apply my “knowledge of the science” and assist them with the design and construction of retention ponds that will protect Skiatook Lake from golf course nutrient runoff. I further anticipate my direct involvement regarding the preparation and implementation of the Environmental Management System (EMS), which is incorporated with the subject lease. Among other pertinent issues, the EMS will provide assurance of the lake's protection via the Corp's approval process of the course design prior to its construction.

I have already met Mr. Randy Heckenkemper, the golf course designer. I am aware that he has significant experience with designing golf courses next to lakes and other “sensitive receptors”. I understand that Mr. Heckenkemper has, in fact, recently designed and built a golf course on a Corp lake (reference Chickasaw Pointe on Lake Texoma).

I am also aware that Dr. Stahle from the University of Arkansas recently conducted a walkover and survey of both Skiatook Point and Tall Chief Cove. It is my understanding that Dr. Stahle was concerned about several issues regarding the construction of the golf course at Skiatook Point, including but not limited to potential impact to a greater number of ancient timbers, the general presence of a thin veneer of native soils due to rock outcroppings at or near the surface, and a logical expectation of stunted growth of fairway and putting green grasses. Pursuant to his findings, Dr. Stahle concluded that the proposed golf course should be relocated to the Tall Chief Cove area and the Camping/RV facilities be placed at Skiatook Point. It goes without saying that that is an important conclusion.

To summarize, it appears that there are numerous positive environmental aspects regarding the construction of the golf course at Tall Chief and the placement of camping facilities at Skiatook Point. As such, it is my recommendation that the USCOE approve the proposed relocation.

Thanks again for the opportunity to provide my thoughts on this matter.

Sincerely,

**ALEXANDER CONSULTING, INC.**

A handwritten signature in cursive script that reads "Dr. Thomas J. Alexander". The signature is written in black ink and is positioned above the printed name.

Thomas J. Alexander, Ph.D., P.G.  
President

WILDLIFE CONSERVATION COMMISSION

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**DEPARTMENT OF WILDLIFE CONSERVATION**

P.O. Box 53465

Oklahoma City, OK 73152

PH. (405) 521-3851

April 2, 1006

Colonel Miroslav P. Kurka  
Us Army Corps of Engineers  
1645 South 101<sup>st</sup> East Ave.  
Tulsa, Oklahoma 74128-4609

**Re: Cross timbers Development Relocation Draft Environmental Assessment**

Dear Colonel Kurka,

This is in response to the Crosstimbers Development Relocation Draft Environmental Assessment (Draft EA). The Crosstimbers development site is on US Army Corps of Engineers (COE) property at Skiatook Lake in Osage County, Oklahoma. The development is proposed by Skiatook Economic Development Authority (SEDA) and StateSource, LLC (StateSource) and involves the COE leasing 643 acres at Skiatook Lake to SEDA and StateSource for development of various projects including a golf course, RV parking, camping areas, cabins, a conference center, marina, roads, restrooms, utilities, and parking lots. The Oklahoma Department of Wildlife Conservation (ODWC) comments are submitted in collaboration with the US Fish and Wildlife Service (USFWS). Therefore, the USFWS response reflects the ODWC position on this matter.

Due to the short response time for this Draft EA, the ODWC has not had the opportunity to consider all impacts as a result of the proposed development. However, the ODWC has collaborated with the USFWS and consulted with other divisions in the agency to arrive at a set of comments that reflect the position of the ODWC. Most of the comments submitted address terrestrial impacts; however, this does not preclude impacts to aquatic life.

The proposed development will result in the loss of approximately 230 acres of land due to alterations of public lands and 200 acres of archery only hunting. In addition, fragmentation is likely to occur as a result of the development. The ODWC is concerned about the loss of habitat and has the following recommendations:



Search for the Scissortail  
on Your State Tax Form

**The COE should open the Hominy Landing park (150 acres) to archery only or shotgun with pellets hunting** to offset the loss of 200 acres of archery only hunting opportunity at the dam

-Hominy Landing is an access point only park with a boat ramp and two pit toilets. Since it is lightly used during the hunting season, user conflict should not be an issue. There is very little residential development on adjacent private lands (3 houses within 1 mile) and the WMA lies on three sides of the park. This limited hunting arrangement works well at access point type parks (i.e., Keystone-Cowskin north/Pawnee cove north-both are open to archery and shotgun w/pellet).

-Since the eastern portion of Twin Points and the Gouin point are currently already open to hunting, the change in land designation will not result in an increase in hunting as cited on page 26/27. A change in designation would increase the protection level for future development.

**The COE should add Twin Points and the Gouin park lands to the ODWC license area** to provide maximum protection of the public lands from future private development.

OR

**provide stronger language as part of the EA that if the Twin Points/Gouin lands are developed in the future, mitigation will be provided in the form of land purchase**

**The COE should fund habitat management projects as part of project mitigation on Twin points/Gouin park lands.**

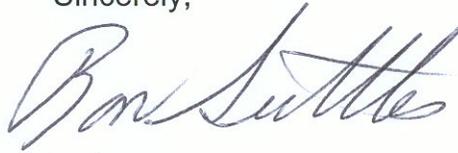
-Funding for development of firebreaks and implementation of a burning program at Gouin park and to enhance burning activities at Twin points will help maximize the quality of habitat available at these sites. These park areas are some of the few lands on the lake that contain enough acreage to effectively manage the habitat with prescribed burns. Increasing the quality of the available habitat will mitigate for the loss as a result of the crosstimbers development project.

-Language pertaining to funding for habitat management should be included in the Draft EA. This language will prioritize the funding and the execution of the prescribed burning projects in the future. Gouin park could easily be burned if an east west firebreak was

constructed along the boundary. Burning is warranted in Gouin park because of the closed canopy post oak timber.

Thank you for the opportunity to provide comments on the above mentioned development project. The ODWC feels that Skiatook COE personnel have managed the habitat well and maximized public hunting opportunities. The ODWC further believes that the COE has a strong interest in natural resource conservation and public hunting and will consider the above recommendations accordingly. If you should have any questions, *please feel free* to contact Ferrella March with the Natural Resources Section at 405-521-4663 or Jeff Pennington with Wildlife Division at 918-629-4625.

Sincerely,

A handwritten signature in blue ink that reads "Ron Suttles". The signature is fluid and cursive, with the first name "Ron" being larger and more prominent than the last name "Suttles".

Ron Suttles  
Natural Resources Section Coordinator

cc: Alan Peoples  
Kevin Stubbs

**James L. Pardee**  
**11658 Santa Cruz Dr.**  
**Skiatook, Ok. 74070**  
**918 396-7865**

April 4, 2006

Attn: Stephen L. Nolen  
Subject: Cross Timbers Proposal

Dear Sir,

We live in Santa Barbara Cove and are opposed to changing the campground location to the north side of the dam. We all built very nice homes and would not like the looks and possible security problems associated with the new location. We would encourage an extension of 30-60 days for more homeowners to review the proposal and be able to present their comments.

As President of Santa Barbara Cove Homeowners Association I also represent the wishes of all our homeowners.

Thank you.

Respectfully submitted,



James Pardee



In Reply Refer To:  
FWS/R2/OKES/  
2006-I-0031

## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Division of Ecological Services  
222 South Houston, Suite A  
Tulsa, Oklahoma 74127  
918/581-7458 / (FAX) 918/581-7467



April 3, 2006

Colonel Miroslav P. Kurka  
Corps of Engineers  
1645 South 101<sup>st</sup> East Avenue  
Tulsa, Oklahoma 74128-4609

Dear Colonel Kurka:

Thank you for providing the Crosstimbers Development Relocation Draft Environmental Assessment (Draft EA) for our review. The CrossTimbers development site is on U.S. Army Corps of Engineers (Corps) property at Skiatook Lake in Osage County, Oklahoma. The development is proposed by Skiatook Economic Development Authority (SEDA) and StateSource, LLC. (StateSource). The project entails SEDA and StateSource leasing 643 acres of Corps land at Skiatook Lake for development of various projects including a golf course, RV parking, camping areas, cabins, a conference center, marina, roads, restrooms, utilities, and parking lots. The U.S. Fish and Wildlife Service (Service) comments are submitted in accordance with section 7 of the Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), National Environmental Policy Act (NEPA), and the Fish and Wildlife Coordination Act (FWCA).

The Corps initially completed the existing Environmental Assessment (EA) for this project in 2003, but proposed changes in project plans (primarily relocating the golf course and campgrounds) required preparation of a new EA. The Service previously provided comments addressing the existing EA in our August 21, 2002, letter and addressed potential impacts to the American burying beetle *Nicrophorus americanus* (ABB) in a January 4, 2006, letter to the Corps.

### GENERAL COMMENTS

A 15 day comment period is exceptionally short and does not allow adequate time for the Service to consult with other agencies to provide coordinated comments under our FWCA authorities. Also, this short comment period is generally not conducive to obtaining meaningful public involvement in the NEPA process and leaves the impression that the Corps is purposely trying to minimize public comment on the issue. Most Draft EAs for actions of this magnitude have a minimum of 30-60 days for public review.

## THREATENED AND ENDANGERED SPECIES

The Service supports implementation of the proposed standardized protocol for avoiding or minimizing any adverse impacts to the ABB. However, this protocol appears to be contained in Appendix A, not Appendix B, as stated under the heading “7. Threatened and Endangered Species” on page 21. The standard protocol initially involves ABB surveys to determine their presence or absence at the project site. Bait away or trap and relocate measures are incorporated if ABBs are determined to be present. An ABB monitoring plan with more details (numbers and locations of trap sites) for proposed surveys should be provided as soon as possible for our review. The Service agrees that all other federally-listed species are unlikely to be affected by the proposed development.

## MITIGATION

### Aquatic

The proposed mitigation for aquatic impacts near the Marina should include provisions for maintaining brush piles at locations that are accessible to the general public and not just limited to the leased dock area. Brush piles should be replenished annually with new material.

### Terrestrial

The proposed mitigation fails to provide habitat improvement (relative to existing conditions) or replacement of lost habitat values due to project impacts. The proposed action would permanently impact at least 166-230 acres of terrestrial habitat. Converting the cross timbers forest and prairie habitat to roads, buildings, and a golf course would be a long term impact that would reduce or eliminate habitat for most native wildlife currently utilizing the property. The proposed mitigation would reclassify existing Corps lands at Gouin Point and Twin Points, from recreation to wildlife management general. Reclassifying existing Corps lands can be considered mitigation only if there is some proposed development at the mitigation sites that would be canceled or altered due to the reclassification. The Service is unaware of any proposed projects at the mitigation sites. The proposed action with mitigation appears to be a net loss in habitat quantity and quality. This loss would be contrary to the spirit and intent of the FWCA. Existing federal lands at Skiatook Lake were set aside to offset impacts to fish and wildlife resources from the original construction of the reservoir.

The Service could support the proposed mitigation with additional conditions. The mitigation should include:

1. Active management to actually improve and maintain habitat values at both Gouin Point and Twin Points.
2. The mitigation lands should be added to the Oklahoma Department of Wildlife Conservation (ODWC) lease for the Skiatook Wildlife Management Area.
3. Hunting (at least archery/shotgun with pellets) should be allowed at the Hominy Landing recreation area to mitigate for the development-related loss of hunting opportunities.

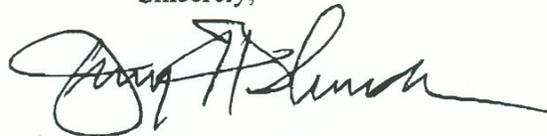
The Corps should prepare a wildlife management plan for implementing habitat improvement at the reclassified areas. This wildlife management plan should be coordinated with, and approved by, the ODWC. The Corps has been implementing some wildlife management at Twin Points and this should be expanded to include Gouin Point. We appreciate the Corps past efforts to manage for wildlife on the Skiatook Project lands, but we realize that these types of actions are frequently cut in times of reduced budgets. All wildlife management activities on these areas should be considered a mitigation requirement and implemented or funded by the Corps for the life of the CrossTimbers lease.

Adding the mitigation lands to the ODWC lease would provide even more protection from future development threats than the proposed reclassification. We have seen several examples (including this proposed action) of Corps lands being reclassified to allow development on lands that were not classified for that use. Reclassifying the land does not appear to provide much protection from any future development proposals at Twin Points and Gouin Point.

The Service is generally not opposed to such developments if adequate mitigation with true replacement of habitat values is provided. However, in recent years the Corps has opposed Service recommendations to actively manage lands to replace the habitat values lost at the developed lands. Land sales and developments at Hugo Lake and Lake Texoma have occurred, or are proposed, with virtually no mitigation. The cumulative effect of large and small developments at all Corps projects has resulted in a relatively gradual, but significant, loss of fish and wildlife habitat and recreational value related to those resources. More quantifiable measures to provide actual mitigation (such as those implemented through the Habitat Evaluation Procedures for the recent Arkansas River Navigation Project) should be incorporated for proposed developments on Corps lands.

We appreciate the opportunity to review the proposed the Draft EA and provide comments. Please contact Kevin Stubbs at 918-382-4516 if you have any questions related to our comments.

Sincerely,



Jerry J. Brabander  
Field Supervisor

cc: Director, Natural Resources, Fisheries, and Wildlife Sections, ODWC, Oklahoma City, OK

From: Bruce Krefting [krefting@peoplepc.com]  
Sent: Wednesday, April 05, 2006 10:43 AM  
To: Nolen, Stephen L SWT  
Subject: Further neighborhood review needed on Cross Timbers proposal to relocate the golf course and camping / RV area

As a nearby resident, I have already responded with my opposition to the Cross Timbers relocation proposal and the Corp's draft environmental assessment (see my original email below). Now, as President of the Beverly Hills Lake Estates II Property Owners Association, I strongly urge you to postpone any decision for 30 to 60 days to allow for a formal review meeting by the effected neighbors of Cross Timbers.

In my research I have only found one other person in my neighborhood of 27 homes and lots owners that was aware of the Cross Timbers proposal (and he is opposed to the proposal). And, after meeting with a Director of the adjacent neighborhood, Santa Barbara Cove, with 30 homes and lots, I found he was unaware of the proposed change and also opposed to the Cross Timbers relocation proposal. On behalf of the Santa Barbara Cove Homeowner's Association's, Jim Pardee has written you with their opposition to the Cross Timbers relocation proposal and asking for more time before a decision is made by the Corp.

Our two neighborhoods represent 2 of the closest developments to the Cross Timbers leased land - each less than 2 miles away. Our combined membership of almost 60 residents and owners make us by far the largest block of nearby neighbors to Cross Timbers. Because both neighborhoods are so close to Cross Timbers, their relocation proposal does impact us.

With so many owners of the most impacted neighborhoods completely unaware of the Cross Timbers relocation proposal, it's clear that the Corp needs to allow more time to communicate the proposal and hear from the nearby neighbors.

Joining with the Santa Barbara Cove Homeowner's Association, the Beverly Hills Lake Estates II Property Owners Association also urges the Corp to postpone any decision to allow time for a meeting of the impacted nearby residents so they can hear the proposal and have our questions addressed.

Thank you.

Bruce KreftingPresidentBeverly Hills Lake Estates II Property Owners Association14389 Giorgio DriveSkiatook, OK 74070918-361-7338 -----  
Forwarded Message-----From: Bruce Krefting <krefting@peoplepc.com>Sent: Apr 2, 2006 12:07 PMTo: Stephen.L.Nolen@swt03.usace.army.milSubject: I oppose the Cross Timbers proposalThanks for sending me the CD with the complete Environmental Impact statement. I OPPOSE the proposed change for several reasons:

a.. I don't believe this proposal has been very well presented to the Lake Skiatook area public. One ad in the Skiatook Journal may be legally sufficient but hardly allows for widespread review and discussion. As the president of the Beverly Hills Lake Estates II neighborhood of 27 property owners located close to Cross Timbers, not a single owner has told me they had seen the single ad - all were unaware of the proposed change. I met with a board member of the Santa Barbara Cove association, another nearby neighborhood on Skiatook Lake of almost 30 property owners, had also not

heard of the proposal - and he was COMPLETELY AGAINST the proposal. I also think the size of this Environmental Impact document meant many could not review the proposal (rural Osage County residents around Lake Skiatook typically have just dial-up internet access. A 141-page documents is simply too big to be downloaded or viewed at 26.6K download speed. I would urge the Corp to hold a series of public comment meetings that are well advertised to truly get the feel of the local population to this proposed change.

b.. I am against moving the golf course to a location so far from the lake as described in the proposal (the layout is not well described in the proposal which reinforces in my mind the pending "plain-ness" of the new course). Oklahoma has many fine golf courses but few with as many beautiful lake views as promised in the original site. Moving the course away from the lake will make this course just another golf course. I prefer the numerous lake views and challenging elevation changes in the original proposal as this would make the Cross Timbers course one of the most beautiful courses in the region - perhaps the country - and be a significant boast to our local economy. The proposed change will not benefit the community anywhere near as much.

c.. I am against moving the campground to the north side of the dam. This change will cause security issues with campers too far from after-hours security. With the easy access from the Skiatook Point Landing road, I'm concerned about drinking campers or drinking boat landing users roaming through the Corp access without any available security. As a home owner with property adjacent to the Corp property along Skiatook Lake, I am concerned about drinking campers roaming the Corp property far beyond the Cross Timbers leased areas causing security and property destruction issues for all nearby residents. I think the State Patrol will tell you of many concerns they've had to address from drinking boaters and campers using the Tall Chief access to the lake. Security around the campground must be complete - for the benefit of the nearby property owners and the other campers.

d.. Finally, I oppose the proposed change based on the increased risks of fires started by campers roaming far from the leased area unsupervised. A fire started below our property in Corp land with the prevalent southerly winds this winter would have burned down my home before any fire department could have reached us. Our neighborhood in rural Osage County is served by the City of Skiatook Fire Department that must negotiate a steep climb on Highway 20 to reach our neighborhood. I estimate a single fire truck would need at least 15 minutes to reach our neighborhood, hardly sufficient as our homes are just a hundred yards from the lake edge and even less to Corp property. The fire danger alone with our southerly winds is enough to highly recommend that the campground area MUST be kept on the south side of the dam per the original design (fires out of control there would burn themselves out when they reached the lake). The campground cabins needs to be well supervised with Cross Timbers staff and after-hours security available to ensure destructive behavior is quickly halted.

If I have sent this response to the incorrect email address, please forward it to the correct email address by the April 5 deadline.

I would also like to be put on the notification list for any future proposals that impact the Corp's property around or on Lake Skiatook.

In conclusion, I am OPPOSED to the proposed change and urge the Corp to reject it. I also recommend that any future proposed changes be better

advertised to area resident with mailings and multiple ads to ensure the local neighbors are well informed.

Bruce Krefting14389 Giorgio DriveSkiatook, OK 74070918-361-7338

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PeoplePC Online  
A better way to Internet  
<http://www.peoplepc.com>

From: Ladd Drummond [ldrummond@drummondbranch.com]  
Sent: Wednesday, April 05, 2006 11:28 PM  
To: Nolen, Stephen L SWT  
Subject: Skiatook lake golf course

Mr. Nolen:

My brother and I are longtime landowners in the Skiatook Lake area, My great grandfather bought some of the land we currently own in 1915. Although we sold some of that to the Corp of Engineers for the lake we have also added some other land thru the years. Currently we own approximately 480 acres that joins the lake or corps property.

I just wanted to drop you a note to say that we are in support of moving the golf course to the Tallchief cove area.

Thank You,

Ladd Drummond

From: Harris, Karen [kharris@hollandhall.org]  
Sent: Wednesday, April 05, 2006 12:35 PM  
To: Nolen, Stephen L SWT  
Subject: Skiatook Cross Timbers Resort Environmental Assessment

Dear Sir:

I recently found out about the development on the shores of Skiatook Lake. As a citizen of the United States and the State of Oklahoma, I have a few concerns and questions about the environmental assessment.

1. I understand that the original environmental assessment in 2003 generated considerable public comment and yet the comment period for this e.a. was reduced to 15 days. Why the rush? Is it possible to extend this period?

2. I understand that the ancient crosstimbers and prairie ecosystems have been drastically reduced in size and that this development would further reduce both systems. The EA reports that the the ancient crosstimbers forest encompasses only 162 square miles (an area about the size of the city of

Tulsa) I also know that Nature Conservancy research shows that conservation of these two ecosystems requires regional management. Neither crosstimbers

nor prairie can be conserved by maintaining a few preserves. I am familiar

with the Nature Conservancy's Cross Timbers Preserve near Keystone Lake. It is my understanding that biologists have only begun to assess the Cross Timbers community and they do not yet know what organisms may be a part of this very rare ecosystem. Even the EA states that "little is known about the bird communities in these ancient forests". Do we know if there are threatened or endangered neotropical migrants nesting there? I'm pretty sure they will not nest on a golf course. Even my beginning ecology students know that reduced populations of organisms are most often caused by reduction in their habitat. To say that this development will have no significant impact on population trends is reckless at best. I am concerned that the Corps is willing to "lease", for \$0, public property to a municipality, which in turn will sublease to a PRIVATE company, when you have little idea what the public will be losing. Why is this proposal the preferred alternative? As I understand it, the only other alternative presented was a simple switch in locations of a golf course and a campground. How do you know the benefit of the development will outweigh the cost when we have yet to determine the ecological cost?

3. Where is the analysis of the impacts of pesticides and fertilizers on the water quality of Skiatook Lake? The management plan is not sufficient for the purposes of informing the public and for arriving at a Finding of No Significant Impact. In fact, the management plan calls for growing ferns, poplars, and cottonwoods to catch the nutrients before they enter the lake.

Anybody involved in the management plan know what species of ferns can survive in the understory of the crosstimbers? Can the developers guarantee that poplars and cottonwoods can survive?

4. Is the proposed mitigation sufficient? Changing the designation of a third area does not seem to me to make up for losing two other areas. Is crosstمبر habitat actually present at Gouin Point?

5. How do I know that StateSource will be a good steward of the land? What incentive do they to be good stewards of federal land? A flawed environmental management plan cannot substitute for appropriate NEPA reporting.

6. I firmly believe the Corps should do more work, including a full environmental impact statement before proceeding with this project.

Thank you,

Karen Harris  
Biology/Ecology teacher, Holland Hall School

From: Gary [SStation@cox.net]  
Sent: Wednesday, April 05, 2006 2:25 PM  
To: Nolen, Stephen L SWT  
Subject: Crosstimbers golf course relocation

Mr. Nolen:

As a property owner and future resident of Lake Skiatook, I agree with the decision to relocate the CrossTimbers golf course from Skiatook Point to Tall Chief Cove and the camping area from Tall Chief Cove to Skiatook Point. The reason is two fold:

1. Tall Chief Cove is more readily accessible to an expanding population, particularly as the area develops as a Tulsa suburb. Future residential and commercial development will likely occur along a widened 52nd Street West, providing a more secure financial underpinning for the golf course and related commercial development at CrossTimbers and reducing long term pressure on the Skiatook Lake Dam traffic going to Skiatook Point.
2. I understand that the developers of CrossTimbers did an extensive study of "ancient" trees and discovered considerably more of them on Skiatook Point than at Tall Chief Cove. It seems reasonable that developing a golf course would be much less destructive to an area less densely populated with such trees.

Gary Harkreader

# **APPENDIX F**

## **USACE RESPONSE TO PUBLIC COMMENTS RECEIVED REGARDING DRAFT ENVIRONMENTAL ASSESSMENT**

RESPONSE TO COMMENTS  
ON DRAFT ENVIRONMENTAL ASSESSMENT

A number of comments were received on the Draft Environmental Assessment. The responses to these comments are detailed below:

1. Robert and Carolyn Wood (email dated March 27, 2006)

Comment: Would prefer the golf course to remain at original location. Concerned about campground being closer to residential areas and possible decrease to property values.

Response: See response to Comment #13 below. The Skiatook Point Public Use Area is zoned Recreation-Intensive use in the Skiatook Master Plan prepared by USACE in September 1976. Appropriate uses on recreation-intensive zoned lands include camping, picnicking, hiking, group activities, and related activities. Proposed development under the action plan does not change the originally anticipated use of this area.

2. Dennis and Sherry Lenox (email dated March 27, 2006)

Comment: Think the golf course should stay in the original location.

Response: See response to Comment #13 below.

3. Paul Kallenberger (email dated March 28, 2006)

Comment: Objects to proposed move of the golf course from Skiatook Point to Tall Chief Cove. Original plan gained support of Skiatook residents and lake neighborhoods because the golf course was located closer to Skiatook. Proposed relocation will make it more difficult for residents to use the golf course. Better golf course setting present at Skiatook Point.

Response: See response to Comment #13 below. Travel time from the Town of Skiatook to the proposed golf course at Tall Chief Cove will be less than five minutes more than if the course was constructed at Skiatook Point. Constructing the golf course at Tall Chief Cove will also place the course closer to the greater Tulsa area population. With regard to setting, the CrossTimbers golf course designer regards the Tall Chief Cove location as superior, with a minimum of 13 holes with potential lake views. In addition, the course designer anticipates creating both links and traditional golf hole designs, which will enhance both views and play.

Comment: Locating campgrounds at Skiatook Point will isolate RV users from the CrossTimber facilities. Boating and swimming will be more difficult at Skiatook Point.

Response: It is the experience of USACE that overnight RV camping is typically separate from day use recreation activities. Although not as protected from wind as the Tall Chief Cove area, boat access has been available and heavily utilized at Skiatook Point for more than 15 years, and boat access will continue with development of the proposed camping area. Temporary mooring or short-term use boat dock facilities are planned for construction in the general campground area. Development of a swimming area at one of the coves at Skiatook Point is anticipated as part of the future campground construction, which increases recreational opportunities for the public.

Comment: Concerned about increased traffic flow, crime, and vandalism at Skiatook Point if camping area constructed there. These problems are already present at Tall Chief Cove.

Concerned with vandalism to Healing Rock due to campground use at Skiatook Point.

Response: StateSource plans for the camping area at Skiatook Point includes the construction of trails and roads for camper use. Security, signage, and surveillance cameras are all anticipated to be used in the camping area. See Section IV.B.9 of this EA for information on tribal concerns regarding Healing Rock and mutually agreed to actions that will be taken to minimize the likelihood of vandalism at this significant cultural feature.

4. Steve and Mary Short (email dated March 28, 2006)

Comment: Would prefer the golf course to remain at original location. Concerned about campground being closer to residential areas and possible decrease to property values.

Response: See response to Comment #1 and Comment #13.

5. Oklahoma Archeological Survey (letter dated March 29, 2006)

Comment: Comments on the CrossTimbers project previously provided in a letter dated March 31, 2003. Healing Rock will be protected from development plans and will meet the concerns of the tribes. Notes that site 34OS678 will require further evaluation to determine eligibility to the National Register of Historic Places. Did not see further mention of the two historic archeological sites (34OS676 and 34OS677) previously recorded in the SEDA lease area.

Response: See Sections III.E. and IV.B.9 for specific information regarding sites 34OS678 and the Healing Rock. The two historic sites (34OS676 and 34OS677) are located east of Skiatook Point and will not be impacted by any planned development activities at this time. Both of these sites were determined to be ineligible for the National Register of Historic Places during consultation with the Oklahoma SHPO in 2003 during the original EA review process.

6. Kevin Clough (letter dated March 29, 2006)

Comment: Currently constructed trail in the vicinity of his neighborhood (East Ridge Estates) does not match the location of the trail as it was presented in public meetings and on the CrossTimbers webpage.

Response: Trail locations and construction was addressed in the original EA and is outside of the scope of the current EA. However, information presented to the public regarding the location of trails in the CrossTimbers development was meant to show general routes and not final designed alignments. The present trail alignment was approved by USACE to minimize the loss of mature trees and decrease the amount of potential sediment runoff likely to occur after construction. The trails were constructed to generally follow the original USACE boundary/firebreak that was cleared shortly after the property was purchased by USACE.

Comment: Requests information on the type of trail surface to be constructed, what type of security program will be put in place, liability of adjacent landowners, disposition of removed timber, and damage to boundary fence and adjacent property.

Response: According to StateSource, trail surfaces within the CrossTimbers development will vary, but may include natural, asphalt, and other proven trail surfaces. Security on the trails will be provided by signage and enforcement of access restrictions by CrossTimbers employees and contractors. Boundary fencing along trail sections will be repaired or replaced as necessary to secure trail access. Signage is being installed along the trail to alert potential trail users to the requirement that all access must be approved in advance by CrossTimbers personnel. Vegetation removed during trail construction will be disposed of in accordance with current state law, which may include burning where allowed and appropriate. USACE has inspected the trail construction activities in the vicinity of East Ridge Estates and has not identified any damage to adjacent private property as a result of the CrossTimbers trail construction.

Comment: Concerned with decrease in stormwater runoff from neighborhood due to drainage changes made as a result of CrossTimbers trail construction.

Response: Storm water discharges associated with construction are regulated by the Oklahoma Department of Environmental Quality (ODEQ). The ODEQ issues permits for construction sites according to the rules established under the Oklahoma Pollution Discharge Elimination System (OPDES), as promulgated under OAC 252:605 standards. Storm water permits are required for construction activities that disturb more than one acre, cumulative. All storm water general permits require the permittee to complete, implement and maintain a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP has to meet the requirements set forth in the general permit and must be tailored to meet the specific sites specifications and requirements. CrossTimbers development is covered under Oklahoma Permit OKR101494 authorizing discharge under the OPDES Storm Water Construction program (attached). Their SWPPP is available for review upon request. ODEQ personnel inspect the construction site for compliance with Oklahoma regulations as dictated by the permit requirements. The last inspection was completed on April 10, 2006 and no violations were noted (attached). The trail bridge in question was constructed with USACE approval and utilized best engineering practices in accordance with the SWPPP to avoid silting and erosion that might undermine the bridge. A recent ODEQ stormwater inspection conducted on April 10, 2006 found the bridge and associated drainage changes actually improved the effective flow of stormwater through the drainage.

Comment: Concerned about noise impacts from existing Red Castle Gun Club to golf course if moved to Tall Chief Cove area.

Response: The Tall Chief Cove campground has been in existence since 1989, and USACE has not received complaints from campers regarding noise from the Red Castle Gun Club. Accordingly, we do not anticipate noise generated by the gun club will be a disturbance to CrossTimbers golfers.

#### 7. Stephanie Upton (email dated March 31, 2006)

Comment: Favors the proposed CrossTimbers facilities relocations.

Response: Supports proposed alternative.

May 5, 2004 12:55PM BRETSCH & ASSOCIATES, INC. NO. 7459 P. 274

## Oklahoma Department of Environmental Quality Authorization to Discharge Under the OPDES Storm Water Construction General Permit

AUTHORIZATION NO. OKR101494

In compliance with the Oklahoma Pollution Discharge Elimination System (OPDES) Act 27A O. S. §2-6-201, the Rules of the Department of Environmental Quality (DEQ), and in reliance on the certified statements and representations heretofore made in its application,

StateSource LLC  
320 S Boston Ave, Suite 500  
Tulsa, OK 74103-

Is authorized to discharge storm water from a construction site located in Osage County at:  
CrossTimbers  
Skiatook Lake - 1/2 mile N of 11785 Lake Road  
Skiatook Oklahoma

The receiving body of water is Hominy Creek.

This Facility Discharges into a 303(d) listed Stream

The OPDES requires permittees to have a Storm Water Pollution Prevention Plan (SWP3) which includes a description of appropriate sediment control measures. These are applicable to your construction site, which is subject to inspection. Proof of this authorization must be available at the construction site.

The Authorization shall become effective April 30, 2004 and will expire at midnight on September 12, 2007.

All terms and conditions of the modified OPDES Storm Water Construction General Permit OKR10, as published on September 13, 2002, shall apply to the recipient of this authorization.



*Mark Derichsweller*

Mark Derichsweller, P. E., Engineering Manager  
Watershed Planning and Toxics Control Section,  
Water Quality Division



Oklahoma Department of Environmental Quality  
Water Quality Division  
INSPECTION REPORT - STORM WATER

ROUTING  
1. ECLS-encode  
2. WQD-encode  
3. Central File

Activity type (check only one)  Construction (OKR10)  Industrial (OKGP)  
Complaint Number: \_\_\_\_\_ OPDES Authorization No. OKR10/OKGP County Osage  
Crosstimbers 3205 Boston Tulisa 74103  
Site/Facility Name Site/Facility Address City Zip  
Ron Howell Pies Owner (918) 288-2332  
Contact Name Title Phone Number

The below listed references are cited in the General Permit for Construction Activities OKR10, and the General Permit for Storm Water Discharges from Industrial Facilities GP-00-01.

SECTIONS	REFERENCES	REFERENCE	REQUIREMENT DESCRIPTIONS	ITEM	NO	DESCRIPTIONS OF DEFICIENCIES
PERMIT VERIFICATION	Part 1.C.4	Part 1.3.1	Facility permitted: NOT on file	*01		
	Part 4	Part 1.3.1	SWPPP developed	*02		
	Part 4.B	Part 4.10.1	SWPPP posted at the construction or facility site or is locally available	03		
OPERATIONS	Part 4.C	Part 4.2.7	BMP properly implemented in accordance with SWPPP	*04		Site looks good
	Part 4.D.3		Silt barriers in place, effective and maintained	05		
	Part 4.D.2		Sediment basins (if required) adequate and maintained as required	06		
	Part 5.D.4	Part 4.2.8	Inspection of BMPs at required frequency and documented in SWPPP	07		
	Part 4.D.2		Vegetation established on completed areas	08		
	Part 4.E.2.c	Part 4.2.9	Offsite tracking of road, sediment and/or materials prevented	09		
	Part 4.E.2	Part 4.2.9	Other control measures implemented	10		
	Part 3	Part 1.1.1	Non-Allowable Discharges Prevented	*11		
		Part 5.1.1	Quarterly visual monitoring performed from representative outfalls; visual examination reports maintained onsite with the SWP3	12		
		Part 5.1.5	Numeric Effluent Limitation Monitoring performed (if required); NELM reports maintained onsite with SWP3	13		
TRANSFER	Part 4		Temporary stabilization controls in place, adequate and functional	*15		
	Part 1.D.2		Transfer documentation submitted	16		
TERMINATION REQUIREMENTS						
TERMINATION	Part 9.J		70% vegetative cover established, temporary control measures removed	*17		
	Part 9.J		Permanent control measures installed	18		
		Part 1.4.2	Operations have ceased	*19		
		Part 1.4.2	Permitted discharges have ceased	*20		

Critical items are indicated in bold and by an asterisk (\*) in the item column. All critical items marked must be corrected within 14 days or as specified by the inspector. Other violations must be corrected by the next regular inspection or by the date specified.

FACILITY STATUS  
 46: Repeat Violation(s)  
 47: Under Current Enforcement  
 48: No Violation Noted

ACTION  
 44: None  
 33: Refer to WQD

Date: 4.10.06

Total number of items marked 0

Number of critical items marked 0

Julianne Tinkels Employee ID# 6430  
Environmental Specialist  
Ron Howell - PRESIDENT CROSSTIMBERS  
Copy received by \_\_\_\_\_ Title \_\_\_\_\_

PURPOSE OF VISIT  
 49: Compliance Monitoring  
 50: Complaint  
 51: Follow-up  
 52: Emergency/Disaster  
 53: Training

NOTICE TO COMPLY BY: \_\_\_\_\_

8. Don England (email dated March 31, 2006)

Comment: Favors proposed relocation of the golf course and campground.

Response: Supports proposed alternative.

9. Lisa and Blaine Burn (email dated March 31, 2006)

Comment: Favors proposed relocation of the golf course.

Response: Supports proposed alternative.

10. Marc Kodack (email dated April 1, 2006)

Comment: Questions regarding possible impacts to the American burying beetle, timing of beetle surveys.

Response: American burying beetle habitat is specific to certain soil types and textures. At the present time all construction activity has been halted in areas where potential American burying beetle (ABB) habitat may be located until ABB surveys have been conducted. ABB surveys will be conducted within the CrossTimbers development in accordance with the “Construction Best Management Practices for Minimizing Impacts to the American Burying Beetle” as detailed in Appendix A of this EA. This protocol was developed by the U.S. Fish and Wildlife Service, and was reviewed and accepted by the Service during informal consultation. In accordance with the protocol, ABB surveys will be conducted during the insect’s active season when nighttime temperatures consistently exceed 60 degrees F. If ABBs are determined to occur within a proposed construction area, they will be baited away or trapped and relocated from the construction area and the site monitored according to the procedures outlined in Appendix A.

Comment: Need to include original Environmental Assessment for the CrossTimbers development as an appendix to the current draft EA.

Response: The original Environmental Assessment for the CrossTimbers development was not included as an appendix to the current EA due to length (approximately 350 pages). However, the original EA is available through the Tulsa District web page by clicking the following link: <http://www.swt.usace.army.mil/library/libraryDetail.cfm?ID=162>

Comment: Information used to assess area populations under Environmental Justice.

Response: The Tall Chief Cove and Skiatook Point Public Use Areas are zoned recreation-intensive use in the Skiatook Lake Master Plan. The review of the proposed action, relative to Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, identified greater public recreational opportunities and no adverse human health or significant environmental impact solely related to the proposed action. Further analysis of potentially affected populations is therefore not necessary.

Comment: Visual impacts to National Register eligible cultural resources.

Response: See Sections III.E. and IV.B.9 for specific information regarding cultural resources located near the proposed development areas. Site 34OS678 is located on USACE

property associated with the Skiatook Lake office, and is not part of the actual SEDA lease area. There are no plans at this time that would affect this site. Consultation with the Osage Nation and Quapaw Tribe in January 2006 did include a discussion by the tribal representative on the need to protect Healing Rock from vandalism without resorting to chainlink fencing and negative signage. This discussion led to the agreement by all parties that protection and interpretation of historic properties at Skiatook Lake was desired and appropriate, and would be conducted under the guidelines detailed in Section IV.B.9.

Comment: Preparation of turf management plan after completion of the proposed EA.

Response: Since final design of the proposed golf course will depend on the approved location, it is not prudent to design the course until such time as that decision has been made. With respect to the proposed golf course, the purpose of the Environmental Management Plan (and the turf management plan) is to provide guidance in the construction and implementation of effective turf management to minimize runoff and enhance vegetation management. Once the decision on the golf course location is approved by USACE, StateSource will initiate work with the golf course designer on the course layout and begin to address the specific turf management needs that the course will require. USACE environmental oversight of the SEDA lease does not end with the completion of the NEPA documentation. The SEDA lease requires full compliance with all applicable environmental laws and regulations. USACE conducts annual environmental and safety compliance inspections to insure that each lease holder is complying with all applicable laws and regulations. The SEDA lease requires the lessee, and all sublessees, to protect the project against pollution of the air, ground, and water, and to comply with any laws, regulations, conditions, or instructions when issued by any Federal, state, interstate, or local governmental agency having jurisdiction to abate or prevent pollution. The requirement in the SEDA lease for an evolving Environmental Management Plan provides additional means to assure continuing environmental responsibility during the construction and operation of the CrossTimbers development.

Comment: Temporary changes to air quality during construction.

Response: See Section IV.B.11 for the discussion of air quality impacts. Construction of the golf course, camping and RV park, marina, and village would result in a temporary increase in air pollutants in the project area. The types of construction equipment used in the project area (e.g., tractor, loader, backhoe) will generate diesel fuel and dust air pollutants. The operation of construction equipment would vary from intermittent to fairly continuous, and many pieces of equipment may operate at the same time. Although construction-related air pollution would occur in the construction areas of the project during the initial construction period, these effects are considered relatively minor for the following reasons: (i) the air quality impacts will be localized and temporary, (ii) the most intensive construction activities would occur over a relatively short period of time, and (iii) the total air pollutants generated by the proposed development will not result in the region becoming a non-attainment area for air pollutants.

Comment: Recreation use anticipated during preparation of initial environmental documents vs. recreation use currently taking place at Skiatook Lake.

Response: The Skiatook Point Public Use Area is zoned Recreation-Intensive use in the Skiatook Master Plan prepared by USACE in September 1976. Appropriate uses on

recreation-intensive zoned lands include camping, picnicking, hiking, group activities, and related activities. USACE initial development plans for Skiatook Lake included 8 fully developed public use areas, with an annual visitation of more than 1,500,000 people. Facilities actually developed by USACE at Skiatook Lake included only two fully developed public use areas and four lake access points. Annual visitation to these facilities averages 500,000 people each year. Development of additional camping facilities at Skiatook Point is consistent with the Skiatook Lake Master Plan, will reduce congestion in the Tall Chief Cove Public Use Area, and will provide needed camp sites for those lake visitors who do not desire the resort-based recreation experience being developed at CrossTimbers.

11. James Zingerman (email dated April 2, 2006)

Comment: Security concerns regarding construction of campground at Skiatook Point.

Response: See response to Comments #3 and 6 above.

12. Bruce Krefting (email dated April 2, 2006)

Comment: Insufficient public notification of proposed action.

Response: NEPA has no minimum requirement for public notification and comment solicitation for the preparation of an Environmental Assessment. USACE chose to allow a 15 day public comment period for this EA, and utilized our typical means of public notification (publishing a Notice of Availability in local newspapers and placing the document on the Tulsa District webpage). This was deemed adequate because all of the proposed development activities were previously addressed in the original EA for the CrossTimbers development on February 13, 2003. The current EA addresses the more limited scope of the change in locations of the golf course and camping areas at Skiatook Point and Tall Chief Cove, and therefore did not merit a longer review period. The draft EA was sent to all individuals on the original EA mailing list and those who provided comments. Additionally, a great deal of information has been made available to the public by SEDA and StateSource regarding all proposed development in the lease area prior to preparation of this current EA, including public meetings with adjacent homeowners associations and property owners.

Comment: Against proposed relocation of the golf course.

Response: Disagrees with proposed alternative.

Comment: Security concerns associated with movement of campground to Skiatook Point.

Response: See response to Comments #3 and 6 above.

Comment: Fire risk associated with proposed campground at Skiatook Point.

Response: The camping season on Skiatook Lake typically begins in April and ends in October. Since these months coincide with the plant growing season, the threat of fire during this period in most years is minimal. The Corps of Engineers experience at Skiatook Lake indicates that the incident of wildfires initiating from a developed campground are rare. Reasons for this include the low fuel levels in these areas which are regularly mowed and the network of roads in the areas that act as firebreaks. In fact, the number of wildfires arising from natural causes exceeds those from campground activities.

13. Allan McKay (email dated April 3, 2006)

Comment: Impacts to property values associated with relocation of golf course and camping area.

Response: See response to Comment #1 above.

Comment: Rationale for proposed facilities relocation.

Response: The requested change in golf course location from Skiatook Point to Tall Chief Cove is based on the identification by the golf course designer that the golf course could fit in the Tall Chief Cove area and still leave room for the additional development already approved for the village area. Initially, this was not believed possible, and therefore was not considered as an alternative in the original EA. Combining the golf course and village in the Tall Chief Cove area will keep similar recreational purposes together, and it is anticipated this will lead to a more economically successful facility layout.

Comment: Request meeting and further public input on proposed action.

Response: See response to Comment #23 below.

14. Mark Schell (email dated April 3, 2006)

Comment: General support for proposed CrossTimbers development and facilities relocation.

Response: Supports proposed alternative.

15. Glenn D. Yandell (email dated April 3, 2006)

Comment: Request meeting and further public input on proposed action.

Response: See response to Comment #23 below.

16. David and Debbie Kendall (email dated April 3, 2006)

Comment: General concern regarding proposed relocation of golf course and campground.

Response: See response to Comments #1, 3, 12 and 13 above.

17. James Paynter, Jr. (email dated April 3, 2006)

Comment: Did not receive requested copy of draft EA.

Response: We apologize for not placing your name on the original mailing list for the draft EA. It was an oversight on the part of USACE.

Comment: Means of requesting public input.

Response: See response to Comment #12 above.

Comment: Concerns regarding trails requirements, maintenance, and security.

Response: See response to Comment #6 above.

Comment: Lack of adjacent landowner contact by StateSource regarding proposed action.

Response: See response to Comment #12 above.

Comment: Water quality concerns and impacts from proposed action.

Response: Potential impacts to water quality as a result of the proposed action have been addressed in Section IV.B.10 of this EA.

Comment: Concerned with long-term project viability.

Response: Although it is acknowledged that some resort projects experience varying degrees of economic success and decline over time as described by the comment, USACE cannot evaluate recreation development proposals only on the basis of possible negative outcomes. The federally-constructed recreation facilities at Skiatook Lake were well below design levels needed to meet the recreating needs of the public. USACE feels it would not be fair to the public to ignore an opportunity to utilize a public-private partnership to provide additional recreation services to the public. All recreation development proposals are evaluated with respect to economic feasibility, quality of proposed development, and financial capabilities of the developer in order to minimize incidences of developmental or economic failures during a lease.

Comment: Loss of lake visual quality.

Response: See response to Comment #10. As detailed in the original and current EA for the CrossTimbers development, natural landscapes and habitat will be incorporated into the development wherever possible and detailed as part of the project Environmental Management Plan.

18. Ron Miller (email dated April 4, 2006)

Comment: Agree with proposed move of golf course and camping area.

Response: Supports proposed alternative.

19. Thomas Alexander (email dated April 4, 2006)

Comment: Supports proposed move of golf course and camping area.

Response: Supports proposed alternative.

20. Oklahoma Department of Wildlife Conservation (fax dated April 4, 2006)

Comment: Concerned with loss of habitat resulting from proposed action. Requests additional lands opened to hunting and recommends additional mitigation actions.

Response: As stated in Section IV.B.6, hunting opportunities on approximately 300 acres of USACE property would be impacted by the rezoning of project lands from recreation low-density to recreation-intensive use. USACE has agreed to offset this loss of hunting opportunity by rezoning approximately 300 acres of undeveloped lands in the Twin Points Recreation Area from recreation-intensive to wildlife management general. As part of the mitigation requirements for impacts to terrestrial habitat, approximately 120 acres at Gouin Point would be rezoned from recreation-intensive use to wildlife management general. Both of these areas would be protected from future development, managed for both game and non-game species, and be available for hunting opportunities. Many of the amenities planned as

part of the CrossTimbers development in Tall Chief Cove and Skiatook Point have been identified for construction since 1976. Impacts resulting in loss of habitat and associated mitigation for those losses were addressed by USACE in the Final Environmental Statement for Skiatook Lake published in February 1972.

Comment: USACE should open the Hominy Landing park to archery only or shotgun with pellets hunting.

Response: Hunting opportunities are reviewed annually by natural resources personnel at the Skiatook Lake project office. Through this process areas are added, downsized, or removed from the lake hunting program, and changes to the hunting designations (e.g. archery only or shotgun with pellets) are considered. While opening Hominy Landing park to hunting is not part of the mitigation proposed for this EA, opportunities exist for discussion with the Skiatook Lake project office regarding opening additional areas for hunting or changing hunting designations.

21. James Pardee as President of Santa Barbara Cove Homeowners Association I (fax dated April 4, 2006)

Comment: Security concerns associated with movement of campground to Skiatook Point.

Response: See response to Comments #3 and 6 above.

Comment: Requests extension of review and comment period for draft EA.

Response: USACE has considered this request for an extension to the public comment period for this EA. In a letter dated April 11, 2006, Tulsa District Commander Colonel Miroslav P. Kurka declined this request, stating that the comments received during the 15 day public review period are sufficient to allow him to make an informed decision on the proposed action (see attached letter).



DEPARTMENT OF ARMY  
CORPS OF ENGINEERS, TULSA DISTRICT  
1645 SOUTH 101<sup>ST</sup> EAST AVENUE  
TULSA, OKLAHOMA 74128-4609

APR 11 2006

Planning and Environmental Division  
Environmental Analysis and Compliance Branch

Mr. James L. Pardee  
President, Santa Barbara Cove  
Homeowner's Association  
11658 Santa Cruz Drive  
Skiatook, OK 74070

Dear Mr. Pardee:

This is in response to your April 4, 2006, letter requesting a 30-60 day comment period extension for the Draft Environmental Assessment of the Proposed Relocation of Golf Course and Camping/RV Area, Crosstimbers Development Project, Skiatook Lake, Oklahoma (dated March 20, 2006). The 15-day public comment period for this document recently closed on April 5, 2006. Your letter indicates that a comment period extension would provide for further review and comment by area homeowners.

I appreciate your interest in this proposal and your willingness to provide input. I am respectfully unable to accommodate your request for an extension to the public comment period. It is my decision that comments received during the public review period are sufficient for me to make an informed decision on this proposal. Owing to your participation in providing comments, you will be added to our mailing list for future documents regarding this proposal. Accordingly, you will be informed of my final decision.

If you have additional questions, please contact Mr. Steve Nolen at 918-669-7660 or e-mail [Stephen.L.Nolen@usace.army.mil](mailto:Stephen.L.Nolen@usace.army.mil).

Sincerely,

Miroslav P. Kurka  
Colonel, U.S. Army  
District Engineer

22. U.S. Fish and Wildlife Service (fax dated April 5, 2006)

Comment: Shortened public comment period does not allow adequate time for coordinated comments and meaningful public involvement.

Response: See response to Comment #12 above.

Comment: American burying beetle protocol contained in Appendix A, not Appendix B as stated in draft EA.

Response: Concur. Change made in the EA.

Comment: Concerned with loss of habitat resulting from proposed action. Requests additional lands opened to hunting and recommends additional mitigation actions.

Response: See response to Comment #20 above.

23. Bruce Krefting as President of Beverly Hills Lake Estates II Property Owners Association (email dated April 5, 2006)

Comment: Requests a meeting for further information sharing and requests an extension of public review period.

Response: USACE has considered this request for a meeting and extension to the public comment period for this EA. In a letter dated April 11, 2006, Tulsa District Commander Colonel Miroslav P. Kurka declined this request, stating that the comments received during the 15 day public review period are sufficient to allow him to make an informed decision on the proposed action (see attached letter).



DEPARTMENT OF ARMY  
CORPS OF ENGINEERS, TULSA DISTRICT  
1645 SOUTH 101<sup>ST</sup> EAST AVENUE  
TULSA, OKLAHOMA 74128-4609

APR 11 2006

Planning and Environmental Division  
Environmental Analysis and Compliance Branch

Mr. Bruce Krefting  
President, Beverly Hills Lake Estates II Property  
Owner's Association  
14389 Giorgio Drive  
Skiatook, OK 74070

Dear Mr. Krefting:

This is in response to your April 5, 2006, e-mail requesting a 30-60 day comment period extension and a formal review meeting for the Draft Environmental Assessment of the Proposed Relocation of Golf Course and Camping/RV Area, Crosstimbers Development Project, Skiatook Lake, Oklahoma (dated March 20, 2006). The 15-day public comment period for this document recently closed on April 5, 2006. We also received e-mail comments for this proposal from you on April 2, 2006.

I appreciate your interest in this proposal and your willingness to provide input. I am respectfully unable to accommodate your request for either an extension to the comment period or a formal review meeting with you and other local residents. It is my decision that comments received during the public review period are sufficient for me to make an informed decision on this proposal. Owing to your participation in providing comments, you will be added to our mailing list for future documents regarding this proposal. Accordingly, you will be informed of my final decision.

If you have additional questions, please contact Mr. Steve Nolen at 918-669-7660 or e-mail [Stephen.L.Nolen@usace.army.mil](mailto:Stephen.L.Nolen@usace.army.mil).

Sincerely,

Miroslav P. Kurka  
Colonel, U.S. Army  
District Engineer

24. Ladd Drummond (email dated April 5, 2006)

Comment: Support moving golf course to Tall Chief Cove area.

Response: Supports proposed alternative.

25. Karen Harris (email dated April 5, 2006)

Comment: Request explanation of shortened public review period. Requests extension of public review period.

Response: See response to Comment #12 above. See response to Comments #21 and 23 regarding an extension to the public review period for this EA.

Comment: Concerned with potential impacts to neo-tropical birds and ancient Cross timbers ecosystem.

Response: Impacts to migratory bird species were evaluated in accordance with Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds. There is no threatened or endangered neo-tropical birds nesting habitat present in the Skiatook Lake area. While several species of neo-tropical birds are present in the Tall Chief Cove and Skiatook Point Recreational Use Areas, the grass-shrublands and savanna-woodlands habitats present in these two areas are abundant on USACE lands surrounding Skiatook Lake. Increased habitat fragmentation and alteration will occur locally in the proposed project area as a result of construction and continued development. However, these local changes will not significantly impact neo-tropical bird habitat on USACE lands at the Skiatook Lake project. See Sections III.D.7 and IV.B.1 for discussion on ancient cross-timbers and potential impacts to the ecosystem.

Comment: Impacts of pesticides and fertilizers on Skiatook Lake.

Response: Water quality concerns have been addressed in Section IV.B.10 of this EA.

Comment: Questions use of particular plant species in minimizing potential impacts from nutrient runoff into Skiatook Lake.

Response: Water quality concerns have been addressed in Section IV.B.10 of this EA. Use of best management practices to control nutrient runoff from the proposed golf course have been addressed in Section IV.B.10 of this EA.

Comment: Mitigation adequacy.

Response: See Section V of the current EA for discussion on mitigation. USACE believes that the proposed mitigation identified in the EA is sufficient to mitigate for the loss of terrestrial habitat that will be impacted by the proposed CrossTimbers development.

Comment: Incentive of StateSource to be good land steward.

Response: See response to Comment #10 above.

Comment: Environmental Impact Statement required.

Response: There were no significant impacts identified to warrant preparation of an Environmental Impact Statement. Therefore, completion of this EA will be sufficient to comply with the National Environmental Policy Act.

26. Gary Harkreader (email dated April 5, 2006)

Comment: Agree with proposed golf course and campground relocation.

Response: Supports proposed alternative.