



United States Department of the Interior

FISH AND WILDLIFE SERVICE
176 Croghan Spur Road, Suite 200
Charleston, South Carolina 29407

December 12, 2002

Mr. T. J. Savereno
Senior Staff Ecologist
Sabine & Waters
P.O. Box 1072
Summerville, South Carolina 29484

Re: Results of Protected Species Survey on an Approximately 500-acre Tract located near the Town of Andrews, Georgetown County, South Carolina
FWS Log No. 4-6-03-I-097

Dear Mr. Savereno:

We have reviewed the information received November 7, 2002 concerning the above-referenced project in Georgetown County, South Carolina. The following comments are provided in accordance with the Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661-667e), and Section 7 of the Endangered Species Act, as amended (16 U.S.C. 1531-1543).

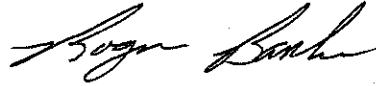
The subject property is an approximately 500-acre tract located on U.S. Highway 521 approximately 0.5 miles southeast of the town of Andrews, Georgetown County, South Carolina. The site is the proposed location for the Georgetown County Business Park. Sabine & Waters Inc. is currently conducting a delineation of jurisdictional wetlands on the property.

Based on the information received, we will concur with a determination that this action is not likely to adversely affect federally listed or proposed endangered and threatened species. In view of this, we believe that the requirements of Section 7 of the Endangered Species Act have been satisfied. However, obligations under Section 7 of the Act must be reconsidered if (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered, (2) this action is subsequently modified in a manner which was not considered in this assessment, or (3) a new species is listed or critical habitat is determined that may be affected by the identified action.

This is your future. Don't leave it blank. - Support the 2000 Census.

Your interest in ensuring the protection of endangered and threatened species and our nation's valuable wetland resources is appreciated. If you have any questions please contact Ms. Paula Sisson of my staff at (843) 727-4707, ext. 18. In future correspondence concerning the project, please reference FWS Log No 4-6-03-I-097.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Roger L. Banks". The signature is fluid and cursive, with the first name "Roger" being more prominent than the last name "Banks".

Roger L. Banks
Field Supervisor

RLB/PTS



United States Department of the Interior



FISH AND WILDLIFE SERVICE

176 Croghan Spur Road, Suite 200
Charleston, South Carolina 29407

July 24, 2009

Mr. Ryan Wenzel
Sabine & Waters
P.O. Box 1072
Summerville, SC 29484

Re: 500-Acre Tract near Andrews, SC
Georgetown County
FWS Log No. 2009-TA-0552

Dear Mr. Wenzel:

The U.S. Fish and Wildlife Service (Service) has reviewed the plans for this proposed project. Based on our review and the information received:

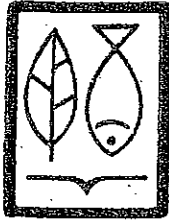
- It is our opinion that the proposed action will have no effect on resources under the jurisdiction of the Service that are currently protected by the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) (Act). Therefore, no further action is required under Section 7(a)(2) of the Act.
- We concur with your determination that the proposed action is not likely to adversely affect resources under the jurisdiction of the Service that are currently protected by the Act. Therefore, no further action is required under Section 7(a)(2) of the Act.
- It is our opinion that the proposed action is not likely to have reasonably foreseeable adverse effects on resources under the jurisdiction of the Service that are currently protected by the Act. Therefore, no further action is required under Section 7(a)(2) of the Act.
- The proposed project may impact wetlands. Please contact the U.S. Army Corps of Engineers, Charleston District for more information.

If you should have any questions, please contact Ms. Melissa Bimbi at (843)727-4707, ext. 217 and reference FWS Log No. 2009-TA-0552.

Sincerely,

For Timothy N. Hall
Field Supervisor

**TAKE PRIDE
IN AMERICA**



SABINE & WATERS

ENVIRONMENTAL LAND MANAGEMENT CONSULTANTS

October 10, 2002

Mr. Roger Banks
U.S. Fish & Wildlife Service
176 Croghan Spur Road, Suite 200
Charleston, South Carolina 29407

SUBJECT: Results of protected species survey on an approximately 500-acre tract located near the Town of Andrews, Georgetown County, South Carolina.

Dear Mr. Banks:

This letter is written to initiate Informal Consultation with the U.S. Fish and Wildlife Service, Charleston Field Office, under Section 7 of the Endangered Species Act regarding the site referenced above. Although no federal nexus exists at this time, it is possible that one may be established should a U.S. Army Corps of Engineers permit be sought for jurisdictional wetland impacts under Section 404 of the Clean Water Act (33 U.S.C. 1344).

PROJECT LOCATION AND LIMITS / PROPOSED ACTION

The subject property is an approximately 500-acre tract located on U.S. Highway 521 approximately 0.5 miles southeast of the town of Andrews, Georgetown County, South Carolina (Figure 1). The site is the proposed location for the Georgetown County Business Park. Sabine & Waters, Inc. is currently conducting a delineation of jurisdictional wetlands on the property.

HABITAT DESCRIPTION

The site consists of six major habitat types; loblolly pine plantation, pine flatwoods, pine-mixed hardwood, swamp-gum pond, pond cypress pond, and hardwood bottom.

Loblolly Pine Plantation - This habitat type comprises the majority of the site by far. It occurs on a variety of mapped soil types, including Bladen loam, Eulonia loamy fine sand and Wahee fine sandy loam. The dominant species in these areas

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is loblolly pine (*Pinus taeda*), although the considerable variation in stand age over the site results in a corresponding variation in associated vegetation types. Approximately 75% or greater of the pine plantation is characterized by loblolly pine that is approximately 20-30 years old, forming a dense canopy with at least 75% closure. In these areas, the sub-canopy is moderately sparse, consisting of a mixture of sweetgum (*Liquidambar styraciflua*), black gum (*Nyssa sylvatica*) and water oak (*Quercus nigra*), although the species assemblage varies with local changes in moisture content and soil type. The shrub layer is likewise sparse and is dominated by wax myrtle (*Myrica cerifera*). The herbaceous layer is very sparse, due in part to the low light penetration and thick layer of pine straw, and consisted of a scattering of slender spikegrass (*Chasmanthium laxum*), broomstraw (*Andropogon* spp.) and *Dichantheium* spp. Common vines include greenbrier (*Smilax rotundifolia*) and yellow jessamine (*Gelsemium sempervirens*). The remainder of pine plantation is relatively young, with loblolly seedlings approximately 4-8 years old. Vegetation between the rows of loblolly was extremely thick in these areas. Dominant species included wax myrtle, broomstraw, blackberry (*Rubus* spp.) and greenbrier.

Pine Flatwoods – A large area in the northwest corner of the site exhibits vegetative characteristics similar to pine flatwoods habitat. This area appears to have been clear-cut approximately 3-5 years ago and is mapped as being underlain by Grifton loamy fine sand and Wahee fine sandy loam. Although this area is still in early stages of revegetation, observation of the existing vegetation and an off-site but contiguous area indicates that it may have been pine flatwoods habitat prior to the cut. Canopy and sub-canopy layers have not yet developed. Shrub vegetation is well-developed, particularly on ridges in the micro-topography, and is dominated by wax myrtle, blackberry, sweet bay (*Magnolia virginica*), sweet pepperbush (*Clethra alnifolia*) and red chokeberry (*Sorbus arbutifolia*). In the wetter troughs between the ridges, herbaceous vegetation is better developed and includes species such as Virginia meadow-beauty (*Rhexia virginica*), orange milkwort (*Polygala lutea*), beak rushes (*Rhynchospora* spp.), marsh bulrush (*Scirpus cyperinus*), cane (*Arundinaria gigantea*) and broad-leaved eupatorium (*Eupatorium rotundifolium*).

Pine-Mixed Hardwood – This habitat type is represented on the site by several relatively undisturbed areas and a larger area that has been clear-cut within the last 3 to 5 years. These areas are associated with Eulonia and Bladen soils. The canopy and sub-canopy in the relatively undisturbed areas are moderately dense and dominated by a mixture of loblolly pine, red maple (*Acer rubrum*) and swamp-gum (*Nyssa biflora*). The shrub layer is very dense and consists almost exclusively of cane. The herbaceous layer is almost non-existent, due most likely to the density of the other layers as well as a thick layer of pine straw. In the clear-cut areas, loblolly pine, wax myrtle, red maple, blackberry, sweetgum and red bay (*Persea borbonia*) were the prevalent species in the shrub layer. Marsh bulrush, beak rushes, Virginia meadow-beauty, Virginia chain fern (*Woodwardia*

virginica) and plume grass (*Erianthus giganteus*) were dominant herbaceous species.

Hardwood Bottom – Hardwood bottoms are found in several areas on the site and are associated with Wahee, Eulonia and Bladen soils. The canopy is moderately dense. Common species are red maple, sweetgum and willow oak (*Quercus phellos*). The sub-canopy is also moderately dense and consists primarily of red maple and sweetgum. The shrub layer is moderately sparse and is dominated by red maple, sweetgum and wax myrtle, but also includes sweet pepperbush, cane and highbush blueberry (*Vaccinium corymbosum*). Herbaceous density and species is highly variable. In areas with higher degrees of canopy, sub-canopy and shrub density, herbaceous vegetation is sparse and consists primarily of slender spikegrass. Where openings occur in the canopy, herbaceous vegetation is moderately dense and includes such species as plume grass, meadow-beauty, Virginia chain fern, pipewort, eupatorium (*Eupatorium* spp.), *Dichantheium* spp., Walter's sedge (*Carex walteriana*), bog buttons (*Lachnocaulon anceps*) and glaucous broom sedge (*Andropogon glaucopsis*).

Swamp-gum Pond – This habitat type is represented by several small (<1 acre) depressions scattered over the site. All are associated with either Wahee or Eulonia soils. The canopy in these areas is generally moderate in density. The predominant species is swamp-gum, but also includes red maple and sweetgum. Shrub density and species composition varies between sites, but is generally moderate in density and includes red maple, sweetgum, fetter bush (*Lyonia* spp.) and Virginia willow (*Itea virginica*). The herbaceous layer likewise varied with site but was generally well-developed, including such species as Virginia chain fern, plume grass, meadow-beauty (*Rhexia* spp.), pipewort (*Eriocaulon decangulare*) and Walter's sedge.

Pond Cypress Pond – Only one small area was found on site that represents this habitat type. The canopy in this small depression consists of a mixture of loblolly pine, red maple, sweetgum and pond cypress (*Taxodium ascendens*). The sub-canopy includes swamp-gum, pond cypress, red maple and sweetgum. The shrub layer is moderately sparse and consists of sweetgum and highbush blueberry. Slender spike grass was the only species noted in the sparse herbaceous layer.

LISTED SPECIES AND HABITAT REQUIREMENTS

Prior to field investigations, we consulted the July 26, 2001 update of the South Carolina Distribution Records of Endangered, Threatened, and Candidate Species provided to us by your office to determine what protected species may occur on site. Based on the list for Georgetown County and a preliminary assessment of the site, the list of potentially occurring species was narrowed as follows:

Common Name	Scientific Name	Federal Status
Bald eagle	<i>Haliaeetus leucocephalus</i>	Threatened
Wood stork	<i>Mycteria americana</i>	Endangered
Red-cockaded woodpecker	<i>Picoides borealis</i>	Endangered
Shortnose sturgeon	<i>Acipenser brevirostrum</i>	Endangered
Pondberry	<i>Lindera melissifolia</i>	Endangered
Canby's dropwort	<i>Oxypolis canbyi</i>	Endangered
Chaffseed	<i>Schwalbea americana</i>	Endangered

Bald Eagle – The bald eagle requires shallow open water and wetland areas for foraging and undisturbed coastal, river or lakeshore areas with large trees for roosting and nesting. In the Southeast, nests are usually constructed in living dominant or codominant pine or cypress trees. Nesting sites are usually within one-half mile of water with a clear flight path to the water. The nest tree is usually the largest live tree in the area with an open view of the surrounding area (USFWS 1992).

Wood Stork – Wood storks are typically associated with freshwater and brackish wetlands. Most nesting colonies in the Southeast are located in woody vegetation, such as bald cypress, over standing water, or on islands surrounded by open water. Foraging habitat may include freshwater marshes, flooded pastures and flooded ditches (USFWS 1992). Foraging sites are often in areas of fish concentrations due to either local reproduction or drying.

Red-cockaded Woodpecker – Typical nesting habitat for red-cockaded woodpeckers consists of open stand of pines with an age of 80 to 120 years (USFWS 1992), although nesting occasionally occurs in younger trees. Longleaf pine seems to be preferred, although nests may be found in any species of southern yellow pine. Stands that are primarily hardwood or that have a dense hardwood understory are usually avoided. Foraging habitat usually consists of pine or pine-hardwood stands at least 30 years old.

Shortnose sturgeon – During winter, this species occurs in salt water bays and estuaries of medium to high salinity. During late winter to early spring the shortnose sturgeon moves upstream into freshwater swamps where it will spawn among flooded trees when water temperatures reach 10-15 degrees centigrade. During summer the adults will congregate in low salinity estuaries to feed on bottom dwelling invertebrates. Eggs and larvae may be susceptible to siltation effects.

Pondberry – Pondberry is primarily found in association with wetland habitats (USFWS 1992). In South Carolina, pondberry is associated with the margins of seasonally flooded sinks, ponds, and depression in pinelands (USFWS 1993).

Canby's Dropwort – Typical habitat for this species includes wet meadows, wet pineland savannas, ditches, sloughs, and around the edges of pond cypress/pine ponds (USFWS 1992). The largest and most vigorous populations have been found to occur in

open bays or ponds that are wet throughout most of the year but which have little or no canopy cover (USFWS 1990).

Chaff-seed – Chaff-seed occurs in sandy, acidic, seasonally moist to dry soils. Habitats where it most commonly occurs include open, moist pine flatwoods, fire-maintained savannas, ecotones between peaty wetlands and xeric sandy soils, and other open grass-sedge systems (USFWS 1995). Chaff-seed is dependent on factors such as fire, mowing, or fluctuating water tables that maintain the open, early successional conditions that it requires.

EVALUATION CRITERIA AND RESULTS

An examination of the South Carolina Department of Natural Resources' Rare, Threatened and Endangered Species Inventory indicated no records of protected species occurring on or within three miles of the project area. Between August 6 and August 9, 2002 we conducted field investigations of the subject property. Field investigations consisted of pedestrian surveys with the purpose of identifying potential habitat for the species referenced above.

Our investigations led to the following conclusions regarding habitat suitability for the species referenced above:

Bald Eagle – No bald eagle nests were observed in the crowns of the larger pine and hardwood trees, and the likelihood of occurrence of this species is considered low due to the distance from suitable foraging habitat.

Wood Stork – No suitable nesting, roosting or foraging habitat was found during field investigations.

Red-cockaded Woodpecker – Very few pine trees of sufficient maturity for cavity construction were observed on site, and these occurred in areas with relatively dense midstory development. No sign of cavities were observed in these trees. Additionally, no cavity trees were observed on adjoining properties, although observations were limited to what could be seen from the property lines of the subject tract. Pine stands located on the site are only now reaching a suitable stage of maturity to be considered as foraging habitat. However, the evident lack of prescribed burning has resulted in midstory density that makes the use of any part of the site for foraging highly unlikely.

Shortnose sturgeon – No stream channels or freshwater swamps with connections to streams were observed on the property during on-site investigations or through an inspection of remote sensing data sources.

Pondberry – Although seasonally flooded pineland depressions were observed on the site, an inspection of those areas revealed no evidence of the presence of pondberry.

Mr. Roger Banks
October 10, 2002
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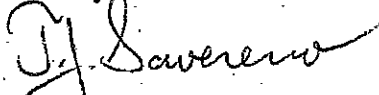
Canby's Dropwort – An inspection of pineland, swamp-gum, and pond cypress depressions on the site revealed no evidence of Canby's dropwort. Canopy density in these areas makes them only marginally suitable habitat for this species.

Chaff-seed – The lack of fire and other factors that maintain early successional conditions make this site unsuitable habitat for chaff-seed. Investigations in the areas that were recently clear-cut revealed no evidence of the species.

DETERMINATION OF EFFECT

Based on our findings, we believe that commercial development of the subject property would have "no effect" on federally listed endangered and threatened species. We ask for your concurrence with these findings. If you have questions or comments, please contact me at (843) 871-5383. Thank you for your assistance.

Sincerely,



T.J. Savereno
Senior Staff Ecologist

Mr. Roger Banks
October 10, 2002
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LITERATURE CITED

- U.S. Fish and Wildlife Service. 1990. Canby's Dropwort Recovery Plan. Atlanta, Georgia. 25 pp.
- U.S. Fish and Wildlife Service. 1992. Endangered and Threatened Species of the Southeast United States (The Red Book). Prepared by Ecological Services, Division of Endangered Species, Southeast Region, Government Printing Office, Washington, D.C. 1,438 pp. (two volumes).
- U.S. Fish and Wildlife Service. 1993. Recovery Plan for Pondberry (*Lindera melissifolia*). U.S. Fish and Wildlife Service, Atlanta, Georgia. 56 pp.

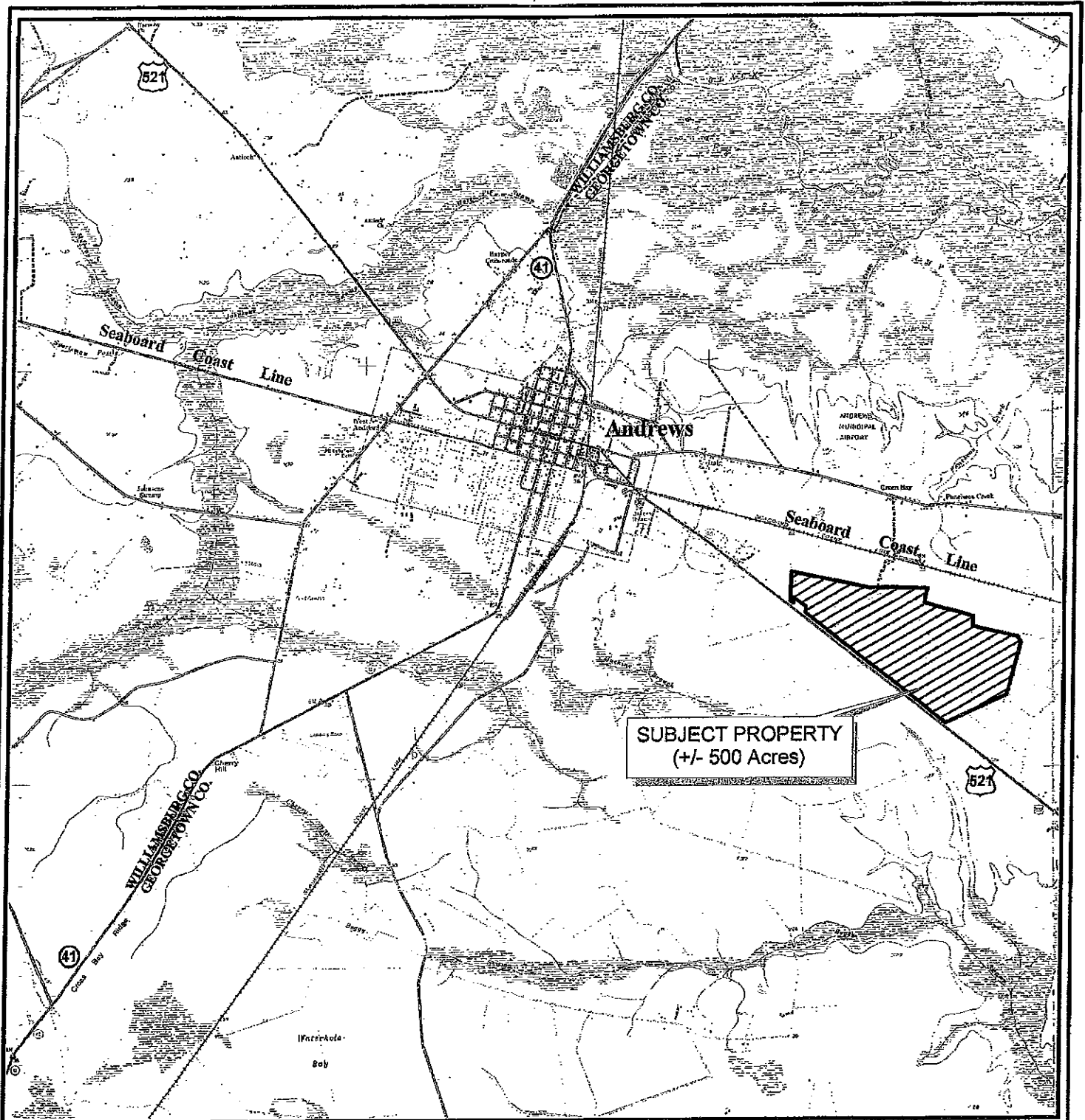




Figure 1.
 Location Map for the
 Approximately 500-acre Proposed
 Georgetown County Business Park

Georgetown County, South Carolina

LEGEND

 Project Boundary

N
 W  E
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 Feet



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Disclaimer: This map is a graphic representation of data obtained from various sources. All efforts have been made to warrant the accuracy of this map. However, Sabine & Waters, Inc. disclaims all responsibility and liability for the use of this map.

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 businesspark.apr (PSSLOCATIONMAP)
 Created By: TJS
 Date Created: October 10, 2002
 Data Source: USGS 7.5-Minute Topo Quad (Andrews)
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