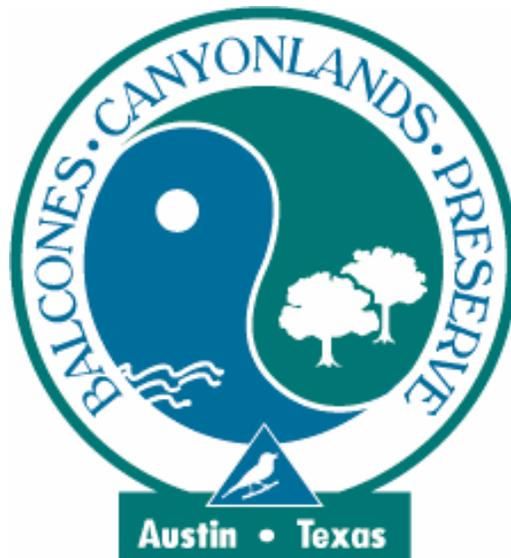


**BALCONES CANYONLANDS PRESERVE
LAND MANAGEMENT PLAN**

TIER III

**TRAVIS AUDUBON SOCIETY
BAKER SANCTUARY
CYPRESS CREEK MACROSITE**



August 2007

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1.0 BACKGROUND INFORMATION

Travis Audubon Society, Inc. (Travis Audubon Society, or TAS), is a local chapter of the National Audubon Society (NAS), a nonprofit organization dedicated to wildlife conservation (see section 2.1.1). Like many NAS chapters, TAS owns property purchased for and managed as wildlife preserve. TAS owns two such preserves in Travis County: the Travis Audubon Society Baker Sanctuary (referred to herein as “the TAS Baker Sanctuary” or “the Sanctuary”) and Blair Woods. The TAS Baker Sanctuary participates in the Balcones Canyonlands Preserve (BCP) system. This participation is completely consistent with Travis Audubon Society’s intended purpose for these approximately 680 acres (275 ha) within the BCP Cypress Creek Macrosite.

1.1 Description of Tract

1.1.1 Location of Tract

Travis Audubon Society, Inc., owns 682.611 acres (276.36 ha) as per Travis County Appraisal District (TCAD) maps 18347 and 18337 (A 4.00-acre discrepancy exists between the total acreage described in the Joe and Evelyn Jester Warranty Deed dated 1986 and the TCAD Map 18347). This property is located in Travis County approximately 5 miles north of Lake Travis, east of the Sandy Creek arm. It is accessible by means of Lime Creek Road, which bisects the center of the property from a western property line east, then northeast to an eastern property line. The approximately 680-acre tract has been assembled from the following parcels:

- (a). 94 acres conveyed in 1966
- (b) 517.861 acres conveyed in 1972
- (c) 20.77 acres conveyed in 1986
- (d) Joe Jester’s life estate conveyed in 1986
- (e) 50 acres conveyed in 1986

Boundary markers, metes and bounds, survey data, and legal descriptions are described in the five deeds held in TAS files.

1.1.2 Tract Features

- a small abandoned quarry site north of Lime Creek Road near the western boundary of the sanctuary
- a PEC electric transmission line north of Lime Creek Road
- an old house (Baker cabin) with small storage buildings north of Lime Creek Road
- a windmill at the Baker cabin a trailer residence and storage sheds for the Sanctuary Steward on the south side of Lime Creek Road

- a small stone shed at the entrance to the Baker Spring Trail
- fencing around the entire outer perimeter of the Sanctuary as well as along both sides of Lime Creek Road
- several unimproved roads north and south from Lime Creek Road
- established trail loops leading north and south from the Steward's residence
- a small private cemetery north of Lime Creek Road near the Baker cabin with historical marker
- Lime Creek on a portion of the northern boundary
- 3-4 small intermittent streams
- several small springs and seeps

1.1.3 Land Status

Travis Audubon Society completely owns all land at the TAS Baker Sanctuary.

1.1.3.1 Rights-of-Way and Easements

The 1966 deed to 94 acres, this tract's northernmost parcel, describes two easements and the right to use a park area:

(a) A 5-foot easement "along all common boundary lines of Lot No. 13 of Red Wagon Ranchettes Subdivision with other lots in said Subdivision for drainage and public utilities, as reserved on the plat of said Subdivision." Lot 13 is a 3.53-acre parcel on the north boundary of TAS property.

(b) An access easement across properties not owned by TAS "lying principally along the boundary between Lots 9B and 10A, and crossing the Northeast corner of Lot 14" in Red Wagon Ranchettes Subdivision. This easement provides access to TAS properties from Red Wagon Lane to the north.

(c) This deed also confers the right to use Red Wagon Ranchettes' "Park Area."

The 1972 deed to the 517.861 acres describes the following easements:

(a) Travis Audubon Society, Inc., was granted "free and uninterrupted easement and right to pass over" the 160 acres on which Joe Jester had a life estate.

(b) The 160-acre and 155.06-acre tracts "are conveyed subject to Lime Creek Road."

(c) An existing power line north of Lime Creek Road infers the presence of a power line easement, though the deed contains no direct reference to such an easement.

(d) An existing power line easement for power to the Texas Commission on Environmental Quality (TCEQ) air monitoring station is provided through an agreement between TCEQ and TAS.

The above list may be appended as further information becomes available.

1.1.3.2 In-Holdings

The only in holding on the Sanctuary is an approximately 1200 square foot cemetery. The cemetery, located near the Baker cabin, contains the graves of Chell Baker, Elizabeth “Lena” Baker, Margaret A. Grigsby and M. J. Draper. The Texas Historical Commission granted Historic Texas Cemetery Designation to the Baker Family Cemetery (TV-C19) on April 9, 2001.

1.1.3.3 Boundary Disputes

To the best of TAS’s knowledge, no boundary disputes exist.

1.1.3.4 Regulatory Requirements

The Sanctuary contains a substantial population of Golden-cheeked Warblers, a federally listed endangered species. In addition, there are unconfirmed reports of the Black-capped Vireo and speculation that karst invertebrates may be present but undiscovered.

Inclusion of this property in the Balcones Canyonlands Preserve (BCP) system mandates compliance with the following:

- the federal Endangered Species Act of 1973 (ESA) and subsequent amendments to the ESA
- the terms and conditions of the 10(a) permit for the BCCP issued by the U.S. Fish and Wildlife Service (USFWS) to the permit holders, the City of Austin and Travis County.

For specific requirements, see the Final BCCP Environmental Impact Statement, the Endangered Species Act, and the BCCP permit. Participation in the BCCP mandates land management for all endangered species and species of concern specified in the Final Environmental Impact Statement (Regional Environmental Consultants and U.S. Department

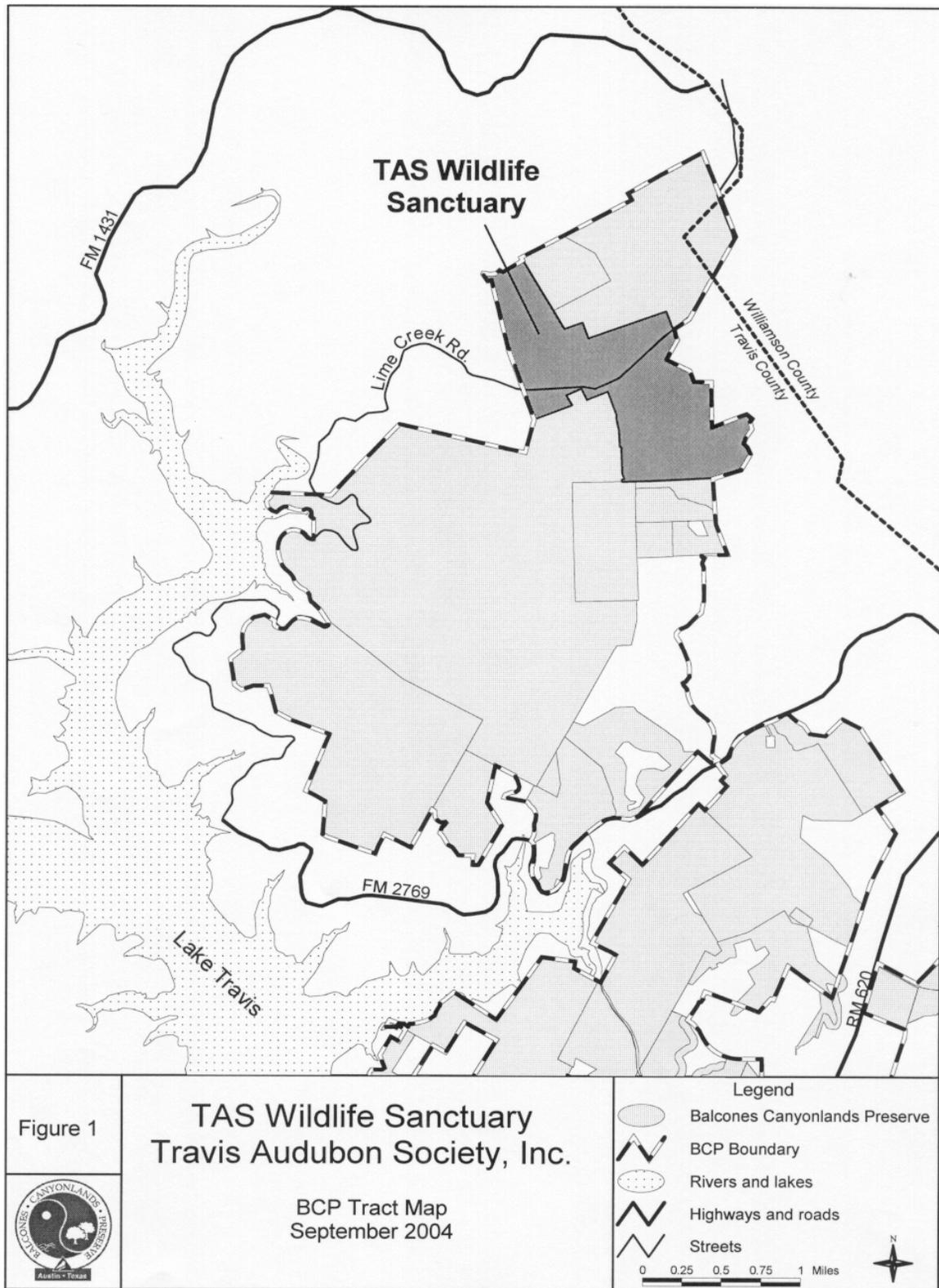


Figure 1. BCP Tract Map: Travis Audubon's Baker Wildlife Sanctuary

of the Interior 1996). TAS considers these conditions to be appropriate and in keeping with TAS's original purpose for this property.

Compliance with federal endangered species regulation brings about compliance with all relevant sections of the Texas Parks and Wildlife Department Code and amendments and the Rules adopted by the Parks and Wildlife Commission in the Texas Administrative Code.

1.1.3.5 Deed Restrictions

The Travis Audubon Society properties consist of eleven individual tracts conveyed to Travis Audubon Society by means of five separate deeds. Below are the restrictions listed in the deeds of record. A further deed search may reveal additional restrictions in additional documents. The following restrictions do not apply uniformly to all tracts but apply to the individual tracts as noted.

(a) The 1966 deed to 94 acres contains the following deed restriction:

Restrictions applicable to Lot 13 of Red Wagon Ranchettes...in Volume 2313, Page 88, of the Plat Records of Travis County, Texas. This set of restrictions applies only to a 3.53-acre tract.

(b) The 1972 deed to 5 17.861 acres (herein referred to as the "Baker Tract") contains the following deed restrictions

1. The property hereby conveyed shall be used only as a game preserve and wildlife sanctuary.
2. The lands hereby conveyed shall not be subdivided or in any manner blocked up and sold in smaller tracts but shall be maintained intact.
3. No residence, trailer, mobile home, building, or other structure shall be constructed or maintained on the lands hereby conveyed except those which are necessary or appropriate to the use and enjoyment of the property as a game preserve and wild life sanctuary.

(c) The 1986 deed to 50 acres (herein referred to as the "Hatfield Tract") contains the following in Exhibit "B." (The first paragraph describes the sale by grantees Gholson and Chamberlain of development rights previously associated with this property. The transfer of development rights to another property allows denser development of the recipient property and no development on the tract from which the rights have been transferred. The loss, or

sale, of development rights on Travis Audubon Society's 50 acres means that no structures may be constructed on this property.)

Development rights to the property have been transferred to Bill Milburn, Inc. Grantee covenants and agrees to fulfill any and all terms of any agreements that run with the land between Grantors and Bill Milburn, Inc.

Grantee covenants and agrees that it will not allow or permit hunting or trapping on the property and will take all reasonable precautions to assure that hunting and trapping never occur on the property. Grantee further specifically covenants that it will never lease any portion of the property for hunting or trapping uses.

Grantee covenants and agrees to maintain the property as a sanctuary for the preservation and observation of wildlife. This property is not to be sold or subdivided, or developed for any purpose inconsistent with the aforementioned use of the property.

1.1.3.6 Special Agreements

Travis Audubon Society entered into an agreement with the Texas Commission on Environmental Quality (TCEQ) (formerly TNRCC) in 1996 that allowed placement of an air monitoring station (site # 38) on the Sanctuary.

1.1.3.7 Mineral Rights

The 1966 deed to the 94 acres contains the following:

One-half mineral reservation in Lot No. 13 of Red Wagon Ranchettes as contained in warranty deed of record in Volume 254, Page 154, of the Travis County Deed Records.

1.1.3.8 Legal Issues

All legal issues are covered elsewhere in the document.

1.1.3.9 Financial Issues

No mortgages or other institutional financial encumbrances remain on Audubon properties. Because Travis Audubon Society is a nonprofit tax-exempt corporation, under Section 501 (c)(3) of the IRS Code, it pays no ad valorem property taxes on the Sanctuary (Alan Jaeger, TAS treasurer, pers. com., September 17, 1996).

1.2 Physical Characteristics

The TAS Wildlife Sanctuary consists largely of wooded uplands with three small canyons containing intermittent streams. Thin, calcareous soils support a small grassland area immediately north and south of Lime Creek Road and mixed woodlands consisting of Ashe juniper plus deciduous species. These woodlands are distributed between upland areas, slopes, and canyon bottoms where plant species diversity increases.

1.2.1 Geology

The area is primarily on the first member of the Edwards Limestone, a lower Cretaceous formation described as follows (Rodda 1970):

This unit has an estimated thickness of 200 feet and consists of thin- to thick-bedded, gray-brown porous dolomite and dolomitic limestone, and hard, gray to tan, fine- to medium-grained limestone commonly containing rudists; Gray to black nodular chert is common and is especially abundant in the dolomite beds.

The uplands of the Sanctuary show the essentially flat topography characterizing the Edwards. Though rock outcrops are rare, a smaller quantity of the Walnut formation is found exposed in the canyons. Pelecypods characteristic of the Walnut can be found along the trails.

The northern properties include Stuart Harris Creek, a loosely north-south tributary of Lime Creek, within a small valley. Within the central and southern portions of the property are two broadly rounded hills that reach elevations of approximately 1,080 feet. Two narrow valleys containing intermittent creeks dissect the southeast portion of the property.

1.2.2 Hydrology

Surface hydrology consists of three intermittent creeks within small valleys or canyons and several intermittent springs and seeps. Lime Creek flows along a portion of the northern boundary of the Sanctuary. When flowing, Stuart Harris Creek and its small tributary in the original 94 acres at the northern portion of the property flow north into Lime Creek, which, in turn, flows into the Sandy Creek arm of Lake Travis. Two small, ephemeral headwater tributaries of Cypress Creek, one of which is called Baker Creek, are found in the southwest portion of the property. When flowing, they flow to the southwest and ultimately into the Cypress Creek arm of Lake Travis. (See U.S. Geological 7.5-minute survey topographic maps; quadrangle 3097-233, Mansfield Dam, Texas, the NW/4 Lake Travis and quadrangle 3097-234, Jollyville, Tex., NE/4 Lake Travis.)

No specific information concerning the subsurface hydrology of this site exists. Given the generally karstic geology of the area and the existence of springs, it can be assumed that substantial subsurface water movement takes place.

1.2.3 Soils

TAS Wildlife Sanctuary soils consists largely of the Tarrant Association described as “Very Shallow, stony, calcareous, clayey soils intermingled with shallow soils overlying limestone” (USDA 1974).

Travis County soil maps indicate small inclusions of Denton silty clay, Speck clay loam, and Purves silty clay, as well as the Tarrant Association. The small areas of creek side floodplains contain richer alluvial soils. All soils found there are mixed with fragments of limestone.

1.2.4 Caves and Subsurface Features

Though no systematic search for subsurface features has been undertaken, such features are likely to exist.

1.3 Biological Characteristics

1.3.1 Vegetation Currently on Tract

More than 85% of the Sanctuary’s acreage is covered in varying densities with mature, mixed woodlands of Ashe juniper and assorted deciduous species. Though Ashe juniper is found in all parts of the property’s woodlands, the deciduous component varies with elevation. Deciduous species in upland woods are largely plateau live oak (*Quercus fusiformis*) cedar elm (*Ulmus crassifolia*) and Texas persimmon (*Diospyros texana*). The upland trees are found among small areas of Hill Country savannah composed of native and non-native midgrasses, prickly pear cactus (*Opuntia* sp.), and twisted-leaf yucca (*Yucca rupicola*). Hillside woods contain the aforementioned species with additional small trees, including redbud (*Cercis canadensis*), and shrubs including wafer ash (*Ptelea trifoliata*) and agarita (*Berberis trifoliolata*).

Approximately 10% to 15% of this property lies in creek side riparian areas that are particularly species-rich. In these areas are found the widest diversity of plant species, including mixed woodlands of Ashe juniper and numerous other woody species, especially sycamore (*Platanus occidentalis*), American beautyberry (*Callicarpa americana*).

Numerous other trees, shrubs, vines, forbs, and grass like species are to be found in the creek sides.

Approximately 5% to 10% of the Sanctuary is grassland. This area is north and south of Lime Creek Road in the center of the Baker tract adjacent to the old Baker cabin and the on-site Steward's residence. Grasses found here include native midgrasses and short grasses and King Ranch bluestem mixed with small woody species and wildflowers. Several very limited areas of mixed deciduous shrub lands with no trees exist on less than 10% of the property.

1.3.2 Animal Species Currently on Tract

Compilation of a complete list of animal species found on this property has never been undertaken. However, the following is a list of mammals thought to be present (Kutac, et al.1983).

Armadillo, <i>Dasyus novencinctus</i>	Raccoon, <i>Procyon lotor</i>
Black-tailed jackrabbit, <i>Lepus californicus</i>	Rock squirrel, <i>Spermophilus variegatus</i>
Common gray fox, <i>Urocyon cinereoargenteus</i>	Several bat species
Eastern cottontail, <i>Sylvilagus floridanus</i>	Several rodent species
Eastern fox squirrel, <i>Sciurus niger</i>	Striped skunk, <i>Mephistus mephistus</i>
Opossum, <i>Dideiphis virginiana</i>	White-tailed deer, <i>Odocoileus virginianus</i>
Coyote, <i>Canis latrans</i>	Ringtail, <i>Bassariscus astutus</i>

One probable addition to the above list is mountain lion (rare; *Felis concolor*)

The Travis Audubon Society printed a revised Austin area bird checklist in 2003 that includes the Baker Sanctuary.

1.3.3 Endangered Species and Species of Concern

1.3.3.1 Golden-cheeked Warbler

The Travis Audubon Society's long-term concern for the Golden-cheeked Warbler prompted acquisition of these properties. During breeding season, this species is abundant, though few recent biological surveys and bird censuses exist. There were a few Golden-cheeked Warbler censuses conducted during the period 1985-1991 by David Lyter and Dean Hector. Graduate research on the Golden-cheeked Warbler has been conducted on-site by Carol Beardmore and by Mike Quinn from Texas A&M. The USFWS Status Report for the Golden-cheeked Warbler contains 1987 bird density data derived from Emlen transects on this property. This

survey found 0.36 males per hectare; that is, 3 to 7 males (4.67 average) in an area estimated to be 12.8 hectares. The Golden-cheeked Warbler is also found on adjacent Balcones Canyonlands Preserve (BCP) tracts Austin Simon, Lime Creek, Lehmann, and Wheless as per Texas Department of Transportation studies.

1.3.3.2 Black-capped Vireo

A 1966 article in Travis Audubon Society's newsletter mentions that Golden-cheeked Warblers and Black-capped Vireos were found on the original 94 acres. Occasional but Black-capped Vireo sightings are still reported on or near this property. The shin oak (*Quercus sinuata*) found on the western boundary of the original 94-acre parcel may harbor small areas of shinnery suitable for Black-capped Vireos. The eastern boundary contains similarly suitable vegetation and is adjacent to the Austin Simon and Lime Creek properties, both participants in the BCP. Habitat manipulation of these areas, currently under discussion, may bring Black-capped Vireos on or near the Travis Audubon Sanctuary in the future.

1.3.3.3 Karst Species

Because no systematic search for karst features and species has been undertaken, the presence or absence of karst species remains unknown.

1.3.3.4 Plants

A few plant surveys have been conducted. A copy of plant survey and additional information is in the TAS files. Botanists interviewed felt that few plant species of concern were likely to be found on this property with the possible exception of Texabama croton. A moss and liverwort study has been conducted. A copy of the study is available in TAS files.

One species of concern, however, Heller's marbleseed (*Onosmodium helleri*), is found along a trail south of Lime Creek Road and along a trail north of Lime Creek Road. Also found on the Sanctuary is Glass Mountains coral-root (*Hexalectris nitida*). This saprophytic orchid, formerly in Federal Category 2, grows in the dense mat of needles found below mature Ashe juniper, parasitizing root phloem.

1.3.3.5 Other Species of Concern

Though only limited surveys have been conducted, Travis Audubon Society Baker Sanctuary may harbor other species of concern, including the following: several karst invertebrates, Texas map turtle, Texas horned lizard, milk snake, Texas garter snake, Heller's marbleseed,

bracted twistflower, Texabama croton, Texas amorphia, Correll's false dragon-head, Buckley tridens, and canyon mock-orange.

Jollyville Plateau salamanders (*Eurycea* sp.) have been found in both Baker and Audubon Springs.

The Sanctuary may also provide a stopover for several avian species of concern, such as Bald Eagle, Peregrine Falcon, Zone-tailed Hawk, Ferruginous Hawk, Swainson's Hawk, Golden Eagle, Merlin and Mississippi Kite.

1.4 Land Uses

1.4.1 Prehistoric

The locations of any archeological sites found on the sanctuary are not a matter of public record. However, if any are found, the Sanctuary Steward will take measures to conserve these cultural resources.

The usual Cretaceous fossils are found on site, including marine gastropods, pelecypods, cephalopods, and echinoderms in the Glen Rose and Walnut, as well as gastropods and rudists in the Edwards. No unusual or unexpected fossils have been reported.

1.4.2 Historic

In 1966, Travis Audubon Society purchased the initial 94 acres of TAS Sanctuary property described as "secluded & thickly wooded" by its classified ad (Austin American-Statesman, April 24, 1966). The three-tract property was purchased for \$16,450, or \$175 per acre, from John Barton, its owner and realtor. One of the three tracts had belonged to TAS member Charles Trenckman prior to its sale to John Barton. A 1966 fund-raising letter from TAS president Emma Leta Bickler describes the property as -

"a 94-acre ideal sanctuary, a typical example of all varieties of Edwards Plateau country, magnificent native trees, shrubs, flowers, grasses, birds including the Golden-cheeked Warbler, and other native wildlife, a spring, a creek of running water, all within 20 miles of Austin, northwest, near Lake Travis with access to the lake."

The TAS president's message in the September 1966 TAS newsletter, Signal Smoke, describes the property as follows:

“Part of the tract is heavily wooded with many species of trees, including old cedars and Spanish oaks - both necessary in Golden-cheeked habitat. A portion of the tract is open country covered with grass and a great variety of wildflowers. Golden-cheeked Warblers and Black-capped Vireos were seen on the property in the spring and early summer. Many other birds were also observed.”

The presence of thick woods and “old cedars” suggests that the land had not cleared for ranching or farming purposes for several decades, if ever.

TAS member Charles Trenckman, former owner of one of the tracts in the original 94 acres, suggested that TAS members befriend Chell and Lena Baker, a brother and sister who were the original Sanctuary’s nearest neighbors. The Baker’s and their mother before them “had protected the property as a private wildlife preserve since the original grant from the State of Texas” as per Sara Penn Harris’ account. Past TAS president and treasurer Ed Kutac said that Chell Baker was an avid hunter and had maintained the wooded property as a game preserve.

By the late 1960s and early 1970s, the Bakers were elderly and concerned about disposing of their property. They lived simply with minimal electricity, wood heat, and windmill-driven well water. They “loved the land and the wildlife and, wanted their land protected from developers and sub-dividers and preserved.” Chell Baker’s lawyer advised him to convey his property to a tax-exempt organization, reserving a life estate for himself and his sister, in order to avoid inheritance taxes after the death of Chell Baker. They were concerned that inheritance tax obligations would force the subdivision and sale of this property. Prompted by his attorney, Chell Baker contacted TAS member Stuart Harris and negotiations began.

On April 25, 1972, TAS president Richard Tims and other TAS officials signed the deed adding the 500+ acre Baker properties to the Travis Audubon Society Wildlife Sanctuary, subject to a life estate to Chell Baker, followed by a life estate to his sister, Lena Baker, and a smaller life estate to their lifelong friend and helper, Joe Jester. These tracts still comprise the majority of TAS Wildlife Sanctuary holdings (Harris 1979; Ed Kutac, pers. com., September 19, 1996).

In 1986, Joe Jester sold four parcels of property totaling 24.77 acres, according to the deeds (20.77 acres, according to the Travis County Appraisal District), as well as his life estate on the 160 acres, to Travis Audubon Society. This property’s land use history is similar to that of the Baker property.

The 50-acre tract donated by Gholson and Chamberlain in 1986 was part of a working cattle ranch owned by Nelma Gholson and her first husband, Grover Hatfield. This property had been actively ranched by the Hatfields from its purchase in 1951 until its donation to TAS in 1986. Although this property was part of a working cattle ranch, it was either not cleared or has not been cleared in recent years. The Hatfields had purchased the property from the Marvin and Myrtice Turner family, who also operated a cattle ranch (Sally Strong, past TAS president, pers. corn., September 24, 1996; Mrs. Nelma Gholson, property donor, pers. corn., October 2 and 8, 1996).

1.4.3 Current

1.4.3.1 On-site Usage

Travis Audubon Society members are allowed daytime access to the Baker Sanctuary except during hunting season. Nonmembers are allowed when accompanied by members or when permission has been granted. An on-site Steward lives on the property, just south of Lime Creek Road midway through the Sanctuary. The Steward's presence promotes compliance with access guidelines (see APPENDIX C for Sanctuary Regulations).

TAS Land Management Plan
September 2004

1.4.3.2 Adjacent Land Usage

The TAS Wildlife Sanctuary properties are bound as follows:

(a) The northernmost tracts are bound on the east by two properties participating in the Balcones Canyonlands Conservation Plan:

(1) the 100-acre Austin Simon tract is owned by Parks and Wildlife Foundation of Texas and managed by the City of Austin.

(2) the 494-acre Lime Creek tract is owned by the City of Austin

(b) South of Lime Creek Road the eastern boundary of TAS Baker Sanctuary is currently under residential development.

(c) The southernmost boundary is adjacent to undeveloped property held as 10(a) mitigation property by the City of Cedar Park.

(d) The Sanctuary is bound on the southwest by two undeveloped properties, both participants in the Balcones Canyonlands Conservation Plan:

(1) the Texas Nature Conservancy's 160-acre Ruth Lehmann tract

(2) the Lower Colorado River Authority's 2,176-acre Wheless tract

(e) Lands to the west and north of the Sanctuary are subdivided into lots ranging in size from 5 to 20 acres, including the subdivision called the Red Wagon Ranchettes, and more than 50% occupied with single-family residences.

2.0 MANAGEMENT PROGRAM

See APPENDIX A and B.

2.1 Plan Administration

The TAS Sanctuary Committee and the Sanctuary Steward will administrate participation in the Balcones Canyonlands Preserve and property management. Because this property has always been managed as a wildlife preserve, compliance with the rules and the spirit of the BCP has always been and will continue to be a part of this property's administration.

2.1.1 Description of Managing Entity with Authority and Mission

Travis Audubon Society is a 501(c)(3) nonprofit organization dedicated to environmental issues, emphasizing bird conservation. It is a chapter of the National Audubon Society, whose mission statement is as follows:

The Travis Audubon Society promotes the enjoyment, understanding and preservation of birds, other wildlife, and their habitats in Central Texas.

Travis Audubon Society's managing authority derives from free and clear ownership of the approximately 680-acre Sanctuary. The Sanctuary is managed as a wildlife preserve with emphasis on conservation of the endangered Golden-cheeked Warbler. The Sanctuary Committee, chaired, as of this writing, by John Wilcox, makes management decisions.

2.1.2 Staffing

The only staff member associated with the TAS Baker Sanctuary is the on-site, volunteer Steward, whose responsibilities include the following:

- a) maintain a regular presence on the Sanctuary property.
- b) perform routine maintenance of the property including mowing, watering and trash pickup.
- c) repair facilities and equipment.
- d) keep the property secure.
- e) greet visitors to the property on behalf of Travis Audubon Society and to serve as a liaison with the general public.

- f) notify the Sanctuary Committee and the Board of Directors of any need for major repairs to facilities or equipment.
- g) attend the TAS Sanctuary Committee and Board of Directors meetings when necessary, and to keep the Sanctuary Committee informed of conditions on the property.
- h) write monthly articles for the Travis Audubon Society's newsletter (Signal Smoke).
- i) supervise the Land Management Program, which includes but not limited to:
 - 1. supervision of White-tailed Deer leases
 - 2. management of the Brown-headed Cowbird trapping program
 - 3. supervision of the annual Golden-cheeked Warbler survey
 - 4. control of feral animals
 - 5. cage existing oak seedlings and planting acorns
 - 6. controlling non-native plant species
- k) keep records pertaining to the Sanctuary including expenses, petty cash account, deer lease records and visitation records.

2.1.3 Inventory of Major Equipment

Major items of equipment at the Sanctuary include an ATV (all-terrain vehicle), a riding lawn mower, a 25-gallon spray unit and hand fire fighting tools.

2.1.4 Current Budget

Funding for managing the TAS Baker Sanctuary is derived from deer leases, donations and a permanent endowment fund that has been established by TAS. Excluding occasional capital improvements, the annual budget at the present time (\$7 - 8,000) includes insurance, utilities, operation and maintenance of Sanctuary equipment and facilities, administrative expenses, and management plan expenses.

2.1.5 Interagency Cooperation, Management Contracts, and Other Agreements

Travis Audubon Society is a Managing Partner Agreement with the Balcones Canyonlands Coordinating Committee by which the TAS Baker Sanctuary participates in the Balcones Canyonlands Conservation Plan.

An agreement between TCEQ and TAS concerns the placement of an air monitoring station on the Sanctuary.

2.1.6 Annual Reports

Annual reports are written by the Sanctuary Steward and are submitted to the Coordinating Committee in a timely manner.

2.2 Management Goals

2.2.1 Primary Management Goals

2.2.1.1 Golden-cheeked Warbler

The Short-Range Plan for the Wildlife Sanctuary (see APPENDIX A) lists the following two goals:

1. To protect and enhance the TAS Sanctuary for the benefit of the Golden-cheeked Warbler and other native or endemic species.
2. To develop complementary nature study opportunities.

The following is condensed from Travis Audubon Society's Long-Term Management Plan for the TAS Wildlife Sanctuary (see Appendix). Management goals for the Sanctuary are as follows:

1. To protect the integrity of existing mature Ashe juniper/Oak woodland and to maintain the existing nesting pairs of Golden-cheeked Warblers (estimated at 40 to 60)
2. To preserve native prairie species in clearings and restrict the spread of exotic plants if possible
3. To encourage hardwood and shrubbery succession
4. To control populations of undesirable species
5. To control public access so that it does not interfere with other management objectives
6. To provide a site for scientific research with a priority on Golden-cheeked Warbler topics

2.2.1.2 Black-capped Vireo

Travis Audubon Society will continue to investigate and record reports of Black-capped Vireo (BCV) sightings on the Sanctuary. However, since potential BCV habitat on the Sanctuary is limited, no management of BCV habitat for the Sanctuary is being considered at the present time.

2.2.1.3 Federally Listed Karst Species

Travis Audubon Society will record the location of any karst features or species found on the Sanctuary. If any are found, TAS will make an effort to protect and limit activities near those locations.

2.2.1.4 Species of Concern

Travis Audubon Society will record the location of any other species of concern found on the Sanctuary. If any are found, TAS will protect and limit activities near those locations.

2.2.2 Secondary Management Goals

Travis Audubon is working with other individuals and agencies that manage BCP tracts to help achieve a coordinated management approach for the Cypress Creek macro site.

2.3 Issues

At this time, no major goal conflicts are known.

Potential major conflicts include the following:

- (a) Future development on adjacent properties may conflict with Golden-cheeked Warbler activities.
- (b) Future subdivision and road construction in close proximity to the Sanctuary may conflict with Golden-cheeked Warbler activities.

Potential minor conflicts include the following:

- (a) An issue concerns visitors in Golden-cheeked Warbler habitat. The recreational and educational value of viewing the warbler may conflict with the needs of the Golden cheeked Warbler during breeding season. TAS plans to continue only limited visitation on site during and immediately after Golden-cheeked Warbler breeding season.
- (b) A deed restriction that prohibits hunting of white-tailed deer on the easternmost 50 acres may affect control of white-tailed deer. Deer hunting on surrounding acreage may help constrain deer densities on this tract.
- (c) Public access to the present document may conflict with the TAS Baker Sanctuary Long-Term Management Plan by hindering the protection of some features or species.
- (d) Ownership by TAS, a private entity, may lead to a variance in public accessibility as compared to other BCP tracts. Access may be more restrictive due to some aspects of TAS sanctuary management.
- (e) Increased trespass and unauthorized vehicular activities may negatively impact the sanctuary

2.4 Management Objectives

Within the resource limitations that Travis Audubon Society must operate under, TAS will continue to work toward the following high priority objectives for the Sanctuary.

1. Maintain facilities and equipment

2. Control public access
3. Control deer population
4. Conduct Golden-cheeked Warbler surveys
5. Develop a new educational Trail Guide
6. Influence surrounding land use
7. Expand educational activities

2.5 Specific Implementation Strategies

Objective I is to be met by means of the following strategies:

Use of volunteers at scheduled workdays

Within budgetary limitations expenditure of monies for special capital needs

Minimal cedar control

Objective 2 is to be met by means of the following strategies:

Maintenance of fencing, gates and signs

Continuing Steward's presence

Continue to host annual Open House

Continue to follow Sanctuary Rules

Continue to monitor and direct visitors

Objective 3 is to be met by means of the following strategies:

Continue hunting activities within existing restrictions

Objective 4 is to be met by means of the following strategies:

By funding annual GCWA surveys as the budget allows

Objective 5 is to be met by means of the following strategies:

Conducting surveys for notable features

Maintenance of trails with additional signs

Objective 6 is to be met by means of the following strategies:

Remain in contact with neighboring landowners, by means of invitations to the annual TAS Baker Sanctuary open house and ongoing communication

Communicate with potential donors

Remain in communication with neighboring landowners concerning trash dumping, poaching, and fencing

Monitor and comment on projects underway on neighboring lands Increase educational outreach activities

Objective 7 is to be met by means of the following strategies:

- Develop educational materials
- Provide limited programs
- Develop plan for expanded educational activities

2.5.1 Vegetation Management Procedures

Primarily hand methods will be utilized to manage vegetation on the Sanctuary.

2.5.1.1 Control Methods (Mechanical/Chemical)

Limited mechanical methods approved by the TAS Sanctuary Committee may be used. The TAS Sanctuary Steward will use chemical methods only as a last resort after a review and approval by the Sanctuary Committee.

2.5.1.2 Oak Wilt

At the present time there is no plan developed for oak wilt control. Travis Audubon Society will continue to monitor for evidence of oak wilt and other tree diseases. Any treatment will follow accepted guidelines within the BCP and approved by the TAS Sanctuary Committee.

2.5.1.3 Prescribed Fire and Wildfires

The Sanctuary Steward submitted a Wildfire Management Plan to the BCP in 2002. Early detection of ignitions is the key to effective control of wildfire. The Sanctuary Steward watches for fires and will call the fire department if necessary. Controlled burns have been utilized in the past, however there are no plans to conduct controlled burns at the Sanctuary. (See Appendix D for the TAS Baker Sanctuary Wildfire Management Plan).

2.5.1.4 Restoration and Protection Efforts

See APPENDIX A and B.

2.5.1.5 Species of Concern

The Sanctuary Steward will continue to monitor for other species of concern. Protection measures will be implemented as needed and as resources allow.

2.5.2 Animal Management Procedures

2.5.2.1 Endangered Species

Golden-cheeked Warbler

Management for the Golden-cheeked Warbler consists primarily of maintaining existing habitat. The Sanctuary contains approximately 680 acres of woodlands consisting of mature Ashe juniper and mixed deciduous species. Its suitability as Golden-cheeked Warbler habitat is amply demonstrated by the numerous pairs of nesting Golden-cheeked Warblers found on site annually. The Sanctuary's vegetation is protected from illicit cedar harvesting (cedar chopping) by fencing and the on-site Steward. Active woodlands management activities such as tree planting, thinning, or burning are neither planned nor underway. The annual white-tailed deer hunt occurring on this property benefits Golden-cheeked Warbler habitat by reducing deer populations. Because high deer densities are thought to reduce deciduous recruitment in the mixed woodlands of the Texas Hill Country, this practice will be continued.

Black-capped Vireo

The Sanctuary lacks any sizable areas of habitat suitable for the Black-capped Vireo and no confirmed sightings exist. No plans to create Black-capped Vireo habitat exist.

Karst Invertebrates

Though a cave on adjacent property suggests possibility of karst species on site, no karst species are currently known. None have been reported on sanctuary property.

2.5.2.2 Problem Animal Control

Browsing Animals

Domestic browsers such as cattle and goats are excluded by fencing. The on-site Steward monitors and maintains the Sanctuary's fences. To some extent, white-tailed deer populations are kept in check by seasonal deer hunts and 9294 feet of high fence along the Sanctuary's eastern boundary.

Feral Animals

The on-site steward monitors for dogs and cats. When they are found on the Sanctuary efforts are made to identify the owner and have them removed. For animals identified as feral, such as hogs, the Sanctuary Steward makes an effort to remove them.

Predation and Parasitism

The on-site steward, under a permit granted by the Texas Parks and Wildlife Department traps Brown-headed Cowbirds at the Sanctuary. Currently fire ants are not a major problem on the Sanctuary. As fire ants begin to expand into the Sanctuary, the Sanctuary Committee will develop and implement fire ant control measures that are acceptable and compatible with other BCP units.

2.5.3 Physical and Cultural Management Procedures

2.5.3.1 Hydrology and Water Quality

As there does not appear to be any water quality concerns within the Sanctuary, however, springs and seeps are observed for signs of degradation in water quality. Water quality problems will be addressed as needed. As the potential for non-point source pollution increases, Travis Audubon will work to minimize the sources and try to prevent degradation of the Sanctuary.

2.5.3.2 Geology (caves)

Currently there are not any confirmed karst features identified on the Sanctuary. If karst features are found, they will be monitored for signs of disturbance and will be protected as needed.

2.5.3.3 Soils

Currently there is no active soil management required. If future development leads to potential soil erosion problems, TAS will investigate the need for active management.

2.5.3.4 Cultural Resource Protection

Any archeological or historical sites found on the Sanctuary will be recorded in internal Sanctuary records and protected to the extent feasible.

2.5.4 Visitor Management Procedures

Travis Audubon will continue to follow the Sanctuary rules developed by the Sanctuary Steward and reviewed by the Sanctuary Committee. Portions of the trails will be closed as needed to assure the success of the Golden-cheeked Warbler on the Sanctuary. The Sanctuary Committee following the guidelines established in the Long-Term Management Plan will coordinate any research activities. (see Appendix)

2.5.4.1 Sanctuary Rules

Sanctuary rules are developed by the Sanctuary Steward, approved by the Sanctuary Committee and are posted at the Sanctuary and on the website (see APPENDIX C).

2.5.4.2 Access Control

Access will continue to be controlled using fencing, gates, rules and signs. The continued presence of an on-site Sanctuary Steward will help control Sanctuary access. Additional future measures will be developed and implemented by the Sanctuary Committee as needed.

2.5.4.3 Individual or Independent Group Use

Individual use by members of Travis Audubon will continue with varying restrictions on areas accessed depending on the Golden-cheeked Warbler activities and any special features or other species of concern in the area. Group use is currently restricted and determined on a case-by-case basis by the Sanctuary Committee. Persons knowledgeable about protecting the habitat and Golden-cheeked Warblers conduct the annual open house under the supervision of the Sanctuary Steward.

2.5.4.4 Noncommercial Use

There are currently only limited non-commercial educational activities at the Sanctuary. This practice will continue as allowed by the guidelines and procedures established by the Sanctuary Committee.

2.5.4.5 Commercial Use

Currently there is no known commercial use of the Sanctuary and none is allowed without evaluation on a case-by-case basis by the Sanctuary Steward, Sanctuary Committee and TAS Board approval.

2.5.4.6 Use of Resource Conflicts

The primary source of litter on the Sanctuary is along Lime Creek Road. As the traffic and use of Lime Creek Road has increased, so have the amount of litter and the instances of dumping. The fencing and gates along the Sanctuary boundary with Lime Creek Road has minimized the dumping onto the Sanctuary. The combination of the low-level use and the types of users who enter the Sanctuary have kept the litter problem at a minimum within the Sanctuary.

3.0 MANAGEMENT PROGRAM MONITORING

3.1 Establish Measurable Indicators

(to be done in cooperation with monitoring subcommittee of BCCP Land Managers' Group & appended upon completion)

3.2 Monitoring and Evaluation Process

The Annual Reports will provide a measure the progress toward achieving the established objectives.

3.3 Annual Implementation records

Annual reports will be provided within three months following the year's end. The due date will be determined later and added to this Management Plan.

3.4 Evaluation and Review Information

To be added to this Management Plan at a later date.

3.5 Macro Site Audit

To be added to this Management Plan at a later date.

4.0 LITERATURE CITED

Harris, Sara Penn. 1979. The Story of Our Travis Audubon Society Wildlife Sanctuary, *Signal Smoke*.

Kutac, Ed., et al, 1983. Sanctuary Trail Guide, Travis Audubon Society.

Regional Environmental Consultants (RECON) and U.S. Department of the Interior, Fish and Wildlife Service. 1996. *Final Environmental Impact Statement/Habitat Conservation Plan for Proposed Issuance of a Permit to Allow Incidental Take of the Golden-cheeked Warbler, Black-capped Vireo, and Six Karst Invertebrates in Travis County, Texas*.

Rodda, Peter U. 1970. Geology of the Austin West Quadrangle, Travis County, Texas. University of Texas at Austin, Bureau of Economic Geology.

U.S. Department of Agriculture, Soil Conservation Service. 1974. Soil Survey of Travis County, Texas. U.S. Government Printing, Office, Washington D.C.

4.2 Personal Communications

Arnold, Jackie (Jessamine), past president of TAS; personal communication to Melody Lytle, September 10, 1996. TAS president involved in the purchase of the initial 94 acres, the acquisition of 500 acres donated, and the purchase of 23 acres in center of property in the mid 1980s. The property had been ranched and hunted, though cattle had not been on site for some time. Cedar choppers cleared a large area within the 500 acres sometime after acquisition, prompting TAS to fence.

Barrerra. Alma, past president of TAS; personal communication to Melody Lytle, September 16, 1994. President of TAS when Chell and Lena Bakers (siblings) 500+ acres were left to TAS. Chell died during Alma's tenure. Joe Jester inherited a 20-acre life estate (not ownership) from Chell Baker, later sold to TAS. An additional 50 acres was acquired from someone else (Alma cannot remember who). According to Alma, Chuck Sexton, Carol Beardmore, and possibly Rex Wahl did surveys on site.

Carr, Bill, botanist; personal communication to Melody Lytle, September 24, 1996. 95% of plant list for Travis County is complete, though some annotations remain. Found a saprophitic orchid (coral root, or *Hexalectris nitida*) under mature Ashe junipers in dense cedar needle. It is parasitic on root phloem, growing under cedars mature enough to create a mat of needles, which excludes other plants. It blooms in the heat of the summer. Its complete distribution on the TAS properties is unknown but it is "not abundant." This plant was previously a federal Category 2 candidate species.

Gholson, Nelma, land donor; personal communication to Melody Lytle, October 2 and 8, 1996. The 50 acres donated to TAS was part of a working ranch purchased by Mrs. Gholson and her first husband (Grover Hatfield) in 1951 from Marvin and Myrtice Turner, who ranched the property. It was also ranched from the time of purchase by Mr. and Mrs. Hatfield (now Gholson) until its donation to TAS in 1986. Mrs. Gholson says that a spring, a sizable cave, and a large tank exist on the original ranch, possibly on

- the TAS 50 acres, though she is not sure. The title company was Travis Title. Milburn's attorneys were Armbrust and Brown.
- Kutac, Ed, past president; personal communication to Melody Lytle, September 9, 1996. Gholson and Chamberlain (mother and daughter) donated 50 acres came from her husband's ranch, much of which was being sold to Milburn at the time. Ed does not remember the significance of the "development rights" clause. According to Ed, Chell and Lena Baker lived with minimum electricity, a windmill, and wood heat. The Baker property had been inherited from their mother, the only family member ever mentioned in conversation. Chell had been in law enforcement all of his life and was an avid deer hunter. The property had been maintained as a game preserve for deer hunting purposes, not a wildlife preserve as per Sara Penn Harris. Jack Albright and Austin O'Daniel were also managers at some point.
- Lyter, Dave, past Sanctuary caretaker; personal communication to Melody Lytle, September 16, 1996. Dave was Sanctuary caretaker from 1982 to 1989, but does not remember who was the second manager. He does not have bird surveys but will search and send if possible. Daniel Boone was Sanctuary caretaker briefly at some period after Dave.
- McNeal, Patrick, botanist; personal communication to Melody Lytle, September 24, 1996. Did BCCP surveys 1989 but little on Audubon properties. Thinks bracted twistflower, canyon mock-orange are unlikely and *Amorpha* is likely (no notes available).
- Strong, Sally; past president; personal communication to Melody Lytle, September 22, 1996. The 50-acre gift from Gholson and Chamberlain conveyed "development rights" to Milburn. This allows Milburn to use the potential development density on TAS's 50 acres on another piece of Milburn property and is never to be used on TAS property. At some unknown time, quarrying operations took place on the Baker property. A concrete trough near the trailer was once the site of stone cutting. The stone was quarried elsewhere and moved to the saw.
- Thompson, Luke, past Sanctuary caretaker; personal communication to Melody Lytle, September 16, 1996. Luke Thompson (currently a Texas Parks and Wildlife Department employee) was an early sanctuary committee chair and the first on-site manager of the Audubon properties in the early 1970s through 1981, during which the initial 94 acres had been acquired and the 500+- acre Baker property was being acquired. According to Luke, baseline plant and bird checklists were completed as well as an ongoing list of other animals passed on to the next land manager. Luke and Marshall Johnston created an herbarium collection held as a discrete collection in the University of Texas Herbarium. Apparently this collection has now been dispersed. Luke and Marshall initiated a study with high school students to document vegetation changes. Luke projected topos onto the plat maps and the aerial photos to make biological survey maps and property line survey maps. These projections indicated the survey property lines to be accurate.

APPENDIX A

SHORT RANGE MANAGEMENT PLAN

Travis Audubon Society seeks to enhance the Wildlife Sanctuary while preserving habitat diversity primarily for the Golden-checked Warbler.

1.0 GOALS

The Travis Audubon Society (TAS) will act:

1. To protect and enhance habitat at the TAS Wildlife Sanctuary for the benefit of native species contained therein, especially the federally protected Golden-checked Warbler
2. To develop complementary nature study opportunities.

2.0 OBJECTIVES

Develop a resource management program to protect and enhance the habitat for the Golden-checked Warbler and other native species.

Resource management includes such issues as:

1. facility maintenance,
2. scientific studies, and
3. wildlife population control (e.g. deer population management, meadow preservation, food/nesting enhancement).

Because adjacent land use profoundly affects habitat quality, the Sanctuary Committee will seek to:

1. influence adjacent land use and management, and
2. consider acquisition of additional neighboring properties.

TAS will provide controlled access to those seeking opportunities for education. TAS proposes to manage Sanctuary resources while encouraging increased use of the Sanctuary for approved purposes, particularly education. With careful planning, more groups and individuals can make use of this under-utilized resource in the hope that they will become supporters of TAS efforts.

APPENDIX B

LONG RANGE MANAGEMENT PLAN

Premise: Travis Audubon Society (TAS) seeks to maintain and preserve habitat diversity, which supports the Golden-cheeked Warbler and other native species.

Goal One:

Our primary goal is to protect the 40 to 60 pairs of Golden-checked Warblers found in the Sanctuary by protecting, enhancing and managing their habitat. Golden-checked Warbler habitat on the Sanctuary is of particularly high quality consisting of mature Ashe juniper (cedar) trees mixed with a number of native deciduous trees.

Procedures for goal one:

- a. Restrict cedar control to fence lines, existing clearings, existing roads, trails and other designated areas as authorized by the Sanctuary Committee and allowed by applicable U.S. Fish Wildlife Service approved guidelines.
- b. In order to maintain and/or improve Golden-checked Warbler habitat, the Sanctuary Committee will consider.
 - 1) reducing local White-tailed Deer browse pressure on woodland species by varying the number of annual hunting leases granted;
 - 2) establishing doe harvest quotas and engaging hunters willing to harvest doe;
 - 3) including an annual deer census, if and when feasible;
 - 4) cage existing oak seedlings and plant acorns;
 - 5) removal of exotic species
 - 6) monitoring the woodlands for oak wilt and developing a plan for oak wilt control.

Goal two:

A secondary goal is the management of areas not suitable for the Golden-checked Warbler activities. These areas contain a number of valued native plant species, particularly prairie species and species associated with seeps and springs.

Procedures for goal two:

- a. Clearings, especially those containing prairie species, will be cleared of woody species if possible, by manual labor and/or mechanical means
- b. Hand removal is the preferred method of exotic plant species control, application of herbicide may be considered as a last resort.

- c. Employ juniper control as necessary around seeps, springs and drainages in order to minimize biological demand on the waxer supply.
- d. Seed desired species.
- e. Monitor for oak wilt and develop a plan for oak wilt control.

Goal three:

Efforts will be made to control undesirable animal species on the Sanctuary.

Procedures for goal three:

- a. Eliminate feral dogs, cats and hogs.
- b. Encourage research on avian predators and reduce selected predator populations as necessary, subject to legal restrictions.
- c. Complete the high fence along the Sanctuary's western boundary.

Goal Four:

To accommodate appropriate public use, which includes bird watching, serious nature study, classes, scheduled volunteer activities and supervised educational activities.

Procedures for goal four:

- a. Public access will be controlled in order to minimize interference with other management objectives, particularly during Golden-cheeked Warbler breeding season and hunting season.
- b. The Sanctuary facilities will be maintained or improved as necessary to achieve the management objectives.
- c. Scientific research will be a component of the Sanctuary management as per the following:
 - projects benefiting the Golden-cheeked Warbler will be given highest priority;
 - projects, which could be conducted elsewhere, will be given lower priority;
 - permission to conduct research will, under normal circumstances, be granted on an annual basis and persons wishing to conduct long-term projects must reapply each year;
 - the number of projects conducted at the Sanctuary at any given time will be determined by the Sanctuary Steward,
 - permission to conduct research will not be granted to any individual, group, or organization (other than the Travis Audubon Society, Inc.) that will benefit financially from the project

d. The Review process for research projects is as follows:

(1) Proposals for research at the Sanctuary during the Golden-cheeked Warbler nesting season will be submitted to the Sanctuary Committee no later than February 1. The Sanctuary Committee cannot guarantee that proposals submitted later than this date can be processed for the current year.

(2) Proposals will include:

- rationale for study;
- qualifications of all participants
- materials and methods;
- site map of area to be used;
- schedule of activities conducted on the Sanctuary;
- appropriate permits (state and federal);
- letter from major advisor if a graduate student conducts the project;
- signed waiver releasing TAS from liability for injury, damage or loss of equipment

(3) Proposals will be reviewed by the TAS Sanctuary Committee and will be referred to an advisory committee if necessary. The TAS Sanctuary Committee Chair will make final decisions.

e. All researchers will follow the TAS Wildlife Sanctuary regulations unless specific waivers are granted.

f. Interim reports, which may be written or oral, will be submitted to the Sanctuary Committee Chair or other designated TAS member. The applicant and the Sanctuary Committee Chair will determine the schedule.

g. A written progress report will be submitted to TAS in care of the Sanctuary Committee Chair by December 1 of the year in which research was conducted.

h. If a project is approved by the Sanctuary Committee researchers with previously approved projects will be permitted to reject the new project if it interferes in any way with the earlier researcher's research.

i. If the results of the project are published in any format, TAS will be acknowledged in the publication.

j. A copy of the results of any research conducted on the TAS Baker Sanctuary will be forwarded to the Chair of the Sanctuary Committee.

APPENDIX C

TAS – BAKER SANCTUARY REGULATIONS

The Travis Audubon Society Baker Sanctuary is a private, member owned Sanctuary established for the purpose of conserving and fostering local native flora and fauna and their habitat and for serious nature study. In order to ensure that the Sanctuary will serve these purposes in perpetuity and that its wildlife and habitat will be safeguarded from injury and disturbance, TAS maintains the following rules for visitors:

All visitors must have permission to enter the Sanctuary.

1. The TAS Baker Sanctuary is open to all members and up to four guests.

Nonmembers must have permission issued by the Sanctuary Steward or a TAS Board member.

An organized group larger than five persons (including TAS members) must obtain permission from the Sanctuary Steward and should be accompanied by a TAS member. No more than one group will be allowed on a given day.

The Sanctuary will be closed during the deer-hunting season. Contact the Sanctuary Steward or see the newsletter or the web site for exact dates.

The Sanctuary is open for day use only during daylight hours.

The Sanctuary will have restricted access during the golden-cheeked warbler-nesting season (March 1 to August 1). Contact the Sanctuary Steward or call the TAS phone number for information.

Visitors are expected to observe the following regulations:

- Keep gates **CLOSED** and **LATCHED**.
- Please stay on the trails at all times. Trails are marked with colored markers.
- No hunting equipment is allowed in the Sanctuary.
- Dogs and other pets must be kept out of the Sanctuary.
- Smoking and fire building are prohibited.
- Picnicking is restricted to the headquarters area and all trash must be removed.
- Care should be taken to avoid disturbing wildlife and habitat.
- Releasing of wildlife or domestic animals is prohibited.

- Collecting of any kind is prohibited.
- The use of bird or other wildlife calls is prohibited.
- Consumption of alcoholic beverages is prohibited.
- No wheeled vehicles allowed on the trails (with the exception of wheel chairs and strollers). No bicycles are allowed on the Sanctuary.
- Visitors must register at the **SIGN-IN REGISTRATION BOX** and state the purpose of each visit.

APPENDIX D

TASBS WILDFIRE MANAGEMENT PLAN

TASBS WILDFIRE MANAGEMENT PLAN

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1.0 INTRODUCTION

The Travis Audubon Society Baker Sanctuary (TASBS) is a participating partner in the Balcones Canyonlands Preserve (BCP) System. The BCP currently consists of close to 30,000 acres of wild lands, the majority of which are immediately adjacent to a developing urban interface. Managing this urban/wild land interface with the potential for fires moving from wild land vegetation into developed areas or visa versa will require special strategies and tactics. Compounding this challenging situation is the fact that these wild lands provide endangered species habitat. Preservation and restoration of the wild land areas to enhance the quality of the endangered species habitat is an essential requirement of the preserve system and the Balcones Canyonlands Conservation Plan (BCCP) Regional 10(a) permit issued by the U. S. Fish and Wildlife Service.

2.0 DESCRIPTION OF THE SANCTUARY

2.1 Location of Sanctuary

The TASBS consists of 682.611 acres in northwest Travis County, four miles west of Cedar Park, Texas in the BCP Cypress Creek Macrosite. It is accessible by means of Lime Creek Road, which bisects the property from a western property line east, then northeast to an eastern property line.

2.2 Geography, Geology and Soils

The Travis Audubon Society Baker Sanctuary (TASBS) consists largely of wooded uplands with four small canyons containing some hillside seeps and intermittent streams. The Sanctuary property located north of Lime Creek Road includes Stuart Harris Creek, which is a tributary of Lime Creek. The Sanctuary property south of Lime Creek Road contains three valleys or canyons that make up the upper reaches of Cypress Creek. Thin, calcareous soils support a small grassland area immediately north and south of Lime Creek Road and mixed woodlands consisting of Ashe juniper plus deciduous species. These woodlands are distributed between upland areas, slopes and canyon bottoms where plant species diversity increases.

The geology of the TASBS is primarily on the first member of the Edwards Limestone, a lower Cretaceous formation. The uplands of the Sanctuary show the essentially flat topography. The geology of the TASBS is primarily on the first member of the Edwards Limestone, a characterizing the Edwards. Though rock outcrops are rare, a smaller quantity of the Walnut formation is found exposed in the canyons. Within the central and southern portions of the property are two broadly rounded hills that reach elevations of approximately

1,080 feet. Though no systematic search for subsurface features has been undertaken, such features are likely to exist. The soils of the TASBS consist largely of the Tarrant Association. Travis County soil maps indicate small inclusions of Denton silty clay, Speck clay loam, and Purves silty clay as well. The small areas of creek side floodplains contain richer alluvial soils. All soils found there are mixed with fragments of limestone.

2.3 *Climate and Water*

The climate in the Austin area is humid subtropical, with hot summers. Winters are mild with below-freezing temperatures occurring an average of less than 25 days per year. In general, January is the coldest month with July being the warmest. Precipitation is bimodal with rainfall maxima occurring in late spring (May) and early fall (September) and minima occurring in midwinter (January) and early summer (June) (Woodruff 1975). Prevailing winds are southerly throughout the year. Northerly winds that accompany the colder air masses in winter soon shift to southerly winds as these air masses move out over the Gulf of Mexico. The average annual precipitation is 31.9 inches. Precipitation from April through September is usually from thundershowers, while most winter precipitation occurs as light rain (NOAA 1993).

Surface hydrology consists of four intermittent creeks within small valleys or canyons and four intermittent springs or hillside seeps. Lime Creek flows along a portion of the northern boundary of the Sanctuary. When flowing, Harris Springs feeds Stuart Harris Creek in the northern portion of the property flows north into Lime Creek, which, in turn, flows into the Sandy Creek arm of Lake Travis. On the Sanctuary property located south of Lime Creek Road, two small, ephemeral headwater streams fed by the Baker Springs and the Audubon Springs and one intermittent branch stream fed by the Hatfield Spring merge off the Sanctuary property to feed Cypress Creek. No specific information concerning the subsurface hydrology of the Sanctuary exists. Given the generally karstic geology of the area and the existence of springs, it can be assumed that substantial subsurface water movement takes place.

2.4 *Vegetation*

More than 85% of the Sanctuary's acreage is covered in varying densities with mature, mixed woodlands of Ashe juniper and assorted deciduous species. Though Ashe juniper is found in all parts of the property's woodlands, the deciduous component varies with elevation. Deciduous species in upland woods are largely plateau live oak (*Quercus fusiformis*), cedar elm (*Ulmus crassifolia*), and Texas persimmon (*Diospyros texana*). The upland trees are found among small areas of Hill Country savannah composed of native and

non-native grasses, prickly pear cactus (*Opuntia* sp.), and twist-leaf yucca (*Yucca rupicola*). Hillside woods contain the aforementioned species with additional small trees, including redbud (*Cercis canadensis*), and shrubs including wafer ash (*Ptelea trifoliata*) and agarito (*Berberis trifoliolata*).

Approximately 10% to 15% of this property lies in creek side riparian areas that are particularly species-rich. In these areas are found the widest diversity of plant species, including mixed woodlands of ash juniper and numerous other woody species, especially sycamore (*Plantanus occidentalis*) and american beautyberry (*Callicarpa americana*). Numerous other trees, shrubs, vines, forbs and grasslike species are to be found in the creek sides. Approximately 5% to 10% of the Sanctuary is grassland. This area is north and south of Lime Creek Road in the center of the Sanctuary. Grasses found here include native midgrasses and shortgrasses and King Ranch bluestem mixed with small woody species and wildflowers. Several very limited areas of mixed deciduous shrublands with no trees exist on less than 10% of the property.

2.5 Wildlife

A complete list of animal species found on the Sanctuary has never been compiled. However vertebrates seen on the Sanctuary include White-tailed deer (*Odocoileus virginianus*), Striped skunk (*Mephistus mephistus*), Raccoon (*Procyon lotor*), Armadillo (*Dasypus novencinctus*), Opossum (*Didelphis virginiana*), Eastern cottontail (*Sylvagus floridanus*), Black-tailed jackrabbit (*Lepus californicus*), Rock squirrel (*Spermophilus variegates*), Eastern fox squirrel (*Sciurus niger*), Common gray fox (*Urocyon cinereoargenteus*), Coyote (*Canis latrans*), and Ring-tailed cat (*Bassariscus astutus*) along with several bat and rodent species.

2.6 Species of Concern

The Travis Audubon Society's (TAS) long-term concern for the Golden-cheeked Warbler (GCWA) prompted acquisition of the Baker Sanctuary. During breeding season, this species is abundant. Because the GCWA requires mature closed canopy habitat, prevention of catastrophic wildfire will be paramount for the management of this species. Since there is insufficient information at this time regarding the applicability of prescribed fire for GCWA habitat, the TAS is not planning to use prescribed fire to manage GCWA habitat.

Occasional but unconfirmed Black-capped Vireo (BCVI) sightings are still reported on or near the Sanctuary but the property lacks the mid-successional stage of growth required by the BCVI.

The Baker and Audubon Springs have been surveyed and have been found to contain Jolleyville Plateau Salamanders (Chippendale, 1992).

Some plant surveys have been conducted on the Sanctuary (Lyter 1986). Botanists interviewed felt that few plant species of concern were likely to be found on the Sanctuary with the possible exception of Texabama croton, though none has been found. Glass Mountains coral-root (*Hexalectris nitida*) has been found on the Sanctuary as has one species of concern, Heller's marbleseed (*Onosmodium helleri*).

The Sanctuary may harbor other species of concern including several karst invertebrates, Texas map turtle, Texas horned lizard, milk snake, Texas garter snake, bracted twistflower, Texabama croton, Texas amorphia, Correll's false dragon-head, Buckley tridens and canyon mock-orange.

3.0 CULTURAL RESOURCES

3.1 Prehistoric

The locations of any archeological sites found on the Sanctuary are not a matter of public record. However, if any are found, the Sanctuary Steward will take measures to conserve these resources.

The usual cretaceous fossils are found on the Sanctuary including marine gastropods, pelecypods, cephalopods and echinoderms in the Glen Rose and Walnut formations as well as gastropods and rudists in the Edwards formation.

3.2 Historic

Historical uses of the property prior to becoming a Sanctuary include ranching, juniper cutting, agriculture, stock raising and rock quarrying. The Sanctuary has a cemetery designated as a historic cemetery by the Texas Historical Commission.

3.3 Current

TAS members and their guests are allowed daytime access to the Sanctuary property except during hunting season. Nonmembers are allowed when accompanied by members or when permission to enter the Sanctuary has been granted. An on-site Steward lives on the property, just south of Lime Creek Road midway through the Sanctuary.

4.0 ADJACENT LAND USAGE

The TAS Baker Sanctuary property is bound as follows:

- The northmost part of the Sanctuary is bounded on the east by the 594-acre Lime Creek tract owned by the City of Austin.
- The southern part of the Sanctuary is bound on the east by the Ranch at Cypress Creek and the Ranch at Deer Creek developments.
- The southernmost boundary is adjacent to the City of Cedar Park Water Pipeline right-of-way and to undeveloped property held as a 10(a) mitigation property by the City of Cedar Park.
- The Sanctuary is bound on the southwest by two undeveloped properties, both participants in the Balcones Canyonlands Conservation Plan:
 1. The Texas Nature Conservancy Ruth Lehman tract of 160 acres
 2. The Lower Colorado River Authority 2,176 acre Wheless tract.
- Lands to the west and north of the Sanctuary are subdivided into lots ranging in size from 5 to 20 acres, including the Red Wagon Ranchettes subdivision. The one exception to this is an 11-acre tract on the Sanctuary's western boundary owned by the City of Austin, which is the location of their 911-transmitter tower.

5.0 WILDFIRE MANAGEMENT

5.1 Fire Season

The typical fire season in Travis County runs from July through October, then again during January and February.

5.2 Fire Prevention

All BCP partner agencies/organizations, personnel and visitors share the responsibility of wildfire prevention. Public education, safety inspections, enforcement of regulations, hazard fuels management and related activities are all components of prevention. Because wildfires readily cross-political boundaries, close cooperation with adjacent private and public landowners is essential.

5.3 Presuppression

Presuppression planning and activities ensure the ability of each partner agency to perform effectively when wildfire occurs. These activities include training, planning, organizing, maintaining equipment and procuring supplies and equipment. The TAS Baker Sanctuary has on hand 2 Fedco backpack sprayers, 2 Pulaski axes, 2 fire rakes, 2 fire swatters and a 25-gallon portable spray unit.

5.4 Detection and Notification

Early detection of ignitions is the key to effective control of wildfire. All BCP personnel and visitors are encouraged to observe and report any smoke noted in the BCP and surrounding area. Increased fire detection patrols may be necessary during periods of very high to extreme fire danger. When wildfires occur, the following agencies, organizations and individuals are to be notified

PROPERTY.....RESPONDING FIRE DEPARTMENTS

TAS-Baker Sanctuary.....Volente VFD south of Lime Creek Road, North Shore Fire and Rescue Service north of Lime Creek Road, Hudson Bend FD, Sandy Creek FD, Jonestown FD, Travis County Fire Control.

Cypress Creek Macrosite.....North Shore Fire and Rescue Service, Hudson Bend FD, Volente VFD, Sandy Creek FD, Jonestown FD, Travis County Fire Control.

PROPERTY.....CONTACT

Audubon tract.....John Wilcox, Sanctuary Steward (219-8425)

City of Austin tracts..... Sgt. Bill Morgan, City of Austin Park Police (office # 426-2256, pager # 802-7941), Don Koehler, COA Balcones Canyonlands Preserve Manager (office # 402-0237), pager # 802-8060).

TNC tracts.....Dan Snodgrass, Texas Hill Country Preserves Assistant Land Steward (day # 236-8878, after hours # 402-0335, cell # 914-0309).

LCRA tracts.....LCRA Rangers, Systems Operations Control Center (482-6200).

It will be extremely important for each partner organization to develop a working relationship with the fire departments whose jurisdiction includes their respective preserve

units. Copies of fire management plans should be provided to the departments and meetings held to orient the responding departments to any critical protection areas, hazards or other significant features the firefighters should be aware of. If feasible, site visits should be scheduled to familiarize firefighters with the preserves access points, hazards and sensitive habitat zones. By working with firefighters prior to a fire, common concerns and potential conflicts can be addressed.

5.5 Suppression of Wildfires

Suppression includes all actions taken to limit the growth of wildfires and extinguish them. All natural-caused fires not classified and prescribed natural fires and all human-caused fires, excluding management ignited prescribed fires, are wildfires. Suppression forces must use a combination of strategies, tactics and equipment that least alters the landscape and causes minimal damage to preserve resources. The following general minimum impact practices will be utilized on BCP property:

- Cultural and natural resource advisors will be used to assist in locating and constructing fire lines and other surface disturbances.
- Minimum impact suppression tactics will be discussed with overhead and crew superintendents; these tactics will be developed and used in all fire management efforts.
- Instructions for minimum impact suppression tactics will be discussed in each Incident Action Plan.
- Fire behavior should be anticipated; line officers will ensure that selected tactics can be implemented safely.
- Water drops will be used whenever practical, rather than fire retardant chemicals; however, use of retardant is authorized when justified by the Incident Commander and approved by the appropriate BCP managing partner representative.
- When retardant is approved, fugitive retardant will be the retardant of choice. The need for fugitive retardant should be anticipated and ordered early so that it will be available on a timely basis.

- The fire edge will be cold trailed whenever practical; unnecessary fire lines should not be constructed.
- If adequate water and pumps are available, wetlines will be used in preference to constructed handlines.
- Fire lines will be kept to the minimum width necessary.
- Natural barriers will be utilized wherever possible to supplement constructed handlines.
- Falling of trees will be minimized. If falling becomes necessary, stumps will be flush cut and covered during the rehabilitation phase.
- All fire lines, camps and other disturbances will be rehabilitated.
- Incident Commanders will ensure that activities performed in locations other than at Incident Base (dump sites, spike camps, staging areas, helispots, etc.) result in minimum impact upon the environment. All such areas will be rehabilitated prior to demobilization.

5.6 Natural Resource Protection

The most effective rehabilitation measure is careful planning and skilled use of minimum impact suppression techniques. All fires must be surveyed to determine the severity of impact and potential problem areas requiring rehabilitation identified. Appropriate BCP partner biologists will prepare a Fire Rehabilitation Plan. Implementation of the plan should begin during the mop-up phase, or immediately after a fire is declared out. Fire lines will be returned to as near original condition as possible using existing materials. Water bars will be used in steep locations to prevent erosion of disturbed soils. Organic material will be placed to assist in natural regeneration. Personal safety is a concern while fighting fires in karst areas due to the possibility of karst feature collapse. Care must be taken when using foaming agents because it is toxic to aquatic species if allowed to runoff directly into a water source and may impact karst species if foam seeps into karst features.

5.7 Cultural Resource Protection

Fire control strategies and techniques with the potential to alter archaeological sites should be employed only when there is a direct threat to life. All fire control measures, which will

disturb the surface near any archaeological sites, must be reviewed by a qualified archaeologist before implementation.

5.8 Mutual Aid and Interagency Agreements

Travis County Emergency Management Services has mutual aid agreements in place with Williamson, Hays and Burnet Counties, all cities within Travis County and all fire departments within the County. All original mutual aid documents are on file in the County Attorney's office. Interlocal agreements are in place for the BCP between Travis County, City of Austin and LCRA for management of BCP tracts.

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