BALCONES CANYONLANDS CONSERVATION PLAN

Annual Report
FY 2005

Background

On May 2, 1996, the City of Austin and Travis County were jointly issued an U.S. Fish and Wildlife Service (USFWS) regional permit (the Permit) referred to as the Balcones Canyonlands Conservation Plan (BCCP). This Permit allows "incidental take" of eight locally occurring endangered species in compliance with Section 10(a)1(b) of the Endangered Species Act (U. S. Department of the Interior, Fish and Wildlife Service, 1996a). The thirty-year permit covers approximately 561,000 acres in western Travis County identified in the Habitat Conservation Plan and Final Environmental Impact Statement (HCP) (U. S. Department of the Interior, Fish and Wildlife Service, 1996b). The permit also covers incidental take of 27 species of concern should any become listed as threatened or endangered during the life of the permit (see Table 1).

Permit Requirements

The City of Austin and Travis County (the Permit Holders) are required to assemble and manage 30,428 acres of suitable habitat for the golden-cheeked warbler and the black-capped vireo, and to protect and manage populations of canyon mock-orange and Texabama croton. The Permit Holders are also to acquire and manage or ensure protection through management agreements on 35 karst features supporting populations of six endangered invertebrates and 27 features known to harbor 25 species of concern. This system of managed and protected habitats is known as the Balcones Canyonlands Preserve (BCP). The locations of habitat areas and specific karst features proposed for protection are delineated in the HCP (U. S. Department of the Interior, Fish and Wildlife Service, 1996b).

Agencies or organizations entering into formal agreements with the Permit Holders to manage designated preserve lands in accordance with the BCCP are considered Managing Partners. At this time, the sole BCP Managing Partner is the Lower Colorado River Authority (LCRA), which manages 2,707 acres as a portion of the preserve system. As a Managing Partner, LCRA may mitigate for capital improvement and infrastructure development projects through the mitigation credit system established by the BCCP.

Table 1. Species covered by the BCCP.

Common name	Scientific name	Status
Black-capped vireo	*Vireo atricapilla*	Endangered
Golden-cheeked warbler	*Dendroica chrysoparia*	Endangered
Tooth Cave pseudoscorpion	*Tartarocreagris texana*	Endangered
Tooth Cave spider	*Neoleptoneta myopica*	Endangered
Bee Creek harvestman	*Texella reddelli*	Endangered
Bone Cave harvestman	*Texella reyesi*	Endangered
Tooth Cave ground beetle	*Rhadine persephone*	Endangered
Kretschmarr Cave mold beetle	*Texamaurops reddelli*	Endangered
Canyon mock-orange	*Philadelphus ernestii*	Species of Concern
Texabama croton	*Croton alabamensis*	Species of Concern
Flatworm	*Sphalloplana mohri*	Species of Concern
Ostracod	*Candona* sp. nr. *stagnalis*	Species of Concern
Isopod	*Caecidotea reddelli*	Species of Concern
Isopod	Trichoniscinae N. S.	Species of Concern
Isopod	*Miktoniscus* N. S.	Species of Concern
Spider	*Cicurina wartoni*	Species of Concern
Spider	*Cicurina ellioti*	Species of Concern
Spider	*Cicurina bandida*	Species of Concern
Spider	*Cicurina reddelli*	Species of Concern
Spider	*Cicurina reyesi*	Species of Concern
Spider	*Cicurina cueva*	Species of Concern
Spider	*Cicurina travisae*	Species of Concern
Spider	*Neoleptoneta cocinna*	Species of Concern
Spider	*Neoleptoneta devia*	Species of Concern
Spider	*Eidmannella reclusa*	Species of Concern
Pseudoscorpion	*Aphrastochthonius* N. S.	Species of Concern
Pseudoscorpion	*Tartarocreagris reddelli*	Species of Concern
Pseudoscorpion	*Tartarocreagris intermedia*	Species of Concern
Pseudoscorpion	*Tartarocreagris* N. S. 3	Species of Concern
Harvestman	*Texella spinoperca*	Species of Concern
New Comanche Trail Cave Harvestman	*Texella comanche*	Species of Concern
Millipede	*Speodesmus* N. S.	Species of Concern
Ground beetle	*Rhadine s. subterranea*	Species of Concern
Ground beetle	*Rhadine s.mitchelli*	Species of Concern
Ground beetle	*Rhadine austinica*	Species of Concern

The Nature Conservancy of Texas (TNCTX) and the Travis Audubon Society (TAS) also manage lands for public and environmental benefit within the Preserve. These organizations are not considered Managing Partners, however, as no formal agreements with the Permit Holders have been finalized. In FY2003, the City of Lakeway accepted management obligations for the 498-acre Schramm Ranch tract, portions of which are set aside as mitigation under USFWS 10(a) permit number PRT-812695 (U. S. Department of the Interior, Fish and Wildlife Service, 1998). The City of Lakeway submits an annual report to the USFWS in conjunction with the BCCP Partners, and this document is attached herein as an appendix. A number of private landowners also manage habitat within the USFWS delineated proposed preserve boundaries, often as required under individually issued Section 10(a) permits. These landowners are responsible for reporting in accordance with the terms and conditions of their individual permits directly to the USFWS, and these reports are not incorporated into this Annual Report. The Permit Holders cooperate with these entities and private landowners to address species and land management concerns common to all BCP properties.

The City of Austin operates the BCCP Capital Improvement/Infrastructure Development Mitigation Process, and Travis County administers the BCCP Public Participation Process that addresses the mitigation needs of agencies and landowners under the terms of the Permit. The BCCP provides a voluntary, streamlined alternative for agencies and landowners seeking to comply with the Endangered Species Act (the Act). Those participating through the BCCP have met their obligations under the Act and may proceed with development under the terms of Participation Agreements. Those choosing not to participate may comply with the Endangered Species Act by obtaining an individual 10(a) permit from the U. S. Fish and Wildlife Service.

The Permit further requires that the Permit Holders submit an annual report that provides:

- an annual summary of development activities within the Permit area
- an annual list of tracts for which Participation Certificates were issued
- the amount of funds collected through Participation Certificate and USFWS directed mitigation fees
- the amount of funds expended for land acquisition
- the amount of funds expended for Preserve operations and maintenance
- an updated map of Preserve lands
- a summary of public use and habitat management activities within the Preserve, and
- copies of all research and investigation reports prepared within the last fiscal year.

Development Activity within the Permit Area

The City of Austin development activity report for FY2005 detailing a compilation of Development Permits issued within the City's jurisdiction of the Permit area is attached as Appendix A.

A summary of development permits issued by the Travis County Permitting office within the Permit area in FY2005 is attached as Appendix B.

Mitigation Credit Balance

The City of Austin's Balcones Canyonlands Preserve staff administers the Capital Improvement and Infrastructure Development Project mitigation credit system on behalf of the BCCP Coordinating Committee. The mitigation needs of the Permit Holders and the Managing Partner for these projects are provided under the terms of the regional Permit. Mitigation credits are issued at a rate equal to the number of acres within the Preserve system managed under the terms and conditions of the Permit and the HCP/FEIS (U. S. Department of the Interior, Fish and Wildlife Service, 1996b). Capital improvement and infrastructure development mitigation needs are subtracted from this accumulated "bank" of credits at a rate of one acre of credit per acre of habitat impact; regardless of habitat zone (see Table 2).

Table 2. Projects mitigated through the use of mitigation credits during FY05 by participating agency.

City of Austin	
Starting City of Austin Balance	11,536.35 acres
Remaining Mitigation Credits	***11,536.35 acres***
Travis County	
Starting Travis County Balance	1,563.0 acres
Anderson Mill Road Extension	(10.0) acres
New preserve additions (credits)	933 acres
Remaining Mitigation Credits	***2,546.0 acres***
Lower Colorado River Authority (LCRA)	
Starting LCRA Balance	2,489.1 acres
Rebuild of the Electric Distribution Line Along RR 1431 from Nameless Road to Buck Run (PEC)	(0.8) acres
Remaining Mitigation Credits	***2488.3 acres***

Participation Certificate Activity

Travis County's Natural Resources Department administers the BCCP Public Participation Process on behalf of the BCCP Coordinating Committee and issues Participation Certificates for cooperating landowners within the Permit area. Descriptions of participation categories are defined in the Interlocal Cooperation Agreement between Travis County and the City of Austin Implementing the Balcones Canyonlands Conservation Plan Shared Vision (City of Austin and Travis County, 1995). As required by the terms of the regional Permit, copies of each Participation Certificate and Habitat Determination map are provided to USFWS Austin Ecological Services office. Over the past year, thirteen Participation Certificates were issued (Table 3), one under the single-family residential use provision, ten for subdivisions or per-acre habitat calculations, and two under the USFWS Alternative Determination Process.

Table 3. Fiscal Year 2005 Participation Certificate summary.

BCCP Application #	Date Issued	Name	Category	Amount Paid
#0423	10-5-2004	Spanish Oaks Section IIB	Subdivision	$3,750.00
#0426	6-20-2005	Wood	Single Family	$9,300.00
#0435	2-8-2005	Northshore Phase 4	Subdivision	$22,800.00
#0438	12-9-2004	Spanish Oaks Section A	Subdivision	$41,850.00
#0439	1-7-2005	Buford	Subdivision	$1,200.00
#0441	1-3-2005	Hinkle and Clarke	Subdivision	$600.00
#0445	12-9-2004	Ory	Subdivision	$1,200.00
#0450	2-15-2005	The Hollows Section 1B	Subdivision	$265,000.00
#0452	5-27-2005	Cypress Canyon Section 4	Subdivision	$31,800.00
#0453	5-27-2005	Cypress Canyon Section 3A	Subdivision	$15,600.00
#0454	5-27-2005	Cypress Canyon Section 3B	Subdivision	$14,700.00
#0458	4-20-2005	Steiner Ranch Area A2	Alternative	$294,000.00
#0463	5-18-2005	Steiner Ranch Area B2	Alternative	$242,800.00

Funds Collected through Participation Certificate and USFWS directed mitigation fees

A total of $945,250.00 was collected through the sale of Participation Certificates in FY2005. These funds are disbursed between the Permit Holders on a quarterly basis.

Travis County's Tax Benefit Financing Plan, a funding mechanism outlined in the Interlocal Cooperation Agreement between Travis County and the City of Austin Implementing the Balcones Canyonlands Conservation Plan Shared Vision (City of

Austin and Travis County, 1995) generated $3,956,944.00 in FY2005. Travis County Commissioners Court directed these funds to support County Preserve land purchases until the land acquisition goals established by the permit have been achieved.

Funds Expended for Land Acquisition

Since the inception of the BCCP, the Permit Holders have successfully competed for USFWS Habitat Conservation Plan grants each year. To date, nine Land Acquisition Assistance Program awards totaling $64,035,078.00 have been completed or are in progress (see Table 4).

Table 4. USFWS HCP Land Acquisition Grant awards received by the Permit Holders.

Year	Federal Grant Funds	Minimum Local Match (25%)	Total Grant	Local Recipient
1997	$1,000,000	$333,333	$1,333,333	City of Austin
1998	$2,000,000	$666,666	$2,666,666	Travis County
1999	$1,500,000	$500,000	$2,000,000	Travis County
2000	$4,140,000	$1,380,000	$5,520,000	Travis County
2001	$14,140,000	$4,713,333	$18,853,333	City of Austin, Travis County
2002	$10,000,000	$3,333,333	$13,333,333	Travis County
2003	$4,993,794	$1,647,952	$6,641,746	Travis County
2004	$3,375,000	$1,125,000	$4,500,000	Travis County
2005	$6,890,000	$2,296,667	$9,186,667	Travis County
Totals	**$48,038,794**	**$15,996,284**	**$64,035,078**	

Travis County expended a total of $5,912,772.50 on fee simple land acquisition activities in FY2005. These expenditures are broken down by tract in Table 5. Of this total $9,192.50 was spent on appraisals and associated acquisition costs for the “Finch” tract. After considering the County’s offer, the landowner ultimately declined to sell to the County for the appraised fair market value.

In addition to fee simple acquisitions, Travis County actively pursues alternative protection strategies such as conservation easements and deed transfers. Use of these non-traditional measures provides opportunities to secure in-perpetuity protection for

habitat lands that may not otherwise be available for fee simple purchase. Approximately 59 acres were secured through these non-grant funded protection strategies in FY05.

Table 5. Travis County FY2005 BCP Land Acquisitions.

Tract	Date Acquired	Acreage	Total Expenditures*
Nootsie, Ltd.		120.0	$5,903,580.00
Finch	Landowner declined appraised fair market offer		$9,192.50
Franzetti		53.0	Conservation Easement
Texas System of Natural Laboratories		6.0	Fee Simple Land Transfer
Totals*			**$5,912,772.50**

* Total Expenditures includes land and associated acquisition costs (surveys, environmental site assessments, etc.)

Travis County's continuing land acquisition efforts in FY06 have already resulted in additional habitat protection successes. Travis County staff will continue to pursue fee simple purchases as well as alternatives such as conservation easements, deed transfers, and other land protection strategies to meet the goals established by the Permit.

The City of Austin committed to accruing 11,578 acres toward the completion of the BCP. Presently the City of Austin owns and manages 13,035 acres of land within the Balcones Canyonlands Preserve. At this time, the City of Austin is not negotiating for the purchase of any additional preserve land.

Funds Expended for Operations and Maintenance

The City of Austin spent a total of $598,718 for FY05 to fund preserve management expenditures by the Austin Water Utility's Wildland Conservation Division, Balcones Canyonlands Preserve Program. This figure understates the City's total expenditures on this program since it does not include (1) work by other staff in the AWU's Wildland Conservation Division on program administration and support; (2) operation and maintenance expenditures by Austin Park and Recreation Department Operations on BCP-designated parkland; or (3) land management expenditures by the Austin Water

Utility on the two BCP-designated tracts that it owns and manages. Those expenditures cannot be readily determined from their program budgets.

Table 6. Annual FY2004 and FY2005 BCP budgets for Permit Holders, the Managing Partner, and cooperating entities with summary of total budgets since plan inception.

BCP Partner	2004	2005	Total Budget: 1996 to Present
City of Austin	$572,110	$598,718	$4,766,145
Travis County	$493,170	$413,072	$3,311,761
LCRA	$105,000	$85,000	$868,072
TNCTX	$80,000	$8,000	$862,000
TAS	$7,350	$13,275	$81,971
TOTALS	**$1,257,630**	**$1,138,065**	**$9,889,949**

The Travis County Natural Resources budget for the BCP Program in FY2005 was $413,072.00. This includes Travis County General Fund expenditures as well as developer funds negotiated to support ongoing operations and maintenance of County managed Conservation Easements. Note that this figure does not include expenditures by the Committee for Wild Basin Wilderness, Inc., which holds a contract to conduct educational programming and management of the County owned Wild Basin Wilderness Preserve. This total also does not include administrative, legal, and additional law enforcement support or non-habitat-related operations and maintenance provided by other Travis County Departments.

Updated Map of Lands Dedicated to the Balcones Canyonlands Preserve

With the addition in FY2005 of 126 acres to the Preserve, 27,746 of the 30,428 acres of black-capped vireo and golden-cheeked warbler habitat required by the Permit (91%) have been assembled by the Permit Holders with the assistance of cooperating landowners and entities. In addition, Travis County acquired management responsibilities for 53 acres within the Preserve that had previously been managed by private landowners, thereby ensuring long-term protection of these habitat lands. A map illustrating the current status of the Balcones Canyonlands Preserve is enclosed as Appendix C. Summaries of BCP lands sorted by managing entity and by macrosite are attached as Appendices D and E, respectively.

Public Use and Habitat Management Activities occurring within the Balcones Canyonlands Preserve

The City of Austin

The Austin Water Utility (AWU) Wildland Conservation Division (WCD) staff has responsibility for management, habitat restoration, removal of threats to the habitat and inventorying existing species within the city's 13,035 acres portion of the BCP. Five biologists assigned to the WCD provide monitoring; surveying; and land management functions for the City's BCP Program. WCD staff coordinated volunteer activities providing maintenance and administration support.

The Utility's Wildland Conservation Division currently manages 9,852 acres of the BCP and assists PARD Park Operations on the other 3,183 acres of designated parks and Preserves.

Table 7. Management Status of City of Austin BCP Properties

Tract	Primary Management Responsibility	Acreage
Upper Bull Creek Unit (Franklin, Hanks, Lanier, COA Canyon Creek)	AWU/BCP BCP/PARD (Franklin)	608
Middle Bull Creek Unit (Ivanhoe, Beard Trust)	AWU/ BCP	996
Lower Bull Creek Unit (St. Edward's Park, Jester, Forest Ridge, 3M, Hilltop, Gibson/Nott, Hiller, Kruger)	AWU/BCP	1140
Lime Creek (inc. 100 acres of Austin-Simon, Ltd.)	AWU/BCP	594
Park West, Coldwater I & II, Long Canyon	AWU/BCP	1345
Cortaña	AWU/BCP	1752
Double J&T	AWU/BCP	1729
Reicher Ranch	AWU/BCP/PARD	820
Bohls Ranch	AWU/BCP	450
Sansom	AWU/BCP	13
Senna Hills	AWU/BCP	35
Vireo Research Area	AWU/BCP/PARD	214
Ullrich Water Treatment Plant	AWU/BCP	18
Water Treatment Plant #4	AWU/BCP	138
	AWU/BCP Subtotal	**9,852**
Bull Creek District Park, Barton Creek Greenbelt	PARD Operations*	25
Spicewood Springs Preserve	PARD Operations	8
Barrow Preserve	PARD Operations	8

Emma Long Metro Park	PARD Operations	950
Commons Ford Park	PARD Operations	115
Barton Creek Wilderness	PARD Operations	999
Barton Creek Greenbelt	PARD Operations	813
Friesenhahn	PARD Operations	62
Mt. Bonnell	PARD Operations	3
	Other City of Austin Subtotal	**3,183**
	TOTAL ACREAGE	**13,0*35***

*****PARD Operations does not manage for Endangered Species; they perform regular maintenance, i.e. mowing, trash pickup, and some trail management activities. AWU BCP staff provides BCP management activities.

UPPER BULL CREEK UNIT

Staff conducted three white-tailed deer census counts on a 5-mile census route on a portion of the Upper Bull Creek Unit (Canyon Creek, Franklin, Lanier, WTP#4 tracts) in August and September of 2005, with an average survey count of one deer per 29 acres (the majority of deer leave the preserve late evenings to forage in nearby suburbs).

Canyon Creek

Illegal trespass from Canyon Creek development remains an ongoing problem. The primary trespass routes appear to come from the adjacent Canyon Creek conservation easements. Management activities for this tract during FY 04-05 included:

- Endangered bird monitoring activities at Canyon Creek concentrated on the 100-acre transitional study plot for golden-cheeked warblers (City of Austin 2005 Golden-cheeked Warbler and Black-capped Vireo Monitoring Program report, Appendix F).
- Routine patrol of the area for evidence of trespass and preserve damage.
- Located an active deer blind/ poaching site and then dismantled the blind after the Game Warden was finished with his surveillance of the site.
- Repair road by removing fallen trees and added reinforced concrete to eroded portions of the road.
- Erosion control efforts.
- Trash removal.
- Repair of damaged perimeter fence and gates due to unauthorized trespass.
- Continued to meet with USFWS and Canyon Creek development officials regarding violations of their section 7A permit and how those violations negatively impact the BCP. The City is also in negotiations regarding taking over ownership and management duties of these adjacent private mitigation lands.
- Staff conducted 3 white-tailed deer census counts.

- BCP staff is in communication with property management and neighborhood association management companies to develop educational efforts.
- Completed one Land Condition Trend Analysis plot for vegetation monitoring.
- Surveyed for the presence of oak wilt (no oak wilt observed).

Hanks Tract and Gardens at Bull Creek Tract

A portion of the Hanks tract was involved in the construction of a regional flood retention facility on the adjoining Gardens of Bull Creek property (To date, the GBC property's acreage is not counted toward the BCP total, but is managed as BCP land). Management activities for this tract included:

- Routine patrol of the area for evidence of trespass and preserve damage.
- Issued trespass warnings to trespassers.
- Staff continued to monitor the health of 229 trees (planted Nov. 2000) and maintain as necessary.
- Planted numerous tree saplings in the deer exclosure with the help of volunteers and continued to water and maintain this vegetation.
- Repaired water irrigation line.
- Removed trash from both tracts.
- Repaired access road on Hanks by removing fallen trees.
- Repaired vandalized perimeter fence and deer exclosure.
- Repaired fence and floodgates damaged by floodwaters.
- Installed new perimeter signs and repaired vandalized signs.
- White-tailed deer exclosure: monitored hardwood saplings that had been planted in previous years by Boy Scout troops.
- Removed and recycled all exclosures located within the deer proof game fence with the help of volunteers. The trees and shrubs were starting to grow into the cages and there was a possibility that the trees would be flattened during a 100 year flood (flood debris would accumulate on the cages)
- Seeded white-tailed deer exclosure to aid in golden-cheeked warbler habitat restoration.
- Seeded eroded areas with native grasses.
- Surveyed erosion problems from adjacent development. This erosion and sedimentation is adversely affecting Bull Creek water quality as well as Jollyville Plateau salamander habitat. Staff reported all erosions problems associated with adjacent development to the City of Austin's environmental inspectors. Remediation was enacted as required by City code.

- Feral hog trapping.
- Biological monitoring continued during FY 03-04 at Hanks. Quarterly monitoring of the presence of the aquatic Jollyville Plateau salamander was conducted on both tributaries. Staff conducted surveys following protocol established in the City of Austin's Watershed Protection and Development Review Department (WPDRD) report "Jollyville Plateau Water Quality and Salamander Assessment". At set stations, staff measured flow, water, substrate and air temperature and counted all salamanders observed. Salamanders counted were further broken down into 3 categories based on observed size. WSPD staff periodically takes water and benthic samples at these sites to determine current status on water quality. Staff will continue to conduct quarterly surveys at this site until there is a minimum of 5 years of data. Five years of data should allow for an accurate assessment of the populations dynamics at this site. Monitoring at this site will continue beyond the 5 years to determine if the recently constructed dam and new upstream development has any adverse impacts on the salamanders and their habitat.
- Co-led with WPDRD a tour of tributaries 5 and 6 of bull creek to show Environmental Board and Austin Water Utility officials how recent development has negatively impacted habitat for the Jollyville Plateau salamander.
- WPDRD staff conducted a new geomorphological study of both tributaries of bull creek to determine the existing status of the streams health and how it compares to the previous study. This will help set baseline data on existing salamander habitat.
- Golden-cheeked warbler observations and enumeration were conducted and territories were mapped. (City of Austin 2005 Golden-cheeked Warbler Report Appendix F).
- Removed non-native invasive vegetation.
- Completed one Land Condition Trend Analysis plot for vegetation monitoring.
- Surveyed for the presence of oak wilt (no oak wilt observed).
- Installed over 40 trees with volunteers.

Lanier tract

Important management activities for this tract include:

- Within the last three years there have been 4 large apartment complexes built nearby without adequate barriers to stop illegal trespass onto adjacent preserve land. Most of the illegal trespass on Lanier originates from Canyon Creek mitigation land.
- Routine patrol of the area for evidence of trespass and preserve damage.
- Golden-cheeked warbler observations and enumeration were conducted and territories were mapped. (City of Austin 2005 Golden-cheeked Warbler Report Appendix F).

- Restored Lanier spring by installing hog proof fencing to prevent hog wallowing thus protecting salamander habitat and enhancing water quality.
- Conducted quarterly salamander surveys at Lanier Spring.
- White-tailed deer surveys are conducted on Lanier, as part of the five mile Upper Bull Creek census route.
- White-tailed Deer Management Program. Deer were culled under the TPWD Antlerless & spike-buck Deer Control Permit (ADCP). The harvested meat was donated to the Capital Area Food Bank.
- Maintained deer feeders.
- Trapped feral hogs (16 hogs were removed)
- Removed non-native invasive vegetation.
- Repaired road, both erosion and vegetation removal of downed trees.
- Repaired flood damaged deer exclosures.
- Completed one Land Condition Trend Analysis plot for vegetation monitoring.
- Surveyed for the presence of oak wilt (no oak wilt observed).

Franklin tract

Key management activities for this tract over the past year were:

- Trapped feral hogs (8 hogs were removed).
- Sedimentation and erosion work along Bull Creek.
- Routinely patrolled main roads and perimeter fencing to look for signs of trespassing, vandalism or illicit dumping.
- White-tailed deer surveys are conducted on Franklin tract, as part of the five mile Upper Bull Creek census route.
- White-tailed Deer Management Program. Deer were culled under the TPWD Antlerless & spike-buck Deer Control Permit (ADCP). The harvested meat was donated to the Capital Area Food Bank.
- Maintained deer feeders.
- Ashe juniper removal and manipulation for WTD management (shooting lanes).
- Scouted out and installed a new deer feeder.
- Repaired vandalized perimeter fence.
- Gave a tour to a Parks and Recreation official regarding management activities.
- Continued to monitor and enhance the Cistern Spring/Jollyville Plateau salamander habitat restoration project, salamanders were observed in November 2004.
- Collected the seed of locally rare spring associated plants and sowed it at the newly protected Cistern Spring fenced area.

- Removed trash dumps from this site.
- Repaired access roads
- Removed non-native invasive vegetation.
- Quarterly monitoring for the presence of the aquatic Jollyville Plateau salamander. Note: Staff conducted surveys following protocol established in the City of Austin's Watershed Protection Department (WPD) report "Jollyville Plateau Water Quality and Salamander Assessment". At set stations, staff measured flow, water and air temperature and counted all salamanders observed. Salamanders counted were further broken down into 3 categories based on observed size. WPD staff periodically takes water, substrate and benthic samples at this site to determine current status on water quality. Staff will continue to conduct quarterly surveys at this site until there is a minimum of 5 years of data. Five years of data should allow for an accurate assessment of the populations dynamics at this site.
- Co-led with WPDRD a tour of the main branch of bull creek to show Environmental Board and Austin Water Utility officials what is considered near pristine habitat for the Jollyville Plateau salamander.
- Golden-cheeked warbler observations and enumeration were conducted and territories were mapped. (City of Austin 2005Golden-cheeked Warbler Report Appendix F).
- Repaired flood damaged deer exclosures.
- Installed new deer exclosures around hardwood saplings.
- Removed old irrigation lines to be used at other sites.
- Completed one Land Condition Trend Analysis plot for vegetation monitoring.
- Surveyed for the presence of oak wilt (no oak wilt observed).
- A tour of the Franklin and Hanks Tract of the BCCP was conducted on March 20, 2005. Attendees: Mary Ruth Holder, Mary Gay Maxwell, William Curra, Ellen Geismar, Lisa O'Donnell, and Mark Sanders. Items Discussed:

1. Sensitivity of the Bull Creek headwater areas (Upper Bull Creek watershed)
2. Relatively pristine conditions of the Franklin tract
3. Degraded conditions of the Collapsed Bridge (Trib 6) and Trib 5 headwater areas
4. Salamander population declines in Tribs 5 and 6
5. Sensitivity of salamander to habitat loss due to construction activities in Trib 5 and 6 sub watersheds

WTP 4 tract

Key management activities for this tract over the past year were:

- Golden-cheeked warbler observations and enumeration were conducted and territories were mapped. (City of Austin 2005 Golden-cheeked Warbler Report Appendix F).

- Monitored salamanders at Moss Gully spring.
- Discovered a new population of Jollyville Plateau (JVP) salamanders in the main branch of bull creek and monitored the site.
- Participated in water quality and JVP salamander monitoring plan to determine if the future water treatment plant will have any negative impacts.
- Participated in discussions on methods to minimize the potential damage the future water treatment plant may have on the BCP.
- An eight-foot game fence was installed along the entire perimeter of the property.
- Repaired perimeter fence and floodgates from recent flood damage to prevent entry of feral hogs and deer.
- Removed non-native invasive vegetation.
- White-tailed deer surveys are conducted on WTP#4, as part of the five mile Upper Bull Creek census.
- Scouted site for future deer stand and feeder locations for the deer removal program.
- Installed and operated hog traps and a hog pen trap.
- Surveyed for the presence of oak wilt (no oak wilt observed).

LOWER BULL CREEK UNIT

Forest Ridge

The Forest Ridge area is subject to continuing heavy public use by hikers and runners. Mountain biking and dog walking appears to be substantially reduced, though these activities continue to occur illegally. The proportion of hikers with entry permits continues to increase and staff finds increasing awareness and sympathy for the nesting season entry permit requirement. Key management activities for this tract over the past are listed below.

- Moved large kiosk sign from parking lot to entrance to Forest Ridge and replaced old Plexiglas cover.
- Installed new sign at far end of Bull Creek trail and rerouted trail.
- Modified dodgeway on Aralia Avenue to keep out bikers.
- Installed cedar fence to stop off trail use, added new signage, markers, and erosion controls and closed illegal trails along Bull Creek trail.
- Built two temporary perimeter fences and repaired one fence.
- Contacted local media and did a news story on illegal biking at Forest Ridge.
- Sponsored research on GCWA productivity and nest predation conducted by Master's candidate from University of Missouri.
- Surveyed GCWA on the 100-acre prime study plot for the eighth consecutive year.

- Conducted routine patrolling and trash removal.
- Recorded all breeding season avifauna, rare plants, and karst features.
- Monitored problem animals: WTD, Feral Hogs, and Cowbirds.
- Continued surveillance for oak wilt.
- Monitored invasive plants; weeded large area of star thistle along trail and removed other invasive plant species: chinaberry, ligustrum, Nandina.
- Repaired fence where car had run into it. Filed police report and received payment for repairs from driver.
- Monitored Jest John cave for vandalism and fire ants and conducted cricket exit count. (see Karst Report, Appendix P).
- Completed LCTA on two plots on Jester.
- Completed project to accurately map authorized and unauthorized trails in Bull Creek Preserve with volunteer effort.
- Installed new, larger sign at dodgeway entrance alerting hikers to restricted access period and requirement of a permit between March 1 and July 31.
- Removed graffiti from greenbelt sign.
- Conducted web-of-life activity and led interpretive hike for Boy Scout Troop toward their earning a badge.
- Implemented new Entry Permit course online, conducted entry permit hikes, and permitted 69 individuals.

Jester tract

Public access has been allowed on a portion of this tract; however, dodge ways have been installed to curtail prohibited mountain bike and horse use of this area. Other management activities on Jester have included:

- Conducted GCWA enumerations on entire tract.
- Sponsored research on GCWA productivity and nest predation conducted by Master's candidate from Missouri State University.
- Worked with neighbors to have them haul their trash off preserve.
- Conducted routine patrolling and other trash removal.
- Repaired and modified dodgeways off Aralia and Jester Blvd. to keep out bikers.
- Inspected Jester pit.
- Recorded all breeding season avifauna, rare plants, and karst features.
- Monitored problem animals: WTD, Feral Hogs, and Cowbirds.
- Continued surveillance for oak wilt.
- Installed game fence on perimeter in trespass area.

- Performed trail maintenance and installed trail markers with volunteers.
- Installed a new and larger sign at the dodgeway access points alerting hikers to restricted access period and requirement of a permit between March 1 and July 31.
- Completed LCTA on one plot on Jester.
- Public outreach effort to stop trespass by bikers (contacted local media and did a news spot).

Hilltop

With the completion of a fence along a portion of the northern boundary, the trespass from mountain bikers, horseback riders and motorcyclists has been reduced. Management activities on Hilltop included:

- Conducted routine patrolling and trash removal.
- Recorded all breeding season avifauna, rare plants, and karst features.
- Monitored problem animals: WTD, Feral Hogs, and Cowbirds.
- Continued surveillance for oak wilt.
- Monitored invasive plants.

Hiller

This tract lies adjacent to Forest Ridge, Hilltop, and Gibson/Nott tracts. Management activities included:

- Conducted routine patrolling and trash removal.
- Recorded all breeding season avifauna, rare plants, and karst features.
- Monitored problem animals: WTD, Feral Hogs, and Cowbirds.
- Continued surveillance for oak wilt.
- Monitored invasive plants.

Gibson/Nott

- Conducted routine patrolling and trash removal.
- Recorded all breeding season avifauna, rare plants, and karst features.
- Monitored problem animals: WTD, Feral Hogs, and Cowbirds.
- Continued surveillance for oak wilt.
- Monitored invasive plants.

Kruger

This tract (95 acres) lies adjacent to both the Hilltop and 3M tracts. The completion of fencing of the external Kruger boundaries has aided greatly in the management of

trespassing from mountain bikers, horseback riders, and motorcyclists onto the Kruger and 3M tracts. Management activities included:

- Conducted GCWA enumerations on entire tract.
- GPS'd all trails.
- Repaired perimeter fencing and gate
- Documented vandalism (police report).
- Collected shin oak acorns for BCVI restoration on Cortana.
- Conducted routine patrolling and trash removal.
- Recorded all breeding season avifauna, rare plants, and karst features.
- Monitored problem animals: WTD, Feral Hogs, and Cowbirds.
- Continued surveillance for oak wilt.
- Monitored invasive plants.

3M Mitigation Tract

Horseback riders and motorcyclists have subsided on this tract due to fencing installed on the Kruger tract. The closure of Forest Ridge and Jester to biking was initiated in the spring of 2001. Some illegal biking on 3M continues from entry points on the St. Edward's tract. Management activities included:

- Surveyed GCWA on 100-acre study plot for eighth consecutive year.
- Conducted GCWA enumerations on entire tract.
- GPS'd all trails.
- Conducted routine patrolling and trash removal.
- Made fence repairs.
- Recorded all breeding season avifauna, rare plants, and karst features.
- Monitored problem animals: WTD, Feral Hogs, and Cowbirds.
- Continued surveillance for oak wilt.
- Monitored invasive plants; removed invasive plant species.
- Removed old irrigation lines and cages around planted hardwoods in exclosure area.
- Documented vandalism.
- Installed new, larger sign at dodgeway entrance alerting hikers to restricted access period and requirement of a permit between March 1 and July 31.
- Completed LCTA on one plot on Jester.

St. Edwards Park

This area serves as a major public access route for hikers and bikers. Hikers are allowed into adjacent Bull Creek Preserve properties, but mountain biking is prohibited. The

major trail through this park continues to be heavily used by dog-walkers, hikers and mountain bikers. Management activities included:

- Surveyed GCWA on 100-acre study plot for eighth consecutive year.
- Conducted enumerations for GCWA over entire tract.
- GPS'd all trails.
- Maintained public trails and conducted fence repairs.
- Conducted routine patrolling and trash removal.
- Recorded all breeding season avifauna, rare plants, and karst features.
- Monitored problem animals: WTD, Feral Hogs, and Cowbirds.
- Continued surveillance for oak wilt.
- Monitored invasive plants.

MIDDLE BULL CREEK UNIT

Ivanhoe

Management activities included the following:

- Endangered bird monitoring activities at Ivanhoe concentrated on the 100-acre study plot for golden-cheeked warblers (City of Austin 2005 Golden-cheeked Warbler and Black-capped Vireo Monitoring Program report, Appendix F).
- Found one male Black-capped Vireo late in the season (probably just migrating through).
- Conducted routine patrols on this tract.
- Closed an illegal trail, installed "no trespass" and boundary markers, and had the individual responsible sign a "no trespass" warning letter.
- Secured on site building from vandals.
- Erosion repair on access road.
- Inspected Austin Energy line clearing activities.
- Inspected LCRA line clearing activities and determined that they exceeded the limits of clearing. COA is seeking remediation.
- Removed non-native invasive vegetation.
- Removed trash from the site.
- Monitored the rare canyon-mock orange (*Philadelphus ernestii*), made note of bloom period, pollinators and seed set.
- The scheduled installation of the perimeter fence was postponed due to legal (the developer "Rancho LaValencia" bulldozed preserve land) and access issues.
- Investigated a new encroachment by Canyon Ridge Development. The developer bulldozed preserve property and for mitigation has agreed to re-seed the site and give

the BCP 200 cedar post which are scheduled to be removed from the development site. The post will be used for trail work and erosion control.

- Quarterly monitoring for the presence of the aquatic Jollyville Plateau Salamander. Note: Staff conducted surveys following protocol established in the City of Austin's Watershed Protection Department (WPD) report "Jollyville Plateau Water Quality and Salamander Assessment". At Ivanhoe spring staff measured air temperature and counted all salamanders observed. Salamanders counted were further broken down into 3 categories based on observed size. WPD staff periodically takes water, substrate and benthic samples at this site to determine current status on water quality. Staff will continue to conduct quarterly surveys at this site until there is a minimum of 5 years of data. Five years of data should allow for an accurate assessment of the populations dynamics at this site.
- Monitoring: Featherman's cave (Beard Ranch cave): biannual monitoring of this cave has been conducted for visible signs of vandalism and red important fire ant infestations (no problems were noted) (Karst Report, Appendix P).
- A major property encroachment was discovered by the adjacent "Rancho La Valencia" development project. Negotiations for mitigation are on going.
- Collected seed with volunteers for a nearby restoration project.
- Surveyed for the presence of oak wilt (no oak wilt observed).
- Effort was ongoing to remove invasive plants with volunteers.

Beard Family Trust

Management activities for this tract included:

- Routine patrol of area.
- Sedimentation and erosion control work.
- Repair of fences.
- Installation of property boundary markers.
- Non-native invasive plant removal.
- Surveyed for the presence of oak wilt (no oak wilt observed).

CYPRESS CREEK UNIT

Lime Creek

Management activities for this tract included:

- Monitoring: Lime Creek has two caves, which harbor endangered karst species. Biannual monitoring of these caves has been conducted for karst fauna and red important fire ant infestations (fire ants were found near the entrance of Broken Arrow cave) (Karst Report, Appendix P).

- Golden-cheeked warbler observations and enumeration were conducted and territories were mapped. (City of Austin 2005 Golden-cheeked Warbler Report Appendix F).
- Periodic patrolling.
- Periodic fence repair (perimeter fence has been repeatedly damaged by contractor work and vehicles crashing into it).
- Removed trash from site (large amounts of trash are regularly dumped at this site).
- Cleared access road of fallen trees.
- Travis County completed work on the new Lime Creek road expansion project (including a new waterline). A portion of Lime Creek preserve was taken, and for mitigation the COA BCP has received a portion of the old road alignment. Travis County installed an eight-foot game fence along the road re-alignment area and has initiated restoration work on the abandoned portion of Lime Creek road.
- The City of Austin BCP submitted a restoration plan for the abandoned road to Travis County.
- City of Austin BCP GPS'd the new boundary of abandoned road and calculated the total area to be included in the BCP.
- Surveyed for presence of oak wilt (no oak wilt observed).

NORTH LAKE AUSTIN UNIT

Emma Long Park

Management activities included:

- Surveyed GCWA on 100-acre study plot for eighth consecutive year.
- Conducted GCWA enumerations on the entire tract.
- Assessed Turkey Creek trail conditions; GPS'd problems areas and photo documented.
- Proposed restoration project for Turkey Creek trail including trail repairs, erosion controls, and replanting.
- Assessed alternative options for off-leash dog trail at Emma Long and created planning maps.
- Operated wooden hybrid Cowbird trap on edge of 100-acre study plot. Monitoring of trap supplemented with volunteer assistance.
- Sponsored research on GCWA productivity and nest predation conducted by Master's candidate from Missouri State University.
- Treated two groves of invasive Tree of Heaven with Remedy and removed smaller individuals with hand tools.
- Conducted routine patrolling and trash removal.

- Recorded all breeding season avifauna, rare plants, and karst features.
- Monitored problem animals: WTD, Feral Hogs, and Cowbirds.
- Continued surveillance for oak wilt.
- Monitored invasive plants and eradicated stands of ligustrum, chinaberry and Nandina.

Coldwater

Management activities on Coldwater during FY 04-05 included:

- Periodically patrolled main roads and perimeter fencing to look for signs of trespassing, vandalism or dumping.
- Investigated legality of development on adjacent property (whether developer had 10a permit or BCP participation certificate) and advised how to minimize impacts to the preserve.
- Investigated land clearing adjacent to tract.
- Completed two Land Condition Trend Analysis transects, one on the northern half of the tract and one on the southern half of the tract.

Long Canyon

City management activities at the Long Canyon tract during FY 04-05 involved the following:

- Routine Patrols: Main roads and perimeter fencing were visited to look for signs of trespassing, vandalism or dumping.
- Trash removal from entrance at City Park Road and from interior trails.
- Successfully ordered removal of tree-house that was built on the preserve by adjacent home owners.
- GPS'd trails and old ranch roads.
- Repaired perimeter fence.
- Golden-cheeked warbler observations and enumeration were conducted and territories were mapped. (City of Austin 2005 Golden-cheeked Warbler and Black-Capped Vireo Monitoring Program, Appendix P).
- Removed non-native invasive vegetation.
- Surveyed for presence of oak wilt (no oak wilt observed).
- Developed communication with both homeowner associations by giving presentations to Boards and general membership, sending articles for reprint in newsletters, providing suggestions for improvements to HOA-managed trails and offering a property hike.

- Met individually with board members of the Long Canyon HOA to discuss encroachment, trespass, and trail-building techniques on trail adjacent to preserve.

Park West

A variety of management activities were conducted during FY 04-05 at the Parke West Tract. Key work efforts included:

- Routinely patrolled main roads and perimeter fencing to look for signs of trespass, vandalism or dumping.
- Repaired old, vandalized, and/or destroyed fences.
- Posted additional boundary/no trespass signage.
- Investigated roadside wildfire.
- GPS'd trails.
- Golden-cheeked warbler observations and enumeration were conducted and territories were mapped. (City of Austin 2005 Golden-cheeked Warbler and Black-Capped Vireo Monitoring Program, Appendix P).
- Investigation of areas surrounding cave mouths for presence of red imported fire ants; fire ant mounds were treated.
- Removed non-native invasive vegetation.
- Surveyed for presence of oak wilt (no oak wilt observed).

Cortaña

The fencing installed by Travis County on a portion of its Steiner Ranch Conservation Easement, which is contiguous with Cortaña's western boundary, has helped greatly to curtail some of the trespassing that has occurred in the central and lower parts of Cortaña. It is likely that the new game fence on the lower, eastern boundary will help decrease trespass activities that had been increasing as a result of development in the adjacent River Place neighborhood.

Staff conducted three white-tailed deer census counts on a 5-mile census route on Cortaña in August of 2005, with an average survey count of one deer per 19.5 acres for the North Lake Austin Macrosite (the majority of deer leave the preserve late evenings to forage in nearby suburbs.

Other management activities included:

- Monitoring: Because of a federal Section 7 permit, Sierra Development Corp. (River Place) has been conducting studies (every other year) to determine GCW and BCV territories and reproductive success on adjacent properties within 3,000 ft of the River Place boundaries. These studies include almost the entire portion of Cortaña (as well as portions of Park West). The studies began in 1994 and will continue until three

years after complete build out of River Place. River Place is also responsible for monitoring 100 acres of manipulated BCV habitat, a portion of which is at the northern tip of Cortaña. The monitoring includes both avian and plant monitoring studies, and has been conducted every year since 1996. All of these studies have been presented to USFWS, via SWCA, Inc, which is conducting the surveys.

- Routinely patrolled main roads and perimeter fencing to look for signs of trespass, vandalism or dumping.
- Repaired perimeter fence and installed several BCP "no trespassing," signs.
- Repaired/maintained access roads.
- Searched for possible transient on Cortaña and adjacent Steiner Preserve.
- Barbed-wire fence along the lower, eastern boundary of property was replaced with an 8-foot game fence.
- New game fence was extended by staff as far as possible to the edge of Lake Austin in order to deter trespass.
- Trash removal.
- Effort was ongoing to remove invasive plants with volunteers.
- Initiated resolution of 20 issues of encroachment/trespass from adjacent homeowners in the River Place subdivision.
- GPS'd roads and trails.
- Wildfire: staff provided logistical support and resources to local fire departments in their effort to extinguish 8.5-acre fire that was ignited by neighborhood youth; boundary of wildfire was GPS'd and effects were documented with photos.
- Improved BCVI habitat by removing small Ashe juniper with hand-operated equipment.
- Staff and volunteers removed non-native invasive vegetation.
- Spread seed collected with volunteer.
- Began to refurbish 7 existing deer feeders and stands in preparation for the deer control program.
- White-tailed deer harvest (Fall 2004-Winter 2005): culled 10 does, 1 fawn doe, and 1 spike buck.
- Additional habitat modification was conducted throughout 30 acres of previously manipulated habitat within the middle portion of the tract; in this area, additional junipers were mulched and live oaks were topped.
- A contract was awarded for more vegetation manipulation on the BCV restoration site (the project will be completed next fiscal year).

- Brown-headed cowbird trapping: BHCO were trapped daily in February, March, April, May, June, and July (121 days). Total number of birds trapped was ten (five males, four females, and 1 juvenile). Trap monitoring was supplemented by help from volunteer.
- Black-capped vireos observations and enumerations were conducted in the northern portion of the property and territories were mapped. (City of Austin 2004 Golden-cheeked Warbler and Black-Capped Vireo Monitoring Program, Appendix F).
- Golden-cheeked warbler observations and enumerations were conducted on the middle section of the tract and territories were mapped. (City of Austin 2004 Golden-cheeked Warbler and Black-Capped Vireo Monitoring Program, Appendix F).
- Began photo point monitoring project of the Upper Cortaña BCVI habitat restoration area; photos were taken at 5 points prior to restoration activities in the 2005 restoration area at Upper Cortaña.
- Initiated a BCVI habitat restoration monitoring project in Upper and Middle Cortaña. Vegetation transects were completed at 4 permanent points in the 2005 restoration area at Upper Cortaña prior to habitat manipulation.
- Presentation given to the River Place Home Owners Association.
- Surveyed for presence of oak wilt (no new oak wilt observed).
- Met with Steve Turnquist regarding easement on Cortaña; verified compliance of agreement by visiting easement regularly.

SOUTH LAKE AUSTIN TRACTS

Staff conducted 3 white-tailed deer census counts on a 5–mile census route on the South Lake Austin tracts (Double J&T, Reicher Ranch, and Bohls) in August and September of 2005, with an average survey count of one deer per 14.6 acres.

Double J&T

Management activities included:

- Along Murfin Road, there is the continual problem of trespassing and dumping of trash onto Double J&T.
- Installation of the western perimeter game fence
- Perimeter fence repair work.
- Installed new “no trespassing” signs.
- Monitoring for golden-cheeked warblers conducted on a 100-acre plot (designated as a transitional plot), in addition to enumerations on the remainder of the tract (City of Austin 2005 Golden-Cheeked Warbler Report, Appendix F).
- Golden-cheeked warbler enhancement: planted native vegetation along fence line.

- White-tailed deer surveys are conducted on Double J&T, as part of the five mile SLAM census route.
- Routinely patrolled main roads and perimeter fencing to look for signs of trespass, vandalism and/or dumping.
- Dealt with neighborhood encroachment issues. Issued trespass warning letters to trespassers. One incident involved removal of vegetation from City property, case is ongoing.
- Removed large amounts of trash.
- Removed non-native invasive plants.
- White-tailed Deer Management Program. Deer were culled under the TPWD Antlerless & Spike-Buck Deer Control Permit (ADCP). The harvested meat was donated to the Capital Area Food Bank.
- Maintained existing stands and feeders for WTD management program.
- Surveyed for presence of oak wilt (two well-established Live Oak OW centers discovered: Medway boundary, Kollmeyer Rd.).
- Rescued two Ringtail cats from attic of tract steward's home.
- Bridge repaired and refurbished (timbers replaced).
- Roof replaced on caretaker's house.
- Native plant rescue: transplanted over 750 grasses from adjacent proposed development with the help of volunteers.
- Moved poorly placed gate on new fence and improved this entrance at Cardinal Hill subdivision.
- "No Parking" signs placed on emergency vehicle entrances.
- Met with developer, Hudson Bend Fire Dept. and City of Lakeway Code Enforcement (CE) regarding a potential gate for emergency access in the new Preserve at Lakeway development.
- Initiated photo point monitoring project of transplanted grass restoration areas.
- Meeting with developer, builders, and City of Lakeway Code Enforcement regarding silt flow into preserve from Alta Vista.
- Alta Vista mitigation included addition of topsoil, seeding of native grasses and erosion control in the form of "water bar" diversions.
- Met with Preserve at Lakeway engineer regarding silt flow from adjacent retention pond. Mitigation plan is similar to Alta Vista, with action to follow in upcoming months.

Sansom Tract

Management activities included:

- Routine patrol of property.
- New game fencing along western boundary of Double J&T, north of Murfin Road, included the western boundary of the Sansom tract.

Reicher Ranch

Management activities included:

- Trash removal.
- White-tailed deer surveys were conducted on Reicher Ranch, as part of the five mile SLAM census route.
- White-tailed Deer Management Program. One deer was culled under the TPWD Antlerless & Spike-Buck Deer Control Permit (ADCP). The harvested meat was donated to the Capital Area Food Bank.
- Improvements were made to greenhouse in order to aggressively propagate native plants for future restoration activities. Renovation, with the help of volunteers, included replacing water lines, sprinklers, glass and electrical wiring. Associated routine maintenance performed.
- Processed seeds and planted numerous species in greenhouse for use in re-vegetation effort on the BCP.
- Routine patrol of property.
- Removed non-native invasive vegetation.
- Surveyed for presence of oak wilt.
- Installed and operated a cowbird trap.
- Road repair work.
- Reicher trail restoration project with Bowie High School volunteers.
- Released two rescued Ringtail cats onto Reicher.
- Volunteer group from Bowie High School improved hiking trail.
- Improvements were made to greenhouse in order to aggressively propagate native plants for future restoration activities.

Bohls Ranch

This riverfront tract is bordered on the west by Reicher Ranch and on the east by the Lake Pointe subdivision and its 230-acre mitigation tract. Since much of the common boundary between Bohls and Lake Pointe mitigation is not fenced, the potential for frequent trespassing onto Bohls continues. Management activities included:

- White-tailed deer surveys were conducted on Bohls Ranch, as part of the five mile SLAM census route.
- Monitoring for golden-cheeked warblers conducted on a 100-acre plot (designated as a prime plot), in addition to enumerations on the remainder of the tract (City of Austin 2005 Golden-Cheeked Warbler Report, Appendix F).
- Ashe juniper removal and manipulation for WTD management (shooting lanes).
- Routine patrolling.
- Surveyed for presence of oak wilt (no oak wilt observed).
- Black-capped vireo habitat restoration efforts were continued. Contractor mulched juniper brush in the original 30 acres of habitat manipulation (January 2004). Removed scrub Ashe juniper on an additional 18 acres of BCVI restoration site in September 2005.
- Removed non-native invasive vegetation.
- White-tailed Deer Management Program. Deer were culled under the TPWD Antlerless & spike-buck Deer Control Permit (ADCP). Harvesting began in late October of 2004 and ended in late January of 2005. The harvested meat was donated to the Capital Area Food Bank.
- Maintained existing stands and feeders for WTD management program.
- Conducted Breeding Bird Surveys at 6 points in Vireo Restoration area (5 visits).
- Performed 6 LCTA bird transects in proposed Wastewater treatment area (5 visits).
- Initiated photo point monitoring project of 2005 BCVI habitat restoration area.
- Initiated a BCVI habitat restoration monitoring project in 2005 BCVI restoration area. Vegetation transects were completed at 8 permanent points prior to habitat manipulation.
- Through the United Way's Day of Caring, volunteers from Sematech topped oak trees in 3-acre area as part of the BCVI restoration efforts.

Commons Ford Ranch Park

Management activities included:

- Routine patrolling.
- GCWA enumerations conducted in habitat (City of Austin 2005 Golden-Cheeked
- Warbler and Black-capped Vireo Monitoring Report, Appendix F).

Senna Hills

Management activities included:

- Routine patrolling.

BARTON CREEK TRACTS

Barton Creek Wilderness Park

FY 2004-05 management highlights for the B.C. Wilderness Park include:

- Excavated boulder at Cave Y entrance to allow access.
- Cave Y and substation sink entrances were checked periodically for signs of human visitation, trash, and damage. Conducted several site inspections with no signs of trespass or vandalism.
- Monitored for the presence of fire ants and found no activity within the caves.
- Austin Energy installed a new security fence to prevent illegal access. This new fence will protect the endangered golden-cheeked warbler, caves with endangered species, the rare *Streptanthus bracteatus*, and water quality.
- Repaired vandalized perimeter fence, gate and closure signs to prevent illegal access into golden-cheeked warbler habitat.
- Golden-cheeked warbler monitoring continued at the 100-acre prime GCW study plot in and around Barton Creek (City of Austin 2005 Golden-Cheeked Warbler and Black-capped Vireo Monitoring Report, Appendix F)
- Surveyed and GPS'd existing *Streptanthus* populations (514 plants identified).
- Routine patrolling.
- Searched for new *Streptanthus* locations.
- Closed illegal trails.
- Installed multiple tow-away signs on Loop 360 frontage/perimeter fence.
- Removed non-native invasive vegetation.
- Removed several active and inactive camps with cooperation from PARD and Park Police.
- Routine trash removal.
- Conducted cave faunal surveys at Cave Y and Seibert Sink (Karst Report, Appendix P).
- Prepared a submittal for Partner's for Fish and Wildlife grant to install fencing to protect rare plants and erosion control.
- Monitored for active oak wilt. Identified seven infected red oaks and nine infected live oaks. All seven red oaks were removed and/or girdled. Live oaks continue to be monitored.
- Vegetation removal under power line for maintenance purposes by Austin Energy.

Barton Creek Greenbelt

- Annual karst fauna monitoring was conducted at Airman's Cave, (Karst Report, Appendix P).
- Austin WSPDR staff take routine water and benthic samples from several points on the creek to help determine the health of the creek and to try to determine how the creek is being impacted by adjacent urban sprawl.
- Surveyed for presence of oak wilt.
- Removed non-native invasive vegetation.

Friesenhahn Tract

- Routine patrolling.
- Monitored for active oak wilt. Identified two infected red oaks and four infected live oaks. The red oaks were removed and the live oaks continue to be monitored.
- Removed non-native invasive vegetation.
- Trash removal.
- Vegetation removal under power line for maintenance purposes by Austin Energy.

WEST AUSTIN PROPERTIES

Vireo Research Area

- Routine patrolling.
- Located and marked one Land Condition Trend Analysis plot for upcoming vegetation monitoring, to commence in October 2004.
- Closed illegal trails.
- Golden-cheeked warbler observations and enumeration were conducted (City of Austin 2004 Golden-cheeked Warbler Report Appendix F).
- Black-capped vireo observations and enumeration were conducted; one male was seen for one day (City of Austin 2004 Black-capped Vireo Report Appendix F).
- Monitored for active oak wilt. 3 infected red oaks were identified and removed.
- No trespassing sign posted on AE cable gate on Loop 360, immediately south of the scenic overlook (mountain biking and associated illegal activities continue to occur from this access point).
- Trash removal.
- Repaired entrance gate and perimeter fence.

Mount Bonnell Park

This small hilltop park overlooking Lake Austin continues to receive high visitation rates, especially by out-of-town visitors seeking a panoramic view of the lake and scenic Texas

Hill Country. Property owners to the immediate south have recently cleared the land and constructed homes effectively removing the vast majority of the habitat for the rare bracted-twistflower *(Streptanthus bracteatus).*

- Volunteers did extensive monitoring of *Streptanthus bracteatus*; 25 individuals were found, all with mature seed.

Ullrich Water Treatment Plant

Managed by AWU. BCP management activities included:

- Surveyed site for the bracted-twistflower, found 28 individuals. Collected seeds from plants growing immediately adjacent to Lake Austin and dispersed seed at a higher elevation, near existing bracted-twistflower individuals.
- The Ullrich water treatment site is undergoing major construction work for expansion of its water treatment capacity. All construction lies outside of the preserve area and therefore has minimal impact on the rare plants and endangered cave invertebrates.
- GPS'd boundary of new game fence and calculated area inside exclosure.
- Little Bee Creek cave: cave entrance was gated to deter trespass and vandalism; cave faunal surveys were conducted.

Barrow Preserve

Management activities include:

- Routine patrol and monitoring adjacent new development (Canyon Rim).
- WSPDR staff monitored the water for pollutants.
- AWU and WPDRD staff met on site and immediately downstream to address ongoing sewer line problems. AWU will re-route some of the existing line and add manholes, which will help prevent future sewer leaks.
- Quarterly monitoring for the presence of the aquatic Jollyville Plateau salamander. Note: Staff conducted surveys following protocol established in the City of Austin's Watershed Protection Department (WPD) report "Jollyville Plateau Water Quality and Salamander Assessment". At set stations, staff measured flow, water and air temperature and counted all salamanders observed. Salamanders counted were further broken down into 3 categories based on observed size. WPD staff periodically takes water, substrate and benthic samples at this site to determine current status on water quality. Staff will continue to conduct quarterly surveys at this site until there is a minimum of 5 years of data. Five years of data should allow for an accurate assessment of the populations dynamics at this site.
- Removal on non-native invasive vegetation.
- Surveyed for the presence of oak wilt (no oak wilt observed).

Stillhouse Hollow

Management activities include:

- Erosion and sedimentation control.
- Began work on interpretive kiosk in collaboration with the Parks and Recreation Department with volunteer assistance.
- Repair of vandalized security fence around Cotterell Cave
- Red-imported fire ant control with boiling water (Karst Report, Appendix P).
- Invasive non-native plant removal.
- Trail work and repair
- PARD staff met with the adjacent neighborhoods associations regarding concerns of wild fires. Staff removed brush illegally dumped by nearby homeowners thus reducing wildfire risk.
- Began work on interpretive kiosk in collaboration with the Parks and Recreation Department with volunteer assistance.
- Trash removal (including the removal of tree forts).
- Put out seed of locally collected native plants in areas where erosion is occurring to aid in erosion control.
- Conducted a faunal survey at Cotterell Cave (Karst Report, Appendix P).
- Jollyville Plateau salamander: Quarterly surveys were conducted on this preserve and the land immediately downstream. This site is the type locality for the Jollyville Plateau salamander. This population crashed in 1994 and has never really recovered. Some of the remaining salamanders have notable spinal deformities. Watershed Protection and Development Review (WPDR) staff takes regular water quality samples for analysis. This year WPDR staff collected soil samples from Cotterell cave for analysis of potential contaminants washing in from nearby homes.
- Staff conducted surveys following protocol established in the City of Austin's Watershed Protection Department (WPDRD) report "Jollyville Plateau Water Quality and Salamander Assessment". At set stations, staff measured flow, water and air temperature and counted all salamanders observed. Salamanders counted were further broken down into 3 categories based on observed size. WSPD staff periodically takes water samples at these sites to determine current status on water quality. Staff will continue to conduct yearly surveys at this site until there is a minimum of 7 years of data. As of 1/02 this site is surveyed yearly. Up until then this site was surveyed monthly since 1994. It is uncertain how much longer City of Austin BCP staff will continue to survey this site. However, staff will continue to try to determine why salamanders are disappearing from this site and why some are deformed. WPDRD

and BCP staff collected 2 deformed salamanders, both individuals were sent off to experts in an attempt to find out why they are deformed.

- Salamanders on this site carry the chytrid fungus, which is lethal to frogs. All equipment and clothing must be either dedicated to this site and none other or sterilized with a 10% solution of bleach before accessing any other sites.
- Dr. Rob Jackson at Duke University and Dr. Will Pockman with the University of New Mexico are currently conducting research on the uptake of water from certain species of trees. They have set up scientific probes on some of the roots inside the cave. This monitoring does not require access into the cave and is only done under BCP staff supervision.
- Completed one Land Condition Trend Analysis plot for vegetation monitoring.
- Surveyed for the presence of oak wilt (no oak wilt observed).

PRESERVE-WIDE ACTIVITIES

Brown-headed Cowbird Control Program.

Feral Hog Control Program.

White-tailed Deer Survey Program.

- White-tailed Deer Management Program. A total of forty-six white-tailed deer were culled from the City of Austin BCP lands.
- A permanent staff member was hired as Land Management Rangers, to assist in outreach and education, patrol and land management activities for the BCP Program.
- Public Outreach Efforts: presentations to homeowners associations, scouts, volunteer groups, AmeriCorps staff and E-Corps members.
- Volunteer Efforts: land management support activities, construction of protective equipment for monitoring apparatus, and proving monitoring support for bird surveys.
- GCW/BCV Monitoring Surveys: See attached report, Appendix F.
- Karst Protection: See report, attached as Appendix P.
- Spring and Jollyville Plateau salamander habitat restoration.
- Continued GIS/GPS mapping of existing BCP resources. The Arc view-created map will have roads, structures, wells, fences, gates, etc. and will be used for future land management.
- Staff assisted academic research studies: Woodland Edge Effects Study (Texas State University at San Marcos); Mountain Bike Activity on GCWA Productivity (Oklahoma State University); BCVI Foraging Study (Texas State University at San Marcos); Non-Native Tree Species Effect on Neotropical Diversity and Abundance (Texas State University at San Marcos); and GCWA Nest Predation Adjacent to an Urban/Wildland Interface (University of Missouri at Columbus).

- Public Outreach Efforts: Gave presentations to Capital Area Master Naturalist training class, several homeowners associations, AmeriCorps staff and E-Corps members, and Texas Forestry Board, gave tour to members of Environmental Board, and provided education at community cave festival.
- Volunteer Efforts: land management support activities, construction of brown-headed cowbird trap, and providing monitoring support for bird surveys. Overall, 26 volunteer projects involved 101 citizens investing a total of 1,085 hours in support of the BCP program.

Travis County

Travis County currently manages a total of 4,752 acres of habitat lands dedicated to the BCP, and continues to actively pursue acquisition and management of additional habitat lands to meet the goals of the BCCP.

Canyon Vista

The Canyon Vista tract consists of two parcels located in the Bull Creek Macrosite. The 237-acre Canyon Vista tract and the 1-acre Canyon Vista Conservation Easement were conveyed to the County by a private landowner previously managing these lands under USFWS 10(a) permit PRT-783564. Travis County accepted transfer of these lands in June of 2004. Management efforts included:

- Regular patrols by Travis County BCP Rangers.
- Baseline data and land use history was researched and recorded, and creation of a Land Management Plan was initiated. Staff expects to present a final draft to the USFWS in FY2006.
- Public outreach efforts were initiated with the surrounding landowners, the staff and students at the adjacent Laurel Mountain Elementary School, and users of the unauthorized trails located throughout the tract.
- Travis County began fencing the property perimeter in order to minimize unauthorized access and protect human health and safety.
- Travis County and the Round Rock School District negotiated and implemented a fencing plan for areas of the preserve adjacent to Laurel Mountain Elementary School.
- Travis County met with homeowners and developers with interests adjacent to the preserve to address encroachment, erosion, trespass and illegal dumping concerns.
- Golden-cheeked warbler surveys were performed and results are summarized in Travis County's *Monitoring of the Golden-cheeked Warbler 2005 Field Season*, attached as Appendix N.

Greenshores Conservation Easement

The Greenshores Conservation Easement was conveyed to Travis County in accordance with the terms and conditions of USFWS 10 (a) permit # TE-074582-0 in April of 2004. This 52-acre parcel is located in the Bull Creek Macrosite, and is adjacent to the City of Austin's Emma Long Park. Travis County actions on the Greenshores tract included:

- Regular patrols by Travis County BCP Rangers.
- Baseline data and land use history was researched and recorded, and creation of a Land Management Plan was initiated. Staff expects to present a final draft to the USFWS in FY2006.
- Fencing construction continued.
- Travis County staff met with and coordinated landowner activities in accordance with the terms and conditions of the Conservation Easement.
- Staff also met with the developer to discuss long-term protection efforts for an adjacent area slated for construction.
- Golden-cheeked warbler presence/absence surveys were performed and results are summarized in Travis County's *Monitoring of the Golden-cheeked Warbler 2005 Field Season,* attached as Appendix N.

CYPRESS UNIT

The Cypress Unit consists of 473 acres located within the Cypress Creek Macrosite. The Cypress Unit is comprised of the Attwood, Blake, "the Crossings", King tract and Toops tracts, and includes lands held in fee simple ownership and managed thorough conservation easements.

Attwood

The 31-acre Attwood tract was acquired fee simple in June of 2004. Management activities on the Attwood tract in FY2004 included:

- Regular patrols by Travis County BCP Rangers.
- Baseline data and land use history was researched and recorded.
- Boundary delineation was initiated.
- Travis County staff worked to coordinate removal of debris and an abandoned mobile home on site.
- White-tailed deer populations were surveyed, and management of these populations was initiated this year. For more information on Wildlife Management, please see *2005 Summary of Wildlife Management Activities on Travis County Managed Tracts of the Balcones Canyonlands Preserve,* attached as Appendix O.

Blake tract

The 38-acre Blake tract was a fee simple acquisition completed in June of 2004. Management efforts included:

- Regular patrols by Travis County BCP Rangers.
- Baseline data and land use history was researched and recorded.
- Boundary delineation was initiated.

"The Crossings" tract

The tract referred to as "The Crossings", also sometimes referred to as the Beck tract, consists of a 175-acre conservation easement conveyed to Travis County in March of 2004. Management obligations were accepted by Travis County as the result of terms of the landowner's USFWS 10(a) permit TE-024619-0. Habitat management in FY2004 included:

- Regular patrols by Travis County BCP Rangers.
- Baseline data and land use history was researched and recorded.
- Travis County staff met with and coordinated landowner activities in accordance with the terms and conditions of the Conservation Easement.
- Boundary delineation was initiated.
- County staff provided education and outreach opportunities and provided management guidance for staff at "The Crossings".

King tract

The King tract consists of a 59-acre parcel immediately adjacent to the Attwood and Blake tracts, as well as the Nature Conservancy of Texas' Lehmann Preserve. The King tract was acquired in part with federal matching funds through the USFWS Land Acquisition Assistance Program grant awarded to the County in 2003. This parcel was acquired in October of 2003. Management activities on the King tract in FY2005 included:

- Regular patrols by Travis County BCP Rangers.
- Baseline data and land use history was researched and recorded.
- Boundary delineation was initiated.

Toops tract

The 170-acre Toops tract was available to the public through guided access for educational and outreach activities provided by Travis County BCP staff. Habitat management activities in FY2005 included:

- Regular patrols by Travis County BCP Rangers.
- Travis County Natural Resources staff coordinated a trash and debris collection and removal event in coordination with Travis County Sheriff's Office Correctional Facilities.
- Travis County staff met with and reviewed power line and infrastructure maintenance activities performed by multiple utility providers.
- Assessment and control of non-native and invasive plant species continued.
- Investigations to quantify and manage white-tailed deer populations continued. A summary of these activities is attached as Appendix O.
- Fencing and property boundary delineation continued.

Hamilton Pool Preserve

Public uses permitted prior to Hamilton Pool Preserve's dedication as a portion of the BCP continued through FY2005. The 232-acre site located in the Pedernales Macrosite contains approximately 1.75 miles of maintained nature trails, and provides access to a popular swimming area located in a natural grotto. User fees are assessed, and public access to the Preserve is limited to day use only. Pets, fires, cooking, fishing, and collecting are all prohibited within the Preserve. BCP management at Hamilton Pool in FY2005 included:

- Regular patrols by Travis County BCP Rangers.
- Travis County Parks and Natural Resources staff actively engages school children and the public in education and outreach efforts related to endangered species and the BCP through guided tours and special opportunities throughout the year.
- A 100-acre study plot for collection of long-term distribution and abundance data for the golden-cheeked warbler was established by the BCP Land Management Plan (BCP LMP). Intensive data collection and monitoring on the study plot continued, and results are summarized in Travis County's *Monitoring of the Golden-cheeked Warbler 2005 Field Season* report, attached as Appendix N.
- Brown-headed cowbird trapping continued at Hamilton Pool Preserve, and results are found in the *2004 Wildlife Management Summary for Travis County BCP Lands*, attached as Appendix O.
- The Hamilton Pool Preserve population of canyon mock-orange, a species of concern covered under the Permit, continues to be protected and monitored.

JOLLYVILLE UNIT

In FY2005, a total of 126 acres were acquired and incorporated into the Jollyville Unit. New acquisitions included the 120-acre Nootsie tract and the 6-acre Texas System of

Natural Laboratory Cave tracts. The Jollyville Unit is located in the Cypress Creek Macrosite and incorporates the Bunten, Cuevas, Grandview Hills, Lake Perspectives, Stratton/Verandah, Tomen Grandview Hills Section 14 Lot 2, Tomen Verandah Apartments Section 8, Vireo Ridge and Vista Point tracts, and includes lands held in fee simple ownership and managed thorough conservation easements.

Bunten tract

The 170-acre Bunten tract was acquired in fee during FY2002. Travis County habitat management occurring on the Bunten tract in FY2005 consisted of:

- Regular patrols completed by Travis County BCP Rangers.
- A 100-acre study plot for collection of long-term distribution and abundance data for the golden-cheeked warbler was monitored. Results of the intensive data collection and monitoring on the study plot are summarized in Travis County's *Monitoring of the Golden-cheeked Warbler, 2005 Field Season* report, attached as Appendix N.
- Assessment and control of non-native and invasive plant species on this heavily impacted tract continued. Of special concern are populations of invasive species including bamboo *(Bambusa* spp.), Chinaberry (*Melia azedarach)* and periwinkle *(Vinca major)* on this tract. Under the direction of Structural Pest Control Board licensed staff, populations of these invasives were cut, cut and treated, or hand pulled where appropriate.
- City of Austin Watershed Protection and Development Review staff continued to delineate and survey Jollyville Plateau salamander habitat on this tract. Substrate composition, water quality parameters (temperature, pH, specific conductance, alkalinity and dissolved gasses), and population surveys were initiated. A report detailing these findings is presented attached in Appendix I.
- Unauthorized access by foot traffic as well as by horse increased on this tract in FY2005. Staff believes this is a direct result of the increasing urbanization of nearby lands.
- Fencing and property boundary delineation continued.

Cuevas Tract

The 140-acre Cuevas tract (also sometimes referred to as the "Tomen-Parke Cave tract") was acquired fee simple in December 2003. Habitat management activities in FY2005 included:

- Regular patrols by Travis County BCP Rangers.
- Baseline data and land use history was researched and recorded.

- Golden-cheeked warbler surveys were performed and results are summarized in Travis County's *Monitoring of the Golden-cheeked Warbler, 2005 Field Season*, attached as Appendix N.
- Surface monitoring of protected karst features continued, and are discussed in the *Balcones Canyonlands Preserve Karst Management 2005 Annual Report*, attached as Appendix P.
- Fencing and property boundary delineation continued.

Grandview Hills tract

The Grandview Hills tract consists of multiple separate parcels that were acquired fee simple or conveyed through conservation easements in FY2002. Habitat management on Grandview Hills in FY2005 included:

- Regular patrols by Travis County BCP Rangers.
- Travis County Natural Resources and Law Enforcement staff provided members of the Grandview Hills Homeowners Association and the Ridge at Grandview Hills Homeowners Association with guided tours and educational opportunities in the preserve units nearest their homes.
- Travis County Natural Resources staff met with the Grandview Hills Homeowners Association (GVH HOA) Board of Directors to continue to discuss management of Talus Springs Cave. For more information about this critical karst feature, *the Balcones Canyonlands Preserve Karst Management 2005 Annual Report* attached as Appendix P.
- Black-capped vireo surveys were performed and results are summarized in Travis County's *Monitoring of the Black-capped Vireo, 2005* report, attached as Appendix M.
- Travis County staff trapped brown-headed cowbirds and continued investigations to quantify and manage populations of white-tailed deer and feral hogs. The *2005 Summary of Wildlife Management Activities on Travis County Managed Tracts of the Balcones Canyonlands Preserve* is attached as Appendix O.
- Fencing and property boundary delineation continued.
- Travis County cooperated with the Texas Historical Commission review of cultural sites throughout the tract.
- City of Austin Watershed Protection and Development Review staff delineated and surveyed Jollyville Plateau salamander habitat located on this tract. Substrate composition, water quality parameters (temperature, pH, specific conductance, alkalinity and dissolved gasses), and population surveys continued. A summary of this work is attached in Appendix I.

- Graduate Student studies of the black-capped vireo population on this tract continued as part of the Master's Thesis work performed through Texas State University at San Marcos. Data collected this field season is presented as a portion of the *Monitoring of the Black-capped Vireo, 2005 Field Season,* attached as Appendix M.

Lake Perspectives tract

Travis County in FY1999 acquired the 124-acre Lake Perspectives tract. Management activities taking place in FY2005 consisted of:

- Regular patrols by Travis County BCP Rangers.
- Endangered species surveys, including intensive efforts on one 100-acre study plot for collection of long-term distribution and abundance data for the golden-cheeked warbler per the guidelines found in BCP Land Management Plan (BCP LMP) continued. Results of this data collection and monitoring are summarized in Travis County's *Monitoring of the Golden-cheeked Warbler 2005 Field Season* report, attached as Appendix N.
- Investigations to quantify and manage white-tailed deer populations continued. The *2005 Summary of Wildlife Management Activities on Travis County Managed Tracts of the Balcones Canyonlands Preserve* is attached as Appendix O.

Nootsie Tract

The Nootsie tract was acquired in FY05 and incorporated an additional 120-acres into Travis County's Jollyville Unit. Management activities included:

- Regular patrols by Travis County BCP Rangers.
- Travis County Natural Resources staff coordinated a trash and debris collection and removal event in coordination with Travis County Sheriff's Office Correctional Facilities. This effort yielded 14.23 tons of trash and recycled 8,450 pounds of metal and 6.36 tons of paper.
- This tract contains a single-family home that is being converted to a field office and Preserve Headquarters facility for Travis County BCP staff.
- Assessment and control of non-native and invasive plant species continued. Efforts to control Chinaberry (*Melia azedarach)* and Tree of Heaven *(Ailanthus altissima)* populations were directed by Structural Pest Control Board licensed staff, and populations of other invasive and non-native species were recorded.
- Endangered species surveys and baseline data collection were initiated and are summarized in Travis County's *Monitoring of the Golden-cheeked Warbler 2005 Field Season* report, attached as Appendix N.

- Investigations to quantify and manage white-tailed deer populations began. The *2005 Summary of Wildlife Management Activities on Travis County Managed Tracts of the Balcones Canyonlands Preserve* is attached as Appendix O.

Stratton/Verandah

Travis County acquired the 6-acre Stratton/Verandah parcel for the Preserve in August of 2004. Management of this tract in FY2005 consisted of:

- Regular patrols by Travis County BCP Rangers.
- Baseline data and land use history was researched and recorded.
- Assessment and initiation of debris removal and habitat restoration needs.
- Fencing and property boundary delineation continued.
- The Stratton tract contains a single-family home and a number of storage structures that were under consideration for use as a BCP Field Office and Preserve Headquarters. Unfortunately, this structure was vandalized in March of 2005, resulting in over $15,000 damage. Those responsible for these actions were apprehended and a settlement agreement including community service and labor as well as fines were assessed. Given the extent of the damage, plans to renovate this structure for County use were abandoned.

Texas System of Natural Laboratories Caves Tracts

Travis County accepted in FY05 the fee simple land transfer of a total of six acres from the Texas System of Natural Laboratories, a non-profit research organization. This land consists of multiple parcels surrounding the openings of a number of important karst features. Management of these parcels included:

- Regular patrols by Travis County BCP Rangers.
- Baseline data and land use history was researched and recorded.
- Assessment and initiation of debris removal and habitat restoration needs.
- Fencing and property boundary delineation was initiated.
- Initial karst feature survey and baseline data reporting was initiated, as reported in the *Balcones Canyonlands Preserve Karst Management 2005 Annual Report*, attached as Appendix P.

Tomen Grandview Hills Section 14, Lot 2

This 35-acre parcel was acquired fee simple in FY2003. FY2005 Habitat management actions included:

- Regular patrols by Travis County BCP Rangers.
- Baseline data and land use history was researched and recorded.

- Travis County Natural Resources staff coordinated a trash and debris collection and removal event in coordination with Travis County Sheriff's Office Correctional Facilities.
- Endangered species surveys and baseline data collection were initiated and are summarized in Travis County's *Monitoring of the Golden-cheeked Warbler 2005 Field Season* report, attached as Appendix N.

Tomen Section 8

The Tomen Section 8 parcel consists of a 24-acre conservation easement that was conveyed to Travis County in April of 2004. Management activities included:

- Regular patrols by Travis County BCP Rangers.
- Baseline data and land use history was researched and recorded.
- Black-capped vireo surveys and habitat manipulation efforts to restore nesting areas in this historically populated area continued, and is reported in the *Monitoring of the Black-capped Vireo, 2005 Field Season*, attached as Appendix M.

Vireo Ridge tract

Vireo Ridge was acquired in fee through multiple transactions in FY2000 and FY2001, and consists of 581 acres of GCWA and BCVI habitat. Management on Vireo Ridge in FY2005 consisted of:

- Regular patrols by Travis County BCP Rangers.
- Black-capped vireo surveys and habitat manipulation efforts to restore nesting areas in this historically populated area continued as reported in the *Monitoring of the Black-capped Vireo, 2005 Field Season*, attached as Appendix M.
- Travis County staff trapped brown-headed cowbirds on the preserve, as well as on private property immediately adjacent to the Jollyville Unit. Investigations to quantify and manage populations of white-tailed deer and feral hogs continued. A summary of these activities is attached as Appendix O.
- Assessment and control of non-native and invasive plant species on this tract continued. Structural Pest Control Board licensed staff directed efforts to manage populations of Chinaberry (*Melia azedarach)* and heavenly bamboo (*Nandina domestica).*
- Karst features were investigated, as summarized in the *Balcones Canyonlands Preserve Karst Management Report, 2005* found in Appendix P.

Vista Point tract

Travis County acquired the 490-acre Vista Point tract in FY2002. Habitat management on this tract in the last year included:

- Regular patrols by Travis County BCP Rangers.
- Surface monitoring and investigations of protected karst features continued as summarized in the *Balcones Canyonlands Preserve Karst Management Report, 2005* found in Appendix P.
- Black-capped vireo surveys were performed and results are summarized in Travis County's *Monitoring of the Black-capped Vireo, 2005 Field Season*, attached as Appendix L.
- Investigations to quantify and manage populations of white-tailed deer and feral hogs continued. A summary of these activities is attached as Appendix N.

Medway Ranch

Medway Ranch consists of 345 acres contiguous with the City of Austin's Double J&T Preserve located in the South Lake Austin Macrosite. Management activities on Medway Ranch in FY2004 consisted of:

- Regular patrols by Travis County BCP Rangers.
- Baseline data and land use history was researched and recorded, and creation of a Land Management Plan was initiated. Staff expects to present a final draft to the USFWS in FY2006.
- Public outreach efforts continued with the surrounding landowners and users of the unauthorized trails located throughout the tract.
- Travis County staff met with and reviewed power line and infrastructure maintenance activities performed by multiple utility providers.
- Travis County Natural Resources staff coordinated a trash and debris collection and removal event in coordination with Travis County Sheriff's Office Correctional Facilities.
- Fencing and property boundary delineation continued.
- Endangered species surveys and baseline data collection were initiated and are summarized in Travis County's *Monitoring of the Golden-cheeked Warbler 2005 Field Season* report, attached as Appendix N.

Ribelin Ranch

The Ribelin Ranch tract was acquired fee simple by Travis County in June of 2004. This parcel consists of 320 acres located in the Bull Creek Macrosite, and connects City of Austin managed preserve lands located to the south (the Ivanhoe tract) with those to the

north and west (the Franklin and Lanier tracts). Travis County management on the Ribelin Ranch tract in FY2005 included:

- Regular patrols by Travis County BCP Rangers.
- Baseline data and land use history was researched and recorded, and creation of a Land Management Plan was initiated. Staff expects to present a final draft to the USFWS in FY2006.
- Travis County staff met with and reviewed power line and infrastructure maintenance activities performed by multiple utility providers.
- Coordination of management and monitoring efforts with City of Austin BCP staff responsible for surrounding parcels.
- Exotic and invasive plants were identified and management efforts were directed by Structural Pest Control Board licensed Natural Resources staff. Heavenly Bamboo (*Nandina domestica)* and Japanese Privet (*Ligustrum japonicum)* populations were cut and treated with a 1:5 Garlon 4/Red River basal oil mix.
- Travis County staff trapped brown-headed cowbirds on the preserve, as well as on private property immediately adjacent to the Jollyville Unit. Investigations to quantify and manage populations of white-tailed deer and feral hogs continued. A summary of these activities is attached as Appendix O.
- Endangered species surveys and baseline data collection were initiated and are summarized in Travis County's *Monitoring of the Golden-cheeked Warbler 2005 Field Season* report, attached as Appendix N.

Romberg Tract

The 40-acre Romberg tract has been a portion of Travis County's BCP land since the permit's inception in 1996. This parcel was available to the public through guided access for educational and outreach activities provided by Travis County BCP staff.

Habitat management activities in FY2005 included:

- Regular patrols by Travis County BCP Rangers.
- Travis County Natural Resources staff completed site visits, but was not intensively surveyed for rare birds in FY2005. Though warblers have been documented foraging and dispersing juveniles at this location in the past, site visits did not provide any evidence of such use during this nesting season.

Steiner Ranch

The Preserve tracts of Steiner Ranch comprise 819 acres in five separate parcels managed by Travis County since FY2001. Conservation Easements on these tracts were transferred to Travis County as partial mitigation required by the USFWS for impacts resulting from

the associated development. Under the terms of the Conservation Easement, the Steiner Ranch Master Association (SRMA) maintained access to a limited number of approved nature trails within the Preserve areas. The use of these trails is restricted to hiking, jogging, and nature viewing from maintained trails, and the trails are for the sole use of residents of the development. Access to remaining portions of these preserve tracts was available to the public through guided access for educational and outreach activities provided by Travis County BCP staff. Travis County Natural Resources provides consulting and reporting services to the landowner concerning wildlife management throughout the preserve.

The Steiner Ranch Unit is comprised of five tracts referred to as J-Canyon, L-Bend, Middle Section, the Vireo Management Area and North East. Management activities on these parcels included:

J-Canyon tract

- Regular patrols by Travis County BCP Rangers.
- Fencing and property boundary delineation continued.
- County Natural Resources and Law Enforcement staff provided Steiner Ranch Homeowners with guided tours through Preserve areas.
- Coordinated trail signage and trailhead gate installation.
- Coordinated habitat restoration efforts and installation of wildlife viewing areas.
- Travis County staff met with and coordinated landowner activities in accordance with the terms and conditions of the Conservation Easement.

L-Bend tract

- Regular patrols by Travis County BCP Rangers.
- Travis County staff met with and reviewed power line and infrastructure maintenance activities performed by multiple utility providers.
- Travis County staff met with and coordinated landowner activities in accordance with the terms and conditions of the Conservation Easement.
- Coordinated trail signage and trailhead gate installation.
- Fencing and property boundary delineation continued.

Middle Section tract

- Regular patrols by Travis County BCP Rangers.
- Travis County staff met with and reviewed power line and infrastructure maintenance activities performed by multiple utility providers.

- Travis County staff met with and coordinated landowner activities in accordance with the terms and conditions of the Conservation Easement.
- Coordinated trail signage and trailhead gate installation.
- Fencing and property boundary delineation continued.

Vireo Management Area tract

- Regular patrols by Travis County BCP Rangers.
- Travis County staff met with and reviewed power line and infrastructure maintenance activities performed by multiple utility providers.
- Fencing and property boundary delineation continued.
- Travis County staff met with and coordinated landowner activities in accordance with the terms and conditions of the Conservation Easement.
- County staff coordinated trail signage and trailhead gate installation.
- Populations of Chinaberry (*Melia azedarach)* were cut and treated with a 1:5 Garlon 4/Red River basal oil mix under the direction of Structural Pest Control Board licensed Natural Resources staff.
- Golden-cheeked warbler and black-capped vireo surveys were performed and results are summarized in Travis County's *Monitoring of the Black-capped Vireo, 2005 Field Season* and the *Monitoring of the Golden-cheeked Warbler, 2005* reports, attached as Appendices M and N.

North East tract

- Regular patrols by Travis County BCP Rangers.
- Travis County staff met with and reviewed power line and infrastructure maintenance activities performed by multiple utility providers.
- Travis County staff met with and coordinated landowner activities in accordance with the terms and conditions of the Conservation Easement.
- Golden-cheeked warbler and surveys were performed and results are summarized in Travis County's *Monitoring of the Golden-cheeked Warbler, 2005 Field Season* attached as Appendix N.
- Coordinated trail signage and trailhead gate installation.
- Fencing and property boundary delineation continued.

Wild Basin Wilderness Preserve

Wild Basin Wilderness Preserve is owned by Travis County and managed through contractual agreement by the Committee for Wild Basin Wilderness, Inc. Travis County

Parks and Natural Resources supports operation of the 227-acre Preserve through staff and financial assistance. Details concerning the management of Wild Basin Wilderness Preserve are reported below under the heading devoted to The Committee for Wild Basin Wilderness, Inc. Surveys of golden-cheeked warblers from this tract are presented in the *Wild Basin Wilderness Preserve Golden-cheeked Warbler Survey 2005 Season* report, presented as Appendix L.

Law Enforcement Summary

Management of Preserve lands to maintain and increase populations of endangered species in a rapidly developing urban interface presents unique challenges for public agencies. Many BCP tracts present significant management challenges ranging from illegal trespass including pedestrian, mountain bike, ATV, and motorcycle traffic, to illegal dumping to poaching of native wildlife on preserve lands. In addition, some BCP tracts contain registered archaeological sites, which require additional monitoring and protection.

To protect the significant natural and cultural resources on County owned and managed preserve lands Travis County has assigned two Park Rangers to the BCP. Travis County Park Rangers are commissioned Texas Peace Officers operating as Deputy Sheriffs under the Travis County Sheriff's Office (TCSO) and are certified Texas Department of Health Emergency Medical Technicians. Their primary duty is to provide the law enforcement component for the effective management of all county owned or managed BCP properties. In FY2005 two additional Park Rangers underwent training enabling them to provide assistance as necessary with resource protection and law enforcement activities on the Preserve. These supplemental BCP Law Enforcement officers spent approximately 18-20% of their FY2005 scheduled patrol time completing training or providing protection on County BCP lands.

Trespass onto posted preserve lands is the most common concern addressed by Travis County BCP Rangers. When trespassers are apprehended on BCP property they are temporarily detained per state law and TCSO policy, questioned regarding their activities, issued a criminal trespass warning and escorted from the property. In FY2005, 15 TCSO Field Identification citations were issued to trespassers confronted on Travis County BCP property. Rapidly developing suburban neighborhoods surrounding many BCP locations will likely generate additional trespass pressure on preserve tracts.

Rangers are responsible for boundary patrols and quarterly inspections of County BCP tracts. Patrols are conducted to provide a law enforcement presence to help minimize illegal activities as well as to assess the condition of County property such as boundary fencing. Rangers are also trained to recognize and respond to hazardous and illegally dumped materials, and regularly cooperate with local, state and federal agencies to appropriately address the threats these materials pose to health and human safety as well as to the natural environment. Inspections encompass surveys of facilities, trails, invasive and non-native species and management needs, trespass issues and other areas that impact the overall condition of preserve tracts. Cooperation with Texas Parks and Wildlife Department Game Wardens has led to the apprehension of poachers illegally taking game animals within the boundaries of the County's preserve lands as well as on adjoining private properties.

Travis County BCP Rangers assist with or lead ongoing education programs conducted by BCP staff, assist with the monitoring and removal of non-native plant and animal species, monitor and protect cultural resource sites, assist with trail mapping and provide support for Travis County Natural Resources field staff. The BCP Rangers have provided assistance in several incidents on City of Austin and LCRA BCP properties and have assisted neighboring landowners and individual BCP land managers with trespass and criminal mischief concerns on adjoining properties. BCP Rangers have also secured physical addresses for the gates to all properties, installed appropriate signage at those properties, and have produced and distributed address maps and lists to emergency response agencies in an effort to facilitate interagency cooperation and reduce response times to incidents within the BCP. In addition, BCP Rangers, along with other Travis County Park Rangers, have taken a lead role in White-Tailed deer management on preserve and park properties.

Cultural Resources

As a political subdivision of the State of Texas, Travis County is obligated to comply with the Antiquities Code of Texas to locate, protect and preserve all cultural resource sites on properties within the jurisdiction and management of the County. Travis County Natural Resources is aware of a number of prehistoric and multi-component archaeological sites located on County owned or managed preserve lands. These sites have been recorded with the Texas Historical Commission, and the Texas Archaeological Research Laboratory located at the University of Texas maintains maps showing locations of identified archaeological sites throughout the BCP. These locations are not identified here, as Section 191.004 of the Antiquities Code of Texas prohibits revealing

archaeological site locations in public documents (U. S. Department of the Interior, U. S. Fish and Wildlife Service, 1996).

In order to better protect the important cultural resources known from Balcones Canyonlands Preserve tracts, Travis County field staff have undergone training pertaining to the identification and field assessment of lithic (rock) artifacts well as historic artifacts associated with 19th and 20th century farming and ranching practices most likely to be encountered in Central Texas. Known cultural sites are regularly monitored for illegal activities such as evidence of surface collecting of artifacts or unauthorized excavation. Known cultural sites are currently being mapped with global positioning satellite technology and mapped on USGS 7.5-minute topographic maps. This data has been transmitted to the Texas Historical Commission and maintained by Travis County Natural Resources staff. Cultural features located on BCP properties are reviewed for possible protection through the National Register of Historic Places, Recorded Texas Historic Landmark, or State Archaeological Landmark designations. Currently, no known features meet the criteria for inclusion under these designations.

Travis County's Balcones Canyonlands Preserve education and outreach efforts in FY2005 included:

- Interpretation of research data and information about the BCP and endangered species for neighborhoods and homeowner's associations, the general public, and interested groups through preserve tours, workshops, special presentations and exhibits.
- Travis County makes a special effort to reach out to schoolchildren living in the vicinity of Preserve properties. Participation in activities such as Elementary and Secondary school science, environment and nature clubs, the "Austin Science Fun Day", and extra-curricular student programs such as summer camps helps to spread the word about the BCCP and protecting the unique native plants and animals found in our community.
- Numerous opportunities were provided for college and university researchers and field classes to utilize the BCP as a living classroom. Baylor University, San Diego State University, Texas State University at San Marcos, and the University of Texas all had projects or fieldwork on Travis County BCP lands in FY05.
- The County regularly provides internships and graduate study opportunities for college students working in the field of natural resources research and management.
- Continuing data collection and scientific study of the species protected by the BCCP, as well as impacts of land management practices. Research data is presented for interested groups and at professional and scientific conferences, such as the 2002

Land Trust Alliance National Rally, the Society of Ecological Restoration and the Continuing Legal Education Conference on the Endangered Species Act and Habitat Conservation Planning.

- Participation at community events throughout the area, such as the Texas Parks and Wildlife Department's annual "Wildlife Expo" and the annual "Austin Karst Festival and Western Oaks Karst Preserve Open House", and conferences for groups with mitigation needs such as real estate agencies and builders associations.
- Travis County Natural Resources staff works closely with interested clubs, organizations, and youth-at-risk programs to educate and inform while also providing valuable hands-on work experiences on the Preserve.
- Informing, evaluating, and problem-solving issues such as alternate mitigation opportunities, acquisition strategies, and land management planning with local landowners, developers, real estate associations, and scientific communities.
- The County works closely with partner agencies to address common safety concerns, and has worked to familiarize emergency responders with Preserve tracts within their jurisdictions.
- The County utilizes various media opportunities to inform the public about issues related to the Preserves, such as purchase of new Preserve lands, receipt of federal HCP land acquisition grants, and the negative impact of non-native wildlife on ecosystem health.
- New content was created and posted to the Travis County website to provide additional public resources related to the BCCP, including expanded and updated participation information, frequently asked questions, species protection, access issues, and contact information for BCP partners and the USFWS.
- The digital video entitled "The Balcones Canyonlands Conservation Plan: A Community-Based Solution" is currently available to the public through the Austin Public Library, the Austin History Center, as well as on two local cable television stations (Austin Time-Warner TCTV Channel 17 and City of Austin TV Channel 6). Clips from the documentary are available in streaming video format on the Travis County website.
- Information packets including letters of support were created to demonstrate widespread public endorsement of the BCCP and the USFWS Habitat Conservation Plan Land Acquisition Assistance Program.

The Lower Colorado River Authority

Management activities for the three LCRA preserves continued to focus on natural resource research, access management, and stewardship promotion.

Westcave

- LCRA staff and volunteers conducted an informal survey for golden-cheeked warblers. At least five and possibly six territories were observed.
- Preserve staff hosted 6775 students, teachers, tourists, researchers, and nature-enthusiasts, and gave 496 programs.

McGregor

- Presence/absence surveys were conducted at McGregor by staff biologists this year.
- LCRA staff continued to work with the Comanche Trail Community Association to promote local support of land management, animal management, and stewardship efforts on the preserve. The permit renewal training was held October and November 2005 for new or returning CTCA McGregor Good Neighbor Program permittees. There are currently 16 permitted McGregor Good Neighbors. The active participation of the permittees continues to be an asset to preserve management. Individuals notify LCRA staff about trail conditions, access concerns, and general preserve status, as well as make suggestions for additional cooperative efforts between the CTCA and the LCRA.
- LCRA staff continued to conduct routine property surveys to identify and address maintenance needs and access issues. Activities included walking the preserve's perimeter, mending small sections of fence, and installing perimeter signs at strategic locations to discourage trespass.

Wheless

- No bird surveys were conducted at Wheless Preserve in 2005. Surveys plan to be conducted in 2006.
- Biologists from the City of Austin surveyed successfully for Jollyville Salamander at Long Hollow twice this spring and summer. The spring was flowing and a high number of salamanders were observed. Several LCRA staff members and LCRA contract biologists participated in the survey, as well.
- LCRA staff continued to conduct routine property surveys to identify and address maintenance needs and access issues. Activities included walking the preserve's perimeter, mending small sections of fence, and installing perimeter signs at strategic locations to discourage trespass.
- Approximately 104.5 acres in the northern part of the study area is currently being managed to create BCVI habitat. It was initially treated in January and February

2002, using a flail mower to remove most woody vegetation. Vegetation sampling was conducted this summer and a burn is planned for this winter.

- A general vegetation survey was performed by staff biologists, including locating rare orchids.

Monitoring Highlights

LCRA staff performed surveys at Westcave and McGregor Preserves. Although the focus of the surveys was to delineate territories, presence of females, nesting activity, and juvenile disbursement were noted as encountered. Territories were mapped with a GPS unit. Following are brief synopses of survey results.

McGregor

Five visits totaling over 72 hours were spent surveying for golden-cheeked warblers at McGregor Preserve. At least 17 and possibly 21 territories were delineated. Four females and two sets of fledglings were observed during the season. The 2005 Survey Report for McGregor Preserve is attached as Appendix G.

Westcave

Five visits totaling approximately 21 hours were spent surveying for golden-cheeked warblers at Westcave Preserve. At least five and possibly six territories were delineated. At least two females and three juveniles were observed during the season, as well as two nests. The 2005 Survey Report for Westcave Preserve is attached as Appendix H.

The Nature Conservancy of Texas

Barton Creek Habitat Preserve

Science

This spring, we continued our annual monitoring of Golden-cheeked Warblers (GCWA) and Black-Capped Vireo (BCVI) populations, using point-counts for GCWA and direct observation for BCVI. This data is currently being analyzed by Conservancy scientists.

White-tailed deer surveys were also conducted to determine population size and make up. We again hosted public hunts on the Preserve to try and reduce the number of deer on the property.

Stewardship

We hired a new preserver manager and are looking forward to a strong year of good land stewardship. Projects include but are not limited to continuation of bottomland hardwood reforestation, prairie restoration, prescribed burning, habitat management for GCWA and BCVI.

Upcoming Events, Workshops and Volunteer Work Days in Spring 2006

This spring we will once again be hosting a landowner workshop at the Barton Creek Habitat Preserve. The topic for the event has yet to be determined.

Volunteer opportunities will also be available and posted on The Nature Conservancy web page at www.nature.org.

On the Horizon

Weather permitting; we will be burning 150-225 acres of potential vireo habitat. As always, we will conducting this prescribed burn in cooperation with local fire departments, the Texas Forest Service, the U.S. Fish and Wildlife Service, and our local BCCP partners. Conservancy employees, our neighbors, and the general public will be notified in advance of the burn.

The City of Lakeway

Schramm Ranch

Development continues on Schramm Ranch in accordance with U. S. Fish and Wildlife Service Permit PRT-812696. Golden-cheeked warbler survey updates for this property were included in the BCP 2003 Annual Report and the next survey will be conducted in the spring of 2006.

No disturbances have occurred in the approximately 200 acres of identified habitat. Building, utility infrastructure and street construction operations continue on the remaining 300 acres. Some 370 single-family homes will be constructed on the non-habitat areas of the tract. Construction is anticipated to continue into 2007.

The agreement between the Developer and USFWS requires installation of perimeter fencing between developed areas and preserve areas as development proceeds and became a condition of issuance of the City's certificate of occupancy for homes constructed in the development. Fencing has been completed.

The City of Lakeway as successor to the 10-A Permit will submit (*i*) written annual reports for next year's activities, (*ii*) any required presence/absence surveys for the golden-cheeked warbler as described in the implementing agreement, and (*iii*) status reports for any clearance and construction activities on the property covered by this permit.

Travis Audubon Society
Baker Sanctuary

Access and trail maintenance

- The Sanctuary was open from January 29th until October 23, 2005 at which time the gates were locked and the Sanctuary Chair/Steward, John Wilcox, posted a closure notice.
- On March 19th, 2005 the Travis Audubon Society held their annual open house at the Sanctuary with guided tours from 9:00 AM until noon. 102 visitors toured the Sanctuary led by 13 guides to look at Golden-cheeked Warblers, spiders, and plants and heard a presentation by Jan Fulkerson with the Texas Forest Service about the urban/wildland interface.
- John Wilcox trimmed encroaching brush from 2.25 miles of our three walking trails, access, hunting and service roads. Also, John raked, shoveled, over 13,000 pounds of coarse gravel at the Baker Cabin and hauled and spread it on the Green and Blue trailheads and at the Headquarters Area of the Sanctuary.
- During the 2005 visitor season, the Sanctuary had 263 registered visitors of whom 56% were national or local chapter members.
- The Sanctuary Steward, John Wilcox, installed nine, 81/2" x 11" interpretive signs at various places on three trails.
- Work on the Jackie Arnold Education Center at the Baker Sanctuary began when the Sanctuary Stewards secured the pro bono design services of PageSoutherlandPage. Concept drawings were approved, a site survey conducted and Travis County, the City of Austin and U. S. Fish and Wildlife Service reviewed the project. Selection of a general contractor, bidding and signing of the contract has yet to be done. However, commencement of construction will be determined by Golden-cheeked Warbler nesting season (March 1 through August 31).

Boundary control

- John Wilcox monitored the Sanctuary boundaries and maintained the fence line and patched holes cut in the high fence along our eastern boundary.
- TAS cleared 6400 feet of fence line along our western and northern boundaries in preparation to high fence. On December 9th, John Wilcox closed bids on the tear out of an existing fence and the installation of 6400 feet of high fence along our western and northern boundaries. Work on the new fence is scheduled to begin January 23, 2006.

General maintenance

- John Wilcox picked up trash on the Sanctuary right-of-way 12 times.
- The Sanctuary Managers hauled 230 bags of trash to the Travis County Solid Waste Transfer Station.
- John Wilcox mowed and trimmed the Headquarters Area, Parking Lot and around the Baker Cabin nine times and continued cleaning up around the Baker Cabin.
- John Wilcox hauled trash out of the woods to the Travis County Solid Waste Transfer Station, repaired barbed wire fences, built new storage areas and maintained equipment.

Problem animal control

- During the 2005-2006 WTD season, John Wilcox managed 6 deer hunting leases for gun hunters. As of December 31, 2005, 14 deer (5 bucks three points or more, 3 spike bucks and 6 antlerless deer) had been taken. All hunters on the Sanctuary filled out the TAS Hunting Application and signed off on the TAS Liability, Indemnity and Release form as well as the TAS Hunting Regulations.
- Feral hogs have not been a problem at the TAS-BS during 2005.
- John Wilcox trapped 29 cowbirds in 2005.

Endangered species

- TAS member Dan Callaway surveyed the TAS-BS 100 acre GCW plot in 2005 and found 18 warbler territories and 4 fledging groups.

Restoration

- John Wilcox caged 20 oak saplings and under story plants to protect them from browsing White-tailed deer.

Cultural resources

- No activity occurred this year regarding cultural resources.

Research

- Lisa O'Donnell (City of Austin Watershed Protection and Development Review Department) and John Wilcox conducted a Jollyville Plateau Salamander survey on May 19, 2005. We found 1 salamander below the Baker Springs and in 6 in the spring run, three of which were juveniles.
- Lisa O'Donnell, John Wilcox and Colin Peden conducted a Jollyville Plateau Salamander survey on August 26th, 2005. Lisa found two adult salamanders in the run below Baker Springs.

The Committee for Wild Basin Wilderness, Inc.

Wild Basin Preserve

Maintenance

- Our two and one half (2 ½) miles of trails received routine maintenance during all seasons. This work included installing sixty-five erosion mitigation devices of various types, e.g. water bars, check dams, and reinforced steps. We sometimes amended surfaces with loose caliche scrape and cedar bark (in moist situations) and constantly removed loose rocks due to erosion. Woody trailside plants were regularly pruned for both safety and convenience. Volunteer trail crews, including members of the Central Texas Trail Tamers and CSR's, work monthly on second Saturdays, 9am-noon. These sessions also involve other land management tasks, e.g. invasive plant removal and revegetation for habitat restoration. Occasional scout, club, and corporate volunteer groups provided work hours as community service to land management and other improvement projects.
- All trails required some maintenance, if only the simplest forms, e.g. replacing margin stones. The more vertical trail sections, however, on Triknee, Possum, Laurel, Falls, and Madrone Trails required more consistent attention than all others due to their more radical slopes. Nearly all installations on those trails involved steps of rock or wood; this past year, approximately two dozen new and an equal number of repairs. More gently sloping Creek Trail received three installations of a recent, more efficient innovation called z-bars. Crews reinforced and replaced several creek-crossing step stones following flashflood events. .

- We have continued to improve the Easy Access Trail to improve accessibility for the mobility-impaired in wheelchairs and strollers. Last spring, we upgraded approximately a dozen water bars and check dams to more manageable rolling grade dips. This project required wholesale caliche amendments. A difficult curve is currently being extended to create an easier traverse on sloping grade, with assistance from the Central Texas Trail Tamers. That reroute will require some plant rescue and revegetation, with assistance by the Native Plant Society of Texas.
- In November, the Central Texas Trail Tamers began monthly formal training sessions, coinciding with our normal trail maintenance Saturdays. This instruction has both improved the skills of our volunteer crew leaders and stimulated community interest by other class participants.

- Vegetation control: (a) We have continued aggressive removal of invasive, non-native plants: King Ranch bluestem, Johnson Grass, Kleingrass, ligustrum, privet, Chinese tallow, chinaberry, nandina, Japanese honeysuckle, pyrocantha, and vitex. Although varying seasonally, these efforts never cease. After three years, for example, weekly stripping of resprouting vitex, April-October, has finally yielded near total eradication. It remains unlikely, however, that we will ever eliminate any of the other aforementioned species due to our urban interface. (b) This calendar year, we attacked two new species: Georgia cane (Arundo donax) and Pampas grass (Cortaderia selloana). With herbicidal-treatment assistance from Travis County field biologists, we've removed approximately 80% of our one-third acre of this heavily tuberous cane. The area will require extensive revegetation. The Pampas grass has occurred fortunately in a small, narrowly confined population, permitting simple manual extraction of 75% by year's end. (c) At the preserve's rear entrance at Wild Basin Ledge, King Ranch Bluestem grass continues to require mitigation. The Native Plant Society of Texas, Austin chapter, has provided sound advice as well as physical/material support in regard to our vegetation problems.
- Last spring, the Texas Forest Service assessed our fire-risk management needs. Gradually over the remaining year, we performed recommended measures primarily related to creating a defensible-space around the Environmental Education Center; secondarily, along the driveway perimeter. The fall and winter drought conditions accelerated this process.

- Eagle Scout candidates built three lashed-cedar trailside fences to address safety concerns near the Environmental Education Center. One of these fences screened off the display pond to prohibit small children from entering the water.
- Throughout the year, we've experienced relatively few instances of vandalism requiring only minor repair: graffiti on limestone, broken tree branches, and dislodged trailside stones.
- We erected a half-dozen wire cages to protect seedlings and saplings of coralroot orchid, Spanish oak, shin oak, and escarpment black cherry.

Repair and Revegetation

- During spring and early summer, more boundary signs were placed along the south and east boundaries.
- In the latter part of the year, our college intern reconfigured the placement of the posts and markers associated with the interpretive trail map for self-guided tours. In cooperation with our education department, she also edited the map's interpretive text to conform to habitat changes at various marker positions. We expect to complete the project shortly after the beginning of the New Year.
- Informal trails continue to appear in various parts of the preserve: below the Environmental Education Center, near the waterfall on Bee Creek, below the Overlook, and along the lower part of Creek Trail. Mesh barriers and newly purchased signs placed at ten such trail entrances now advise hikers that those areas are closed to access. Some areas required revegetation.
- We rerouted Creek Trail immediately below the lower crossing due to erosion at the creek bank, requiring habitat restoration. For safety purposes, a wire hand railing was constructed paralleling the crossing stones.
- Non-native soil draining down slope across Madrone Trail toward Bee Creek was traced to a recent landscape installation on a neighboring property. Upon our request, the neighbor mitigated the problem.
- Our Halloween fundraiser, Haunted Trails, was again conducted in and around the Environmental Education Center and along the short Easy Access Loop. Careful monitoring by the activity's managers and the preserve's land manager limited habitat impact to an acceptable minimum. No revegetation was required.
- TXDOT repaired the eroding southern edge of the paved entryway into the preserve as part of their right-of-way responsibilities.

Surveys

- PBS&J, an environmental services company just across Loop 360, conducted our annual spring survey for the endangered Golden-Cheeked Warbler. To summarize, eight weekly visits revealed 4-5 possible territories involving various males, females, and one fledgling over at least 100 acres of suitable habitat in the lower portions of the preserve. This report is attached as Appendix K.
- Photopoints were established in various parts of the preserve for recording habitat changes over time and conducting biological surveys for species monitoring.
- A private contractor erected a chimney swift tower on the Easy Access Trail. This structure will serve our educational mission as well as for potential survey data in relation to species monitoring.
- An editor with Holt Rinehart & Winston volunteered his time to digitally edit our original vegetation survey.

Security

- Several perimeter walks were conducted to determine the degree of trespass, place more boundary signs where necessary, and identify surveyor pins in preparation for a south boundary fence construction in early 2006. Travis County will hire a private fence contractor with BCP funds. The fence will consist of four-foot high hogwire topped with two strands of barbed wire and will serve principally to discourage human trespass.
- The resident caretaker provided overnight security by opening the preserve front gate at dawn and locking it at dusk (or as quickly as visitors leave.) He also performs evening spot checks to discourage overnight illegal entry to the preserve and assists with annual perimeter walks.
- Visitors were notified about fire danger whenever the risk level was high, especially in the latter part of the year. Signs in the parking area and along the trail entrances advised about these conditions. Additionally, visitors have been cautioned by staff, trailguides, and interpretive displays regarding (a) safety precautions in "wild" lands (especially when hiking in extreme heat) and (b) potential encounters with wildlife.

Copies of research or investigative reports prepared during FY05

Becker, H. M. and D. L. Koehler. City of Austin 2005 Golden-cheeked Warbler *Dendroica chrysoparia* and Black-capped Vireo *Vireo atricapilla* Monitoring Program.

City of Austin Water Utility Wildland Conservation Division, Balcones Canyonlands Preserve Program. 50. p. See Appendix F.

City of Austin. 2005. Building Permits Issued in the Balcones Canyonlands Conservation Plan Permit Area in Fiscal Year 2005. 85p. See Appendix A.

Lower Colorado River Authority. 2005. 2005 Survey Report McGreggor Preserve, Travis County. 8p. See Appendix G.

Lower Colorado River Authority. 2005. 2005 Survey Report Westcave Preserve, Travis County. 8p. See Appendix H.

O'Donnell, L., M. Turner, E. Geismar and M. Sanders. 2005. Summary of Jollyville Plateau Salamander Data (1997-2005) and Status. 58p. See Appendix I.

Paquin, P. 2005. Working on the genus from hell. Pp11-18 *In* The Canadian Arachnologist. May 2005. See Appendix J.

Paquin, P. and Hedin, M. 2005. Genetic and morphological analysis of species limits in *Cicurina* spiders (Araneae, Dictinidae) from southern Travis and northern Hays Counties (TX), with emphasis on *Cicurina cueva* Gertsch and relatives. Prepared for the U. S. Department of the Interior, Fish and Wildlife Service, Contract No. 201814G959. 21pp. See Appendix K.

PBS&J. 2005. Wild Basin Wilderness Preserve Golden-cheeked Warbler Survey, Spring 2005, Travis County, Texas. 19pp. See Appendix L.

Travis County Natural Resources. 2005. Monitoring of the Black-capped Vireo (*Vireo atricapilla*) 2005 Field Season. 21 pp. See Appendix M.

Travis County Natural Resources. 2005. Monitoring of the Golden-cheeked Warbler 2005 Field Season. 36 pp. See Appendix N.

Travis County Natural Resources. 2005. 2005 Summary of Wildlife Management Activities on Travis County Managed Tracts of the Balcones Canyonlands Preserve. 21pp. See Appendix O.

Travis County Natural Resources and City of Austin BCP-AWU. 2005. Balcones Canyonlands Preserve Karst Management 2005 Annual Report. 91pp. See Appendix P.

Literature Cited

Anders, A.D. 2001. Population trends of Golden-cheeked Warblers on Fort Hood: 1992-2001. In Endangered species monitoring and management at Fort Hood, Texas: 2001 annual report. Fort Hood Project, The Nature Conservancy, Fort Hood, Texas.

Anders, A.D. 2000a. Demography of Golden-cheeked Warblers on Fort Hood, Texas in 2000: productivity, age structure, territory density, and adult return rates. In Endangered species monitoring and management at Fort Hood, Texas: 2000 annual report. Fort Hood Project, The Nature Conservancy, Fort Hood, Texas.

Anders, A.D. 2000b. Population trends of Golden-cheeked Warblers on Fort Hood: 1999-2000 and an overview from 1992-2000. In Endangered species monitoring and management at Fort Hood, Texas: 2000 annual report. Fort Hood Project, The Nature Conservancy, Fort Hood, Texas.

City of Austin and Travis County. 1995. Interlocal Cooperation Agreement between Travis County and the City of Austin Implementing the Balcones Canyonlands Conservation Plan-Shared Vision.

City of Austin and Travis County. 1999. Balcones Canyonlands Preserve Land Management Plan, Vol. I-III.

Travis County Transportation and Natural Resources Department. 1999. Balcones Canyonlands Preserve management handbook. VII. Golden-cheeked Warbler management. Travis County Transportation and Natural Resources Department, Austin, Texas.

U. S. Department of the Interior, Fish and Wildlife Service. 1996. Federal Fish and Wildlife Permit No. PRT-788841.

U. S. Department of the Interior, Fish and Wildlife Service. 1996. Federal Fish and Wildlife Permit No. PRT-812695.

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.

Zar, J. H. 1996. Biostatistical analysis, third edition. Prentice Hall, Upper Saddle River, New Jersey.