

Balcones Canyonlands Conservation Plan

2011 Annual Report

(October 1, 2010 – September 30, 2011)

USFWS Regional Section 10(a) 1B Permit No. PRT-788841

Travis County – City of Austin



Submitted by

The Balcones Canyonlands Conservation Plan

Coordinating Committee

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Appendix N – City of Lakeway Schramm Ranch Fish and Wildlife Service Permit 2011 Annual Report

Appendix O -- Travis Audubon Society Baker Sanctuary 2010-2011 Annual Report

Appendix P – Research Reports

1. **Banner, Jay.** *Report of Research Results on Balcones Canyonlands Preserve Scientific Research Permit No. Banner-2011.* University of Texas at Austin. Department of Geologic Sciences. 2011.
2. **Bendik, Nathan F.** *Jollyville Plateau Salamander Interim Report, 2011, for Balcones Canyonlands Preserve.* City of Austin. Watershed Protection. 2011.
3. **Bendik, Nathan F.** *Jollyville Plateau Salamander Status Report, SR-11-10.* City of Austin. Watershed Protection. 2011.
4. **Glick, Roger.** *Stormwater Monitoring in Upper Bull Creek.* City of Austin. 2011.
5. **Hauwert, Nico.** *2011 Hydrogeologic Studies.* City of Austin. Watershed Protection. 2011.
6. **Hauwert, Nico.** *Assessment Report: Jester Estates Cave, October 2010-October 2011.* City of Austin. Watershed Protection. 2011.
7. **INTERA and Glenrose Engineering.** *Groundwater Elevation Monitoring Activities within the Balcones Canyonlands Preserve Along the Planned Jollyville Transmission Main Tunnel Alignment.* 2011.
8. **Johns, David A.** *2011 Summary for Tracing for Pit Springs and Four Points in and near the Balcones Canyonlands Sam Hamilton and Bull Creek Preserves.* City of Austin Watershed Protection. 2011.
9. **McArthur, Karl.** *Surveying and Field Reconnaissance for the Bull and West Bull Creek Floodplain Modeling and Mapping Study.* City of Austin. Watershed Protection. 2011.
10. **McCutchen, Lynn.** *DNA Analysis and Behavioral Studies of the Palpigrade *Prokoenenia wheeleri*.* Kilgore College. Biology Department. 2010.
11. **Perkins, Thais.** *DRAFT Annual Report to the City of Austin Balcones Canyonlands Preserve November 2011.* City of Austin. Watershed Protection. 2011.
12. **Robinson, D. H. and M. Morrison.** *Effects of Habitat Patch Size on Occupancy and Reproductive Success of a Forest-Dependent Songbird in an Urban Landscape.* Texas A&M University. Department of Wildlife & Fisheries Sci., 2011.
13. **Sperry, Jinelle H.** *Effects of Deer Overabundance on Avian Abundance, Diversity, and Reproductive Success in Central Texas.* Engineer Research and Development Center. 2011.
14. **Zara Environmental LLC.** *Population Status of Karst Invertebrates in the Balcones Canyonlands Preserve.* 2011.

Background

On May 2, 1996, the City of Austin and Travis County were jointly issued a U.S. Fish and Wildlife Service (USFWS) regional 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 (USFWS, 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) (USFWS, 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 (Table 1).

Permit Requirements

The City of Austin and Travis County (the Permit Holders) are required to assemble and manage a minimum of 30,428 acres of suitable habitat for the golden-cheeked warbler and the black-capped vireo. Additionally, Permit Holders are required to protect and manage populations of canyon mock orange and *Texabama croton*. The Permit Holders are also required to acquire, manage, and/or ensure protection for 35 karst features which support populations of six species of endangered karst invertebrates. An additional 27 karst features are known to harbor 25 karst-specific 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 (USFWS, 1996b).

Agencies or organizations which enter into formal agreements with the Permit Holders in order 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. Endangered Species and Species of Concern Covered by the Balcones Canyonlands Conservation Plan.

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

*Scientific reclassification in 2011 from *Dendroica chrysoparia* to *Setophaga chrysoparia*

The Nature Conservancy of Texas (TNCTX) and the Travis Audubon Society (TAS) also manage lands for public and environmental benefit within the BCP. These organizations are not considered Managing Partners because no formal agreements with the Permit Holders

have been finalized. The Permit Holders have initiated discussions with other municipalities and stakeholders within the permit area about joining the effort to achieve the goals of the BCCP through Managing Partner Agreements. The Permit Holders hope to forge new agreements securing protection for additional lands within the BCP.

A number of private landowners also manage habitat within the 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 their 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 and 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 entities participating through the BCCP have met their obligations under the Act and may proceed with development under the terms of their respective Participation Agreements. Those agencies and landowners choosing not to participate may comply with the Endangered Species Act by obtaining an individual 10(a) permit from the USFWS.

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

- 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 BCP operations and maintenance
- an updated map of BCP lands
- a summary of public use and habitat management activities within the BCP
- 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 Fiscal Year 2011 (FY11) details a compilation of Development Permits issued within the City's jurisdiction of the Permit area

and can be found in Appendix A. A summary of development permits issued by the Travis County Permitting office within the Permit area in FY11 is included within 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). BCP acreage that was originally mitigation under the BCCP Alternative Determination Process, or another Section 10(a) or Section 7 permit, is not included in this mitigation bank acreage total. 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. Infrastructure Projects Mitigated Through the Use of Mitigation Credits During FY11 by Participating Agency.

City of Austin	
Starting City of Austin Balance	11,590.35 acres
New preserve additions (credits) – Gass	10.09
AWU – Jollyville Bore Holes	.1
AWU – Jollyville Bore Holes	.1
AE – Jett Substation	.1
AE – Hidden Valley	.1
AE – Hidden Valley	.1
AWU – Lift Station 109	.1
AE – Flint Rock	.1
AE – River Place Substation	.1
AE – Angus Valley Substation	.1
AE – 1905 Wood Acre	.01
AWU – WTP4 Tunnel Access Shafts Four Points & PARD	8.0
AWU – Martin Hill Transmission Main	1
AWU – Anderson Mill Pump Station	.2
AE – Red Bud Rd	.2
<i>Remaining Mitigation Credits</i>	<i>11,590.04 acres</i>
Travis County*	
Starting Travis County Balance	3,515.1 acres
New preserve additions (credits) – see table 5	344.142
<i>Remaining Mitigation Credits</i>	<i>3,859.242 acres</i>
Lower Colorado River Authority (LCRA)	
Starting LCRA Balance	2,487.2 acres
<i>Remaining Mitigation Credits</i>	<i>2,487.2 acres</i>

*Steiner Ranch Preserve was added to the BCP in 2001 from a USFWS alternative determination, but was not formally counted toward BCP until FY 2011. Since this acreage was already counted as the mitigation for Steiner Ranch development, it will not be added to the mitigation bank.

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 agreement which is entitled “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. During

FY11, eight Participation Certificates were issued as follows: three for commercial use, three for subdivisions, and two as single family (Table 3).

Table 3. FY11 Participation Certificate Summary.

Application #	Date	Name	Category	Amount Paid
#0648	01/28/11	R. Champion	Single Family	\$2,000.00
#0651	01/28/11	Time Warner Cable	Commercial	\$1,750.00
#0653	02/22/11	Overlook Estates Joint Venture	Subdivision	\$25,850.00
#0654	02/25/11	J. Shipley and B. George	Commercial	\$223,850.00
#0659	06/23/11	P. Smith	Single Family	\$2,000.00
#0660	08/10/11	Jollyville Partners	Subdivision	\$2,800.00
#0667	08/22/11	JV Road, Ltd.	Commercial	\$2,000.00
#0669	08/10/11	WS-COS Development, LLC. (Sweetwater, Village G1 & G2)	Subdivision	\$86,350.00

Funds Collected through Participation Certificate and USFWS Directed Mitigation Fees

A total of \$346,600 was collected through the sale of Participation Certificates in FY11 (Table 3). In FY11, there was a change in protocol for processing BCCP Participation Certificate funds. Prior to these changes, participants wrote one check for mitigation to the Balcones Canyonlands Conservation Plan. Payment was collected by the Environmental Specialist with Travis County Natural Resources and deposited into a City of Austin bank account. On a quarterly basis, these funds were disbursed equally between the two Permit holders. At the request of auditors and the Permit holders, the protocol to collect and disburse Participation Certificate funds was changed in February of 2011 starting with BCCP #0654.

The new protocol requires participants to issue two checks in equal amounts (50/50) to “BCCP-City of Austin” and “BCCP-Travis County.” The checks are delivered to each agency for separate processing. These changes allowed each Permit Holder to have faster access to participation funds and allowed each agency to process funds exclusively through their own financial departments.

Travis County’s Tax Benefit Financing Plan is 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). It is the method Travis County agreed to use for funding land

acquisition and management. In FY11, Travis County’s Tax Benefit Financing Plan generated \$10,263,296 for Travis County’s land acquisition and management projects.

Funds Expended for Land Acquisition

The Permit Holders have competed for USFWS Section 6 HCP Land Acquisition Assistance grants since the inception of the permit. To date, twelve grant awards have been received for \$81,222,130 (Table 4). In FY11, Travis County used \$8,099,999 in grant funds to purchase 131.51 acres of new preserve land (Lake Travis Bluffs and Shareholders (Collins) tracts).

Table 4. USFWS HCP Land Acquisition Grant Awards Received by the Permit Holders, 1997-2011.

Year	Federal Grant Funds	Minimum Local Match *	Total Grant	Local Recipient
1997	\$1,000,000	\$333,333	\$1,333,333	City of Austin
1998	\$2,000,000	\$666,667	\$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	\$14,362,500	\$4,787,500	\$19,150,000	City of Austin, Travis County
2002	\$10,000,000	\$3,333,333	\$13,333,333	Travis County
2003	\$4,993,794	\$1,664,598	\$6,658,392	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
2007	\$5,742,500	\$1,914,167	\$7,656,667	Travis County
2008	\$5,250,000	\$1,750,000	\$7,000,000	Travis County
2010	\$1,330,243	\$886,829	\$2,217,072	Travis County
Total	\$60,584,037	\$20,563,927	\$81,222,130	

* Minimum match does not include overmatches

Travis County also actively pursues fee simple purchases and alternative protection strategies such as conservation easements, donations, 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. Travis County expended a total of \$5,383,473 on non-grant land acquisition activities and secured 212.632 acres through non-grant funded protection strategies in FY11.

During FY11 Travis County officially closed on the Ribelin 10(a) permit mitigation tract, which was previously managed as part of the BCP by Forestar. Upon Travis County Commissioner’s Court approval, this County tract was renamed Sam Hamilton Memorial

Reserve East in honor of Sam Hamilton. The property adjoins the City of Austin's Sam Hamilton Memorial Reserve West tract dedicated in FY10. Acreage from the Steiner Ranch Preserve (819 ac.) was added to the BCP acreage in 2011 after a review of the BCCP Coordinating Committee vote in 2001, the agreement with USFWS, and the Conservation Easement Agreement held by Travis County.

The City of Austin expended a total of \$416,559 on BCP land acquisition activities and secured the 10.09 acre Gass tract during FY11. This past year, Kent Butler, a professor in the School of Architecture at the University of Texas and an avid supporter of the BCP passed away unexpectedly. To honor his memory, the City of Austin renamed the Ivanhoe tract as the Kent Butler Ecological Reserve.

All Travis County and City of Austin FY11 BCP land acquisitions are shown by tract in Table 5.

Table 5. Travis County and City of Austin FY11 BCP Land Acquisitions.

Tract	Agency	Date Acquired	Acreage	Total Expenditures*
69 Grandview	Travis County	01-07-11	8.779	\$318,060
Shareholders IP (Collins)	Travis County	07-28-11	112.980	\$2,644,432
Lake Travis Bluffs	Travis County	12-29-10	18.530	\$5,365,568
<i>Lime Creek Unit: Angrick</i>	Travis County	09-16-11	1.403	\$43,570
<i>Lime Creek Unit: Boswell</i>	Travis County	09-12-11	3.524	\$97,670
<i>Lime Creek Unit: Burns</i>	Travis County	08-09-11	3.645	\$101,834
<i>Lime Creek Unit: Cartwright</i>	Travis County	08-10-11	18.009	\$464,034
<i>Lime Creek Unit: Davis</i>	Travis County	08-01-11	5.420	\$136,664
<i>Lime Creek Unit: Fyffe</i>	Travis County	09-12-11	9.870	\$259,310
<i>Lime Creek Unit: McClanahan</i>	Travis County	09-09-11	4.23	\$114,119
<i>Lime Creek Unit: Shackett 1 A</i>	Travis County	06-08-11	9.113	\$229,959
<i>Lime Creek Unit: Shackett 1 B</i>	Travis County	06-08-11	0.921	\$501
<i>Lime Creek Unit: Storey</i>	Travis County	08-12-11	4.282	\$116,437
<i>Lime Creek Unit: Streich</i>	Travis County	09-22-11	1.645	\$51,961
<i>Lime Creek Unit: Lime Creek Ranch</i>	Travis County	10-29-10	110.481	\$2,409,319
Marquardt	Travis County	05-05-11	14.83**	\$410,410
Wendland	Travis County	07-28-11	16.48	\$629,625
Gass Tract	City of Austin	08-12-11	10.09	\$416,559
		Total	354.232	\$13,810,032

* Total Expenditures include land and associated acquisition costs

** The Marquardt property was previously counted toward the BCP as part of the Franzetti Conservation Easement (CE). Only 1.15 ac. of Marquardt is counted as additional acreage to the BCP for FY11 and so acreage listed under Appendices C and D have been adjusted to reflect this. However, since ownership of Marquardt was transferred to Travis County, 14.83 ac. will be added to Table 2 for Infrastructure Mitigation.

At the end of FY11, Travis County managed 7,339 acres of land within the BCP, and the City of Austin owned and managed 13,608 acres of land within the BCP. For a detailed account of all BCP tracts assembled see Appendices C, D, and E.

On August 30, 2011 the BCP Completion Task Group presented the Completion Report to Travis County Commissioner's Court. The purpose of this report was to determine the status of the BCP as it relates to land acquisition, configuration, and USFWS 10 a permit requirements. The report was requested originally by Travis County Commissioner's Court in 2007. From 2007 to 2011, the Task Group met regularly to discuss completion of the BCP and to create and compile data pertinent to the report. The Task Group presented the findings of the report to the BCCP Coordinating Committee (10/27/11), Scientific Advisory Committee (10/11/11), and the Citizens Advisory Committee (10/20/11). Refer to Appendix F for the final report.

According the Completion Report, the Task Group determined that as of July 2011, the Preserve has acquired approximately 28,213 of the 28,428 minimum acres needed for golden-cheeked warbler habitat acreage and approximately 1,762 acres of the 2,000 minimum acres needed for the black-capped vireo. Staff continues to assess these acreage totals to determine if some of the GCWA acreage, which may not be considered suitable habitat, can be instead managed for BCVI. Forty-five of the 62 caves listed on the permit have some form of protection. As of FY11, ten endangered species karst features, which were not listed on the original permit, are being protected on BCP lands (six features on TC BCP; four features on COA BCP).

At the time of the report, minimum acreage for all macrosites had been acquired except for the Bull Creek macrosite. The higher target acreage is still recommended in several macrosites. Preserve Configuration continues to be an issue for Preserve permit completion. As a condition of the 10 (a) 1B permit, preserve land should be assembled to meet an edge-to-area ratio of 20%. This condition has generally been met in all macrosites except for North Lake Austin, although the analysis of this is still underway. This discrepancy can be explained by the following variables: initial configuration design flaws, issuance of 10(a) permits within the BCP Acquisition Boundary, and the lack of willing sellers. The permit holders will continue to work toward completion of the Permit Requirements during FY12 with special effort toward karst protection and acquisition of additional tracts to meet the acreage and configuration requirements.

Funds Expended for Operations and Maintenance

In FY11, the Permit Holders, LCRA, TNCTX, and the Travis Audubon Society (TAS) spent \$2,204,987 on operation and maintenance of BCP lands (Table 6).

Table 6. Annual FY10 and FY11 BCP Budgets (excluding land acquisition costs) for Permit Holders, the Managing Partner, and Cooperating Entities with Summary of Total Budgets since Plan Inception.

BCP Partner	FY2010	FY2011	Total Budget: 1996 to Present
City of Austin	\$1,295,205	\$1,009,102	\$11,216,837
Travis County	\$953,659	\$1,079,598	\$7,280,490
LCRA	\$85,000	\$60,000	\$1,483,579
TNCTX	\$10,000	\$10,000	\$942,000
TAS	\$22,873	\$46,287	\$277,986
TOTALS	\$2,366,737	\$2,204,987	\$21,200,892

The City of Austin spent a total of \$1,009,102 for FY11 to fund BCP 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 Austin Water Utility Wildland Conservation Division (AWU) on program administration and support; (2) operation and maintenance expenditures by Austin Parks and Recreation Department (PARC) operations on BCP-designated parkland; or (3) capital improvement project related to offices, and other facilities/infrastructure. The aforementioned expenditures cannot be readily determined from their program budgets.

The Travis County Natural Resources budget for the BCP Program in FY11 was \$1,079,598. This total includes Travis County General Fund expenditures and funds negotiated and received from private 10(a) holders for land managed by Travis County to support ongoing operations and maintenance of County-managed Conservation Easements. This sum does not include administrative, legal, law enforcement support or non-habitat-related operations and maintenance provided by other Travis County Departments. This sum also fails to estimate expenditures by St. Edwards University, which holds a contract to conduct educational programming and management of the County-owned Wild Basin Wilderness Preserve.

Updated Map of Lands Dedicated to the Balcones Canyonlands Preserve

With the addition of over 340 acres to the BCP in FY11, 30,171 of the 30,428 acres of black-capped vireo and golden-cheeked warbler habitat required by the Permit (99%) have been assembled by the Permit Holders with the assistance of cooperating landowners and entities.

Additionally, 45 of the 62 caves which are identified to be protected in the permit have been afforded some level of protection. Ten additional endangered species karst features which are not listed on the permit are also protected on BCP land. A map illustrating the current status of the Balcones Canyonlands Preserve is enclosed as Appendix E. Summaries of BCP lands sorted by macrosite and managing entity are attached as Appendices C and D, respectively.

FY 2011 Research or Investigative Reports

Research reports for activities that occurred on the BCP are included as Appendices M and P1- P14. See the table of contents for a list of appendices which include the author and title of each research report.

Public Use, Habitat and Wildlife Monitoring, and Management Activities Occurring within the Balcones Canyonlands Preserve

CITY OF AUSTIN

The following section lists the wildlife and habitat monitoring, management, and public use activities on City of Austin land counted as part of the BCP. The City of Austin's BCP tracts are managed by AWU and PARD with different management responsibilities assigned to each entity (Table 7). PARD operations do not manage for Endangered Species; they perform regular maintenance such as mowing, trash pickup, and some trail management activities. AWU BCP staff provides BCP management activities.

Table 7. Management Status of City of Austin BCP Properties

Tract	Primary Management Responsibility	Acreage
Upper Bull Creek Unit (Franklin, Gass, Hanks, Lanier, COA Canyon Creek plus MUD tracts, Gardens at Bull Creek, Bowman, and Sam Hamilton Memorial Reserve (former WTP 4 "entire tract"))	AWU/BCP	1156.50
Middle Bull Creek Unit (Kent Butler Ecological Reserve, Beard Trust)	AWU/BCP	996.71
Lower Bull Creek Unit (Jester, Forest Ridge, 3M, Hilltop, Gibson/Nott, Hiller, Kruger)	AWU/BCP	1090.98
Lime Creek (inc. 100 acres of Austin-Simon, Ltd.)	AWU/BCP	586.70
Parke West, Coldwater/Cowfork, Long Canyon, Vaught Ranch	AWU/BCP	1393.86
Cortaña	AWU/BCP	1751.95
Double J&T	AWU/BCP	1730.00
Reicher Ranch	AWU/BCP	819.74
Bohls Ranch	AWU/BCP	450.14
Bohls II	AWU/BCP	18.81
Sansom	AWU/BCP	13.00
Senna Hills	AWU/BCP	35.00
Schramm Ranch	AWU/BCP	100.63
Vireo Research Area	AWU/BCP	214.00
Ullrich Water Treatment Plant	AWU/BCP	18.00
Barton Creek Ventures	AWU/BCP	13.62
	AWU/BCP Subtotal	10,389.64
Bull Creek District Park, Bull Creek Greenbelt	PARD/BCP	129.48
St. Edward's Park	PARD/BCP	50.00
Barrow Preserve	PARD/BCP	8.00
Emma Long Metro Park	PARD/BCP	950.00
Commons Ford Park	PARD/BCP	115.00
Barton Creek Wilderness Area (Barton Creek Venture)	PARD/BCP	1075.24
Barton Creek Greenbelt	PARD/BCP	814.64
Friesenhahn	PARD/BCP	62
Mt. Bonnell	PARD/BCP	6
	PARD/BCP Dual-Managed Subtotal	3,210.36
	TOTAL ACREAGE	13,600.00

**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.

Tract specific monitoring and management activities are shown in Tables 8 and 9. More detailed accounts of many of the activities are described in Appendices G and H. Other notable management activities are further described in the next section.

Table 8. City of Austin Monitoring and Management Activities on BCP Tracts within the Bull Creek Macrosite.

Monitoring and Management Activities on the Balcones Canyonlands Preserve (City of Austin tracts)		Bull Creek macrosite																						
		upper Bull Creek unit								middle unit				lower Bull Creek unit										
		Bowman	Canyon Creek	Canyon Creek MUD tracts 1 to 3	Franklin	Gardens at Bull Creek	Gass	Hanks	Lanier	Sam Hamilton Memorial Reserve	Beard Trust	Kent Butler Ecological Resv	Jester Estates Cave Preserve	Barrow Preserve	Bull Ck. Greenbelt	Forest Ridge	Gibson/Nott	Hiller/Hilltop	Jester	Krueger	St. Edwards Park	Stillhouse Hollow	3M	
Monitoring Activities	mist-net, band, and spot-map golden-cheeked warblers								X		X				X					X		X		
	search for banded golden-cheeked warblers	X	X	X	X			X	X	X		X				X		X	X	X	X		X	
	spot-map black-capped vireos														X									
	karst faunal surveys			X					X		X	X										X		
	cave cricket exit counts			X							X	X			X							X		
	jollyville plateau salamander surveys & mark/recapture			X	X			X	X	X		X		X									X	
	bracted twistflower monitoring																							
	canyon mock-orange monitoring										X													
	vegetation monitoring										X													
	fuel moisture sampling of junipers																							
	white-tailed deer surveys		X	X	X	X		X	X	X														
	monitoring of known oak wilt centers		X		X			X																
Management Activities	deer control		X		X			X	X		X													
	feral hog control		X		X			X	X	X	X								X	X			X	
	cowbird control										X													
	red imported fire ant control			X								X										X		
	restoration (planting native plants)				X	X					X													
	non-native plant control	X		X	X	X		X	X	X	X	X	X		X	X			X	X	X	X	X	X
	trash removal			X	X	X		X		X	X	X			X							X		
	patrol for evidence of trespass, vandalism, or dumping	X	X	X	X	X		X	X	X	X	X	X	X	X	X			X	X	X	X	X	X
	maintenance of roads, fences, signs	X	X	X	X	X		X		X	X	X				X			X		X	X	X	X
inspection of utility corridor maintenance				X	X		X	X			X		X					X					X	

Table 9. City of Austin Monitoring and Management Activities on BCP Tracts within the Barton Creek, Cypress Creek, North Lake Austin, South Lake Austin and West Austin Macrosites.

Monitoring and Management Activities on the Canyonlands Preserve (City of Austin tracts)		Barton Creek macrosite					Cypress Creek		North Lake Austin macrosite					South Lake Austin macrosite					West Austin macrosite			
		Barton Creek Wilderness	Barton Creek Greenbelt	Bohls II	Friesenhahn	Senna Hills	Austin-Simon	Lime Creek	Coldwater	Cortaña	Cowfork/Vaught	Emma Long	Long Canyon	Parke West	Bohls	Commons Ford	JJ&T/Sansom	Reicher Ranch	Schramm Ranch	Mount Bonnell	Ullrich	Vireo Preserve
Monitoring Activities	mist-net, band, and spot-map golden-cheeked warblers	X	X							X			X			X						X
	search for banded golden-cheeked warblers	X	X							X			X			X						X
	black-capped vireo spot-mapping									X												X
	karst faunal surveys	X	X				X	X		X			X								X	
	cave cricket exit counts	X	X					X		X			X								X	
	jollyville plateau salamander surveys																					
	bracted twistflower monitoring	X	X																X	X	X	
	vegetation monitoring									X				X								X
	fuel moisture sampling of junipers									X								X				
	white-tailed deer surveys						X	X		X		X		X		X	X					
	monitoring of known oak wilt centers	X								X		X				X	X					X
Management Activities	deer control						X	X	X	X				X		X	X			X		
	feral hog control																					
	cowbird control									X						X						
	red imported fire ant control	X						X					X									
	restoration (planting native plants)																X					
	non-native plant control	X	X		X	X			X	X	X	X	X	X	X	X	X	X		X		
	removal of red oaks infected with oak wilt	X										X										
	trash removal	X	X		X	X				X	X	X		X	X	X	X					X
	patrol for evidence of trespass, vandalism, or dumping	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	maintenance of roads, fences, signs	X		X			X	X	X	X	X		X			X	X					X
	inspection of utility corridor maintenance															X						

Other Notable Tract Management Activities:

In early June, BCP staff, with assistance from an Austin Police Department helicopter and pilot, completed the second biennial aerial reconnaissance of all BCP tracts for signs of oak wilt. In addition, BCP staff conducted or coordinated the following:

Barton Creek Macrosite

Barton Creek Wilderness Area and Greenbelt, and the Friesenhahn tract

- Austin Police Department officers evicted squatters from camps found by BCP staff.
- Planned restoration by neighbors of vegetation damage caused by contractor. Mitigation was suspended due to the long drought.
- Coordinated, with Austin Parks and Recreation Department staff, a full-day invasive-plant removal event with volunteers.

Bull Creek Macrosite

Upper Bull Creek Unit

Bowman

- Jollyville transmission line water well monitoring and testing: Coordinated with COA WP staff as well as various private consultants hired by the City of Austin.

Franklin

- Continued monitoring of the Cistern Spring/Jollyville Plateau salamander habitat restoration project.
- Seed collection from locally rare, spring-associated plants; seed subsequently sowed at the newly-protected Cistern Spring fenced area.
- Monitoring of water level at springs and salamander sites; due to drought conditions, most springs and spring runs were dry by June.
- Installed a wood duck box.
- Jollyville transmission line water well monitoring and testing: Coordinated with COA WP staff as well as various private consultants hired by the City of Austin.
- City of Austin Watershed Protection staff added monitoring equipment to wells and springs.
- Worked with WPDRD subcontractor on allowing access to certain sites for flood control analysis.

Hanks Tract and Gardens at Bull Creek

- Continued to monitor the Jollyville Plateau salamander habitat restoration (removal of a low water crossing).
- Worked with WPDRD subcontractor on allowing access to certain sites for flood control analysis.

- Met with AWU lift station operator, talked about concerns of vandalism, need to gate the lift station, and bolt down manhole covers.
- Met with AWU contractor to determine the best route for access to existing sewer lines. The contractor was tasked with assessing current conditions of the sewer line and to make needed repairs. After access was granted, the contractor postponed action.

Lanier

- Jollyville transmission line water well monitoring and testing: Coordinated with COA WP staff as well as various private consultants hired by the City of Austin.
- City of Austin Watershed Protection staff added monitoring equipment to wells and springs.

Sam Hamilton Memorial Reserve West

- Moss Gully Spring restoration attempt: BCP staff and WP staff supervised a drill rig company's efforts to restore spring flow to Moss Gully spring. The contractor re-drilled a well that was inadvertently filled with concrete from a previous restoration effort. The idea was to remove the concrete which would then allow water to flow through a dissected conduit; however, efforts failed, likely due to the fact that the concrete was not completely removed from the conduit.
- Led the annual night hike, focusing on the sounds at night.
- Worked with WP subcontractor on allowing access to certain sites for flood control analysis.
- Led a nature hike for a Cub Scout troop; discussed why species diversity is important.
- Jollyville transmission line water well monitoring and testing: Coordinated with COA WP staff as well as various private consultants hired by the City of Austin.

Middle Bull Creek Unit

Jester Estates Cave Preserve

- Investigated herbicide poisoning from multiple homeowners including probable fire ant baits. Talked with neighbors regarding herbicide poisoning and illegal dumping of pool water into the preserve.
- Updated neighborhood door hanger and handed it out to neighbors (addressing the herbicide/ pesticide/ dumping issues).
- Worked with WP staff on a new hydrological study of the cave.

Kent Butler Ecological Reserve

- Dedicated the former Ivanhoe tract in honor of Kent Butler, who was instrumental in establishing the Balcones Canyonlands Preserve. A formal dedication ceremony was held at City Hall on September 22.

- Met with two neighbors of Ivanhoe off of Amelia Cove. Both want to clear vegetation that is encroaching into their property (one is going to replace his decaying fence). BCP staff assessed both sites, flagged the trees that could be cut, and will monitor both sites closely to make certain that they comply.
- Reported new brush dumping, herbicide poisoning, and illegal food baiting. The herbicide has killed or damaged several trees, and the bait is attracting feral hogs and possibly coyotes.
- Follow-up on encroachment from Colina Vista. Worked with Travis County staff regarding the tie into the new perimeter fence and the new adjacent Travis County preserve, thus cutting off illegal access to the property from Colina Vista.

Lower Bull Creek Unit

Forest Ridge

- Prepared and presented hikes for those requesting a permit to hike through the Bull Creek Preserve during Golden-cheeked Warbler breeding season.
- Investigated 2 newly found karst features; reported findings to the City's Watershed Protection Department staff.
- Trail work volunteer day: Volunteers repaired the trail and erosion problems.

Cypress Creek Macrosite

Lime Creek/Austin Simon

- Prescribed burn preparation completed for a six-acre area that included finalizing the fireline and building of water collection and storage units.
- Third year of vegetation monitoring was completed in former Ashe juniper-oak woodland that was burned during a wildfire in April of 2009.
- Investigated new gas station proposed to be built adjacent to the Lime Creek tract near karst features. Looked into options to minimize potential damage to the adjacent karst.

North Lake Austin Macrosite

Coldwater/Cowfork/Long Canyon/Vaught Ranch

- Banding and surveying of golden-cheeked warblers was conducted on the Coldwater tract and researchers from Southwestern University (Georgetown, Texas) conducted research on avian density and nest success to look at their relation to herbivore browse on Long Canyon and Coldwater.

Cortaña

- Continued negotiations with a neighbor who constructed an unauthorized fence across a portion of this tract where the neighbor has an access easement. In January, City surveyors again marked the boundaries of the easement.
- A section of hiking trail intended to be constructed on the adjacent River Place MUD property was determined by surveyors to encroach on City BCP property.
- On September 16, BCP staff found that trees had been cleared from approximately a quarter-acre of City BCP property behind a home at 5306 Eagle Trace Trail.

Emma Long Park and Preserve

- Orion, a private consulting firm in Austin, conducted white-tailed deer surveys along City Park Road and provided the City of Austin BCP with the data.
- Golden-cheeked warblers were banded and surveyed in the Bike Park.
- Completion of a 640-meter-long trench to contain the oak wilt center near the Turkey Creek trailhead. The trench was filled in and covered with mulch from slash that had been cleared from the trench path.
- In September 2011, transported mulch generated from mechanical treatments at the Vireo Preserve to the Emma Long Motocross Park to assist with trail restoration.
- Provided funding for a cooperative effort with PARD to develop an education kiosk and signs for the Emma Long Motocross Park. This work will be implemented in 2012.

South Lake Austin Macrosite

BCP staff participated in the Westcave Christmas Bird Count, on the portions of this macrosite that are within the count circle (Bohls Ranch, Reicher Ranch, and JJ&T).

Commons Ford Ranch Park

- Ongoing prairie restoration project. Vegetation surveys and Project Prairie Bird surveys conducted by volunteers.
- Big Day in the Park outreach event and fundraiser for the prairie restoration project.

Double J&T

- Completion of an 1150-meter-long trench around an oak wilt center. The trench was filled in and covered with mulch from slash that had been cleared from the trench path.

Reicher Ranch

- Restoration of golden-cheeked warbler habitat on the grounds of the office headquarters and surrounding areas.
- Lightning strike on May 10 brought response from volunteer fire department. Only one tree was destroyed.

West Austin Macrosite

Mount Bonnell

- A “view improvement” project, initiated by the West Point Society, cleared vegetation to open vistas from select points on the summit in early February. Though CoA BCP staff were consulted for advice to protect the Bracted Twistflower (*Streptanthus bracteatus*), miscommunication led to altering the cover and exposing to foot traffic some areas where twistflowers had been observed in the past. BCP staff continue planning mitigation actions with PARD staff and the West Point Society to protect the habitat from further damage.

Vireo Research Area

- A mechanical manipulation plan was implemented for the central knoll and the surrounding uplands, totaling about 50 acres, which was initiated during the fall of 2010 and completed in February 2011.
- Due to the 2011 drought and subsequent burn ban, City of Austin staff revised treatment plans for 18.5 acres of woody vegetation that had been cut with a tree shear in preparation for a prescribed burn. During the fall of 2011, the majority of the slash was mulched to assist with other habitat restoration efforts within the BCP. This included making mulch and mulch socks to be used as part of a research project to restore soils and promote hardwood regeneration on degraded areas of the Wild Basin/Vireo Preserve that are currently not habitat for either the warbler or the vireo. Collaborative efforts among the City of Austin, Travis County, St. Edwards University, Wild Basin, and volunteers are currently underway to design and implement the research project, which will be implemented in early 2012. The remainder of the mulch not used as part of this research project was transported to the Emma Long Motocross Park to assist with trail restoration efforts.
- Established 16 photo points just prior to the mechanical manipulation in October 2010 and repeated the photo points upon completion of the manipulation in February 2011.
- Initiated fence installation along the north, west, and east boundaries in fall 2010, completed in early 2011.
- Issued BCP research permit to Walter Stewart to plant Bracted Twistflower (*Streptanthus bracteatus*) rosettes (grown from seeds collected near Mt. Bonnell) in late fall/winter 2011. His proposal was reviewed by the *Streptanthus bracteatus* working group prior to permit issuance. The rosettes are scheduled for transplanting in December 2011.
- Led guided hikes highlighting the historical significance of this site as the largest Black-capped Vireo colony within the BCP and habitat restoration plans.

City of Austin Outreach Program

The City of Austin provides outreach to the community for the Balcones Canyonlands Preserve (BCP) through educational and volunteer activities which, in turn, support management of the lands. Volunteers provide labor that shortens task time and expertise that enhances staff projects. Educational presentations to a variety of audiences create better informed recreationists, neighbors, and citizen advocates that respect property boundaries, access rules, and strategies for property management. The outreach program also models responsible public access through its volunteer and educational efforts.

At the beginning of January 2011, Amanda Ross began as the Conservation Program Coordinator for the City of Austin Wildlands. The position had been vacant for seven months. The Volunteer Coordinator Position was vacant from May 2010 to September 2011. Louise Liller began as the Volunteer Coordinator in September 2011. She brings years of volunteer management and a commitment to working with volunteers that promises to reengage volunteers.

2011 Highlights for BCP's Education, Outreach and Volunteer program include:

- The BCP program benefitted from the efforts of volunteers investing an impressive 1364 hours in many different types of projects. This number translates into the equivalent of just under one additional staff person. This number was almost half of 2011 as a result of only having a volunteer coordinator for one month in FY 2011.
- On May 13, BCP partners hosted a 15th Anniversary Celebration of the BCCP. Speakers included previous BCCP Committee Members Bruce Todd and Valarie Bristol as well as current members Mayor Lee Leffingwell and Commissioner Karen Huber. The celebration at Reicher Ranch included a tree planting and activities for the 200 participants.
- On September 1, 2011, 183 participants attended the BCP Infrastructure Workshop. The workshop was moved to the JJ Pickle Center to accommodate the growing size of participants.
- Fewer guided hikes were offered in 2011. In an effort to increase the number of guided hikes next year, ten new volunteer hike guides were trained. This training accounted for 200 hours of volunteer time in 2011.
- Several volunteer workdays happened to support restoration efforts at the Vireo Preserve.
- Volunteers contributed over 400 hours of personal time to monitor Golden-cheeked warblers.

- The 2011 wildfire season was an active season creating challenges for improving education and outreach activities associated with wild fire education. This is an ongoing process for outreach staff. Outreach staff customized the Ready, Set, Go publication for the Austin area.
- Fuel moisture monitors continue to contribute vital fuel moisture data to help monitor the potential for wildland fires. In FY2011, these volunteers contributed just less than 200 hours.
- Almost 1,400 people receive the monthly email distribution publicizing the opportunities.

The table below includes a summary of all outreach and volunteer projects for the BCP.

Table 10. City of Austin BCP Outreach Activities for FY11

Type of Activity	Total Wildlands Events	Total Wildlands Participants	Total Events BCP	Total BCP Participants
Special Events	6	1,200	5	700
School presentations	1	50	1	50
HOA/NA	1	24		
Community Orgs	5	164	3	75
Teacher Institute	1	52	1	52
BCP Hikes	6	79	6	79
WQPL Hikes	6	87		
Specialty Trainings	2	23		
Guide Trainings	1	10	1	10
Bull Creek Permit Hikes	4	69	4	69
Volunteer Events	13	165	9	112
Totals	46	1,923	30	1,147



Caption: Bruce Todd and Valarie Bristol reminisce at the 15th Anniversary Celebration of the BCCP.



Caption: Tree planting ceremony at the 15th Anniversary Celebration of the BCCP.



Caption: BCP Staff leading the volunteer Golden-cheeked warbler monitoring training.

TRAVIS COUNTY

At the close of FY11, Travis County managed a total of 7,339 acres of open space lands dedicated to the BCP. Travis County staff conducted a variety of resource monitoring and management activities on County-managed BCP lands in FY11 (Tables 11 and 12). Many of these activities are described in more detail in Appendices H, I, J, K, and L. Other notable management activities are further described in the next section. Additionally, the annual report for Wild Basin Nature Preserve can be found in Appendix M. Wild Basin is owned by Travis County and managed by St. Edwards University.

Table 11. Monitoring and Management Activities on Tracts Owned by Travis County within the Bull Creek, North Lake Austin, South Lake Austin, West Austin, and Pedernales River Macrosites.

Monitoring and Management Activities on the Balcones Canyonlands Preserve (Travis County tracts)		Bull Creek Macrosite							North Austin Macrosite			Lake South Lake Austin		Pedernales River	West Austin				
		Canyon Vista	Colina Vista	Concordia	Karnik/Richards/Wendland	Origer	Ribelin	Sam Hamilton East	Woody Hollow	Franzetti	Gray Mountain	Greenshores	Hereford	Steiner Ranch	Chandler	Medway	Hamilton Pool	Wild Basin	
Monitoring Activities	spot-map golden-cheeked warblers (100-acre plots)	X					X										X	X	
	spot-map golden-cheeked warblers (non 100-acre plots)						X	X									X		
	spot-map black-capped vireos																		
	presence/absence survey for black-capped vireos						X						X						
	karst surface monitoring						X												
	karst faunal surveys																		
	cave cricket exit counts																		
	jollyville plateau salamander surveys						X												
	deer surveys																X	X	
Management Activities	deer control						X										X		
	feral hog control																X		
	cowbird control																X		
	red imported fire ant control																	X	
	non-native plant control			X	X	X	X	X				X							
	black-capped vireo habitat restoration					X													
	trash removal																X		
	patrol for evidence of trespass, vandalism, or dumping	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	maintenance of roads, fences, signs				X							X			X	X	X	X	

Table 12. Monitoring and Management Activities on Tracts Owned by Travis County within the Cypress Creek Macrosite.

Monitoring and Management Activities on the Balcones Canyonlands Preserve (Travis County tracts)		Cypress Creek Macrosite																				
		Bunten	Collins	Cuevas East	Cuevas West/TSNL	The Crossings	Grandview Hills North	Grandview Hills South	King/Atwood/Blake	Lake Perspectives	Lime Creek Unit	Lucas/Bluffs at Lake Travis	New Life	Nootsie	Romberg	Snowden	Spezia	Toops	Vireo Ridge/Stratton	Vista Point	Volente	
Monitoring Activities	spot-map golden-cheeked warblers (100-acre plots)	X							X											X		
	spot-map golden-cheeked warblers (non 100 -acre plots)					X	X		X			X									X	
	spot-map black-capped vireos			X							X						X	X	X			
	presence/absence survey for black-capped vireos			X															X	X		
	karst surface monitoring	X	X	X	X		X		X		X		X						X	X		
	karst faunal surveys	X		X	X		X				X		X						X	X		
	cave cricket exit counts			X	X						X									X		
	jollyville plateau salamander surveys	X					X						X									
	deer surveys				X		X							X					X	X		
Management Activities	deer control	X			X		X							X		X			X	X		
	feral hog control													X								
	cowbird control													X				X				
	red imported fire ant control			X	X						X									X		
	non-native plant control			X							X	X							X			
	black-capped vireo habitat restoration										X											
	trash removal															X						
	patrol for evidence of trespass, vandalism, or dumping	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	maintenance of roads, fences, signs		X		X		X							X					X		X	

Other Notable Tract Management Activities

Constructing and maintaining boundary fences is an important aspect of Preserve management. In FY11, Travis County installed 14,587 linear feet of boundary fence on the following tracts: Volente, Medway, Stratton, Grandview Hills North, Wild Basin, and Nootsie.

Several BCP road projects occurred in FY2011. Travis County Road and Bridge created a new entrance road to the Natural Resources Field Office at the Nootsie tract. This new entrance is about 0.2 miles south of the old entrance and is about 0.2 miles long. The original entrance road was located on a dangerous curve so the purpose of the new road was to make it safer for staff and visitors to access the field office. Travis County staff coordinated with LCRA, who repaired a washed out area of road along the Richards tract and installed a new entrance gate to the Ribelin tract. LCRA made these improvements to allow better access to their utility lines.

An earthen dam on the Gann tract that was partially breached during the heavy September 2010 rains was removed by staff in November 2010. Removal of this dam helped restore the natural creek flow.

A dam that was built illegally in 2008, just upstream of the Lake Perspectives tract by a neighboring landowner, was removed by the landowner in April 2011 as required by a court decision. This dam had been built without City or County building permits and it impeded natural creek flow into the BCP and other downstream landowners. Removal of the dam restored the natural flow.

Travis County staff assisted in the coordination of the of the pool clean-up at Hamilton Pool Preserve. This clean-up took place in the spring of 2011 by Espey Consultants. They used a vacuum pump and filtration process which removed 5-6 feet of silt from the bottom of the pool. The silt was the result of run-off from a nearby development during heavy April 2007 rains. While cleaning the pool, Espey Consultants took measures to reduce any impact to Golden-cheeked warblers, such as providing sound attenuation around the pump, moving the filtration staging area off of Hamilton Pool, and conducting bird surveys within 300 feet of the pump. Results from the survey indicated that warblers were not using the area around the pump and there was very little, if any, impact to warblers from this project.

A 49-acre development project called “Trails at 620” began construction during FY11. This development is adjacent to the Grandview Hills North tract and Travis County holds a

conservation easement on land owned by this developer. County staff worked closely with the developers on a number of issues to reduce impacts on the preserve including determining the best location of retention ponds and stormwater outflows, and amending the conservation easement to allow fencing within the buffer area to better protect the preserve. Construction within this development will continue during FY12, and staff will monitor it closely for any impacts to the BCP.

On September 6, 2011, staff on patrol observed raw sewage leaking from a sanitary sewer manhole near the Collins tract. The wastewater flowed through a culvert, down a ditch and into the creek on the Collins tract. Staff contacted the Texas Commission on Environmental Quality and the Cedar Park Wastewater Unit. Cedar Park crews were able to fix the problem and stop the leak on the same day.

Travis County Law Enforcement and Preserve Patrol

Management of BCP lands to meet the terms and conditions of the BCCP permit in a rapidly developing urban interface presents unique challenges for public agencies. Many BCP tracts are subject to law enforcement issues including illegal trespass (pedestrian, mountain bike, all-terrain vehicle, and motorcycle traffic), illegal dumping, vandalism, theft, and poaching of native wildlife.

Law enforcement on all Travis County owned or managed properties including County Parks and County BCP tracts are provided by Rangers. These Rangers work under Travis County's Parks Division and they are commissioned Texas Peace Officers operating as Deputy Sheriffs under the Travis County Sheriff's Office (TCSO) and certified by the Texas Department of State Health Services as Emergency Medical Technicians. In FY11 there were 18 documented trespasser encounter incidents, 19 incidents of Criminal Mischief (tree removal, lock and fence cuts), one fire (1-acre grass fire), and five cases of theft reported.

The Rangers and Travis County's Natural Resources staff regularly patrol and inspect County managed BCP tracts to look for signs of illegal activity and to assess management needs. Regular patrols provide a visible County presence, thereby minimizing the incidence of unauthorized activities. Patrols also allow staff to inspect fences, facilities, trails and roads, and look for resource management issues such as non-native plant and animal encroachment and signs of oak wilt infestation.

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-managed BCP lands. Known cultural sites are regularly monitored for illegal activities such as evidence of surface collecting of artifacts or unauthorized excavation.

Travis County BCP Volunteer and Outreach Programs

Volunteer Program Activities

The Volunteer Coordinator position was vacant from September 2010 until June 2011 when the position was filled by William Burch. Despite having this key position vacant for much of the FY11, Travis County BCP benefited from the efforts of 173 volunteers who invested time into many different types of projects. Besides training, volunteers spent their time on the following projects: biological monitoring, wildlife management, non-native plant removal, vegetation surveys, maintenance, education and outreach, and data organization. The Volunteer Program has been effective at promoting education and outreach at the BCP; the program also reduces staff time and costs for BCP management. Volunteers provide valuable skills and time to Travis County. Overall, volunteers contributed 697 hours to assist Travis County at the BCP in FY11 (Table 13).

Table 13. Number of Volunteer Hours Contributed to Travis County’s BCP during FY11.

Type of Activity	Number of Hours
Training	17.5
Bird Monitoring	287.5
Jollyville Plateau Salamander Monitoring	24.5
Karst Biological Surveys/Cricket Counts	17
Wildlife Management Activities	56
Non-native Plant Removal	96
Vegetation Surveys	24
Aquatic Water Quality Monitoring	43
Data Management	44.5
Public Education and Outreach	4
Maintenance	83

Education and Outreach Activities

Travis County presented information about the BCP at hikes and tours, community meetings, public events, and training workshops. Approximately 1,903 individuals were reached through these efforts (Table 14).

Table 14. Travis County BCP Education and Outreach Summary for FY11.

Type of Activity	Total Events BCP	Total BCP Participants
Special Events	7	1,396
Childrens' Programs	3	76
University Programs	12	117
Community Programs	15	142
HOA/Neighbor Meetings	6	73
Hike/Lecture Series	2	35
Other Hikes/Tours	9	64
Totals	52	1,903

Some of the Travis County BCP education and outreach efforts in FY2011 include:

- Travis County staff participated in and helped organize a number of special events this year including the 15th Anniversary BCCP Celebration, the BCP Infrastructure Maintenance Training Workshop, the Volente Fall Festival, the Austin Cave Day Festival, Williamson County Search and Rescue Training, the Black-capped Vireo Symposium, and a BCP Volunteer Appreciation Event.
- The FY11 BCP Hike and Lecture Series provided monthly guided hikes for the public to visit and learn about the preserve and management of the plants and animals that the BCP protects. Travis County staff led two interpretive educational hikes at Hamilton Pool Preserve as part of the Hike and Lecture Series.
- Travis County staff led 8 other hikes or tours of the BCP to Preserve neighbors and other groups, such as Texas Parks and Wildlife Department staff and Urban Wildlife Conference participants.
- Travis County reached out to area children this year by presenting two educational presentations during Summer Camps held at Alma de Mujer. Students got to learn about the endangered species found in the BCP as well as other local wildlife. Staff also worked with an Eagle Scout group who installed a bat roost box on the Snowden tract and learned about local wildlife.
- Numerous opportunities were provided for college and university researchers and field classes to utilize the BCP as a living classroom. In FY11, several universities had

projects or fieldwork on Travis County BCP lands including Concordia University and St. Edwards University.

- Travis County BCP staff provided training regarding rare plants, endangered species, and natural and cultural resource protection for other County Departments, including staff responsible for assisting in management efforts on County Parks and Open Space lands.

THE CITY OF LAKEWAY

Refer to Appendix N for a brief report for the City of Lakeway's management of Schramm Ranch. A more extensive report may be delivered to the USFWS after the submission date of this annual report.

THE LOWER COLORADO RIVER AUTHORITY

Management Highlights (October 2010-September 2011)

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

Westcave

- Preserve staff hosted 4771 students, teachers, and visitors from October 1, 2010 to September 30, 2011.

McGregor

- Deer harvest activities were not conducted at McGregor during the 2010-2011 season. No deer or feral pigs were removed from the preserve this year.
- LCRA staff continued to work with the Comanche Trail Community Association (CTCA) to promote local support of land management, animal management, and stewardship efforts on the preserve. The permit renewal training was held November 17 and 20, 2010 for new or returning CTCA McGregor Good Neighbor Program permittees. During this reporting period, there were 14 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. The training for the 2011-2012 year will take place November 9 and 12, 2011.
- 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.

LCRA partnered with Travis County to intensively survey a 100 acre plot that combined the McGregor Preserve and the adjoining TC property for golden-cheeked warbler. The final report for the survey and research is included in the City of Austin's 2011 avian ES report.

Wheless

- Golden-cheeked warbler surveys were not conducted at the Wheless Preserve this year.
- LCRA staff continues to monitor Wheless for introduced plant species as part of the invasive plant control program.
- 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, installing perimeter signs at strategic locations to discourage trespass, and monitoring for oak wilt.
- The main entry at Wheless was improved to increase vehicle safety when accessing/exiting the preserve.

THE NATURE CONSERVANCY OF TEXAS

Annual Report for Barton Creek Habitat Preserve Calendar Year 2011

Science / Stewardship

Annual surveys (point count) were completed for the black-capped vireo (BCV) and golden-cheeked warblers (GCW) to determine population densities. Texas A&M University conducted transect surveys in a study to determine the impact of future expansion/construction of Hwy 71 on the GCWs. A total of 73 GCW territories were noted on the preserve. One male BCV was located on several occasions; a second male was located once and no females were documented on the preserve. Brown-headed cowbirds are being removed from the property with the use of a shotgun.

Preserve staff and TPWD public lands lottery hunters are helping to control the population of white-tailed deer in an effort to reduce browse and increase recruitment of Texas Oaks. Population is estimated through spot-light surveys, stand counts and camera surveys.

Austin Youth River Watch continues to monitor water quality in Barton Creek; results have not found any anomalies.

Due a major drought and severe wildfire activity in central Texas, no prescribed fires were completed on the preserve in 2011. Three units totaling approximately 225 acres are ready to be completed during the winter season, and two miles of contingency lines were installed at the preserve in preparation for a wildfire.

Education/Outreach/Volunteers

Numerous groups have used the preserve for conservation education, and volunteer projects. During 2011, we had approximately 1,300 visitors on the preserve for volunteer, educational, and research purposes.

TEXAS CAVE MANAGEMENT ASSOCIATION

The Texas Cave Management Association manages two of the caves listed on the permit (Lost Oasis Cave and Whirlpool Cave). Management activities on the Lost Oasis Preserve for FY 2011 have been listed below:

Annual Report for Lost Oasis Cave Preserve Calendar Year 2011

Science / Stewardship

- Annual surveys were not conducted at the preserve. No golden-cheeked warblers or brown-headed cowbirds were observed. Only one red imported fire ant mound was observed in November.
- Hunting was not nor will ever be conducted on the preserve.
- Although no prescribed fires have occurred on the preserve, the total parcel (3.6 acres) is ready to be burned.
- A complete management plan was prepared in 2011 and is ready for TCMA Board approval at the beginning of 2012.
- There is one volunteer preserve manager and no paid staff.

Education/Outreach/Volunteers

During 2011, we had approximately 20 visitors on the preserve for volunteer, educational, and research purposes. Preserve maintenance consisted of volunteer efforts to clear brush, remove lower branches, remove trash and clear one fire break.

TRAVIS AUDUBON SOCIETY

Travis Audubon Society owns and manages 680 acres at the Baker Sanctuary which are included as part of the BCP. A report of the monitoring and management activities conducted on the Bakers Sanctuary for FY11 is included as Appendix O.

LITERATURE CITED

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