

Balcones Canyonlands Conservation Plan

2022 Annual Report

(October 1, 2021 – September 30, 2022)

USFWS Regional Section 10(a)(1)(B) Permit No. TE-788841-2

Travis County – City of Austin



Submitted by
The Balcones Canyonlands Conservation Plan
Coordinating Committee
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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 30-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).

Table 1 - Species Covered by the Balcones Canyonlands Conservation Plan

Common name	Scientific name	Status
Black-capped vireo	<i>Vireo atricapilla</i>	Delisted*
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 Cave 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 travisae</i>	Species of Concern
Spider	<i>Neoleptoneta concinna</i>	Species of Concern
Spider	<i>Neoleptoneta devia</i>	Species of Concern
Spider	<i>Eidmannella reclusa</i>	Species of Concern
Harvestman	<i>Texella spinoperca</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
Pseudoscorpian	<i>Tartarocreagris 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

*Previously listed as Endangered, the Black-capped vireo was delisted in April 2018

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

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 and an additional 27 karst features that 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 or Preserve). 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. The Lower Colorado River Authority (LCRA) and The City of Sunset Valley are both Managing Partners. The LCRA manages approximately 400 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. The City of Sunset Valley entered into a BCP Managing Partner Agreement in 2014 and designated 21,585 acres, known as the Gaines Greenbelt, to be included as part of the BCP. The Gaines Greenbelt mitigates for impacts to golden-cheeked warblers, black-capped vireos, and karst species due to maintenance, improvement and public use of the Gaines Greenbelt Trail, and future impacts associated with social trail closure, fencing and signage.

The Nature Conservancy of Texas (TNCTX) and the Travis Audubon Society (TAS) also manage lands for public and environmental benefit within the BCP. In April of 2015 Travis County purchased a conservation easement over 672 acres of the Travis Audubon Society Baker Sanctuary.

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 year.

Development Activity within the Permit Area

The City of Austin development activity report for Fiscal Year 2022 (FY22), which details building permits issued by the City of Austin west of Loop 1 within the Permit area, is located in Appendix A.

The Travis County development activity report for FY22, which details building permits issued by Travis County in precincts 2 and 3 within the Permit area, is located in Appendix B.

Mitigation Credit Balance

The City of Austin's BCP 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/EIS (U.S. Fish and Wildlife Service, 1996a and 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 (Table 2).

Table 2 - Infrastructure Projects Mitigated Through the Use of Mitigation Credits in FY22 by Participating Agency

City of Austin	
<i>Starting City of Austin Balance</i>	11,674.54 acres
<i>New preserve additions (credits)</i>	0
Barton Substation Shielding Upgrades	0.1
Slaughter Lane Corridor Improvements	9.8
Guildford Cove Pump Station Improvements	0.5
Four Points Duct Bank Project	3.0
McNeil Water Transmission Main Geotech Borings and Piezometers	0.1
Spicewood Springs Road Regional Mobility Improvements Project	20
BC 5678 Unit Upgrade Project	0.1
<i>Remaining Mitigation Credits</i>	11,613.94 acres
Travis County	

<i>Starting Travis County Balance</i>	8,657.884 acres
<i>New preserve additions (credits)</i>	691.46
Steiner Ranch Evacuation Route	0.9
Ledgestone Terrace Drainage Improvements Project	0.4
<i>Remaining Mitigation Credits</i>	9,348.044 acres
Lower Colorado River Authority (LCRA)	
<i>Starting LCRA Balance</i>	259.73 acres
<i>New preserve additions (credits) –</i>	0
Fairland to Lago Vista (T414) Transmission Line Storm Hardening Project	12.6
LCRA Marshall Ford to McNeil (T197) Storm Hardening Project	0.8
USFWS Approved Use of Mitigation Credits for clearing in Burnet County	23
<i>Remaining Mitigation Credits</i>	223.33 acres

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 strive to 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.

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 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 FY22, 20 Participation Certificates were issued as follows for development projects: 4 for subdivisions, 4 for infrastructure projects, 3 for single family residential, 3 for commercial development, and 6 for residential (Table 3).

Funds Collected through Participation Certificates

A total of \$632,975.00 was collected through the sale of Participation Certificates in FY22 (Table 3). To facilitate a 50/50 split in participation certificate revenue between the City of Austin and Travis County, participants pay the mitigation fee with two checks, half to “BCCP-City of Austin” and the other half to “BCCP-Travis County.” The checks are delivered to each agency for separate processing.

Table 3 - FY22 Projects Mitigated Through the Purchase of Participation Certificates

Application Number	Date	Name	Category	Amount Paid
0721-S	9/28/2022	Travisso Ltd	Subdivision	\$18,150.00
0776-R	11/3/2021	Nash Sweetwater, LLC	Subdivision	\$103,675.00
0776-S	5/11/2022	Nash Sweetwater, LLC	Subdivision	\$33,825.00
0805	2/1/2022	Milky River Development, Inc.	Subdivision	\$203,225.00
1077	12/2/2021	CTX4R, LLC	Commercial	\$20,900.00
1078	10/4/2021	Wesley and Lisa Marie Youngblood	Residential	\$6,600.00
1082	12/2/2021	Todd Dailey	Commercial	\$4,400.00
1086	10/4/2021	Guy Havenstein*reported for 2021 in error	Residential	\$5,500.00
1099	2/1/2022	Cherrywood Pointe	Commercial	\$28,600.00
1109	2/14/2022	Ashley Thigpen & Christopher Heuss	SF Residential	\$2,000.00
1115	2/22/2022	Austin Pitner	SF Residential	\$2,000.00
1116	2/22/2022	Jerome Perales	Residential	\$7,425.00
1117	2/22/2022	Milestone Community Builders	Infrastructure	\$3,575.00
1118	2/14/2022	Round Rock Amos Pipeline	Infrastructure	\$100.00
1123	5/11/2022	Megan Lin	SF Residential	\$2,000.00
1124	2/22/2022	City of Lago Vista Pipeline	Infrastructure	\$2,750.00
1126	3/29/2022	BCRUA	Infrastructure	\$3,300.00
1146	8/25/2022	Teodoro Moscosco	Residential	\$1,650.00
1149	8/25/2022	Allison & David Solin	Residential	\$500.00
1018-1	10/28/2021	Jim Fellers	Residential	\$184,800.00
			Total	\$632,975.00

Funds Collected through Tax Benefit Financing

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 FY22, Travis County's Tax Benefit Financing Plan (TBF) generated \$21,505,164 for Travis County's land acquisition and management projects.

Funds Expended for Land Acquisition

Travis County continues to purchase preserve properties using County funds without grant assistance. Fee simple purchases and alternative protection strategies such as conservation easements, donations, and deed transfers have also been utilized. 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 \$26,060,450.62 in FY22 on non-grant land acquisition activities and secured 691.46 acres for inclusion in the BCP. At the end of FY22 Travis County managed 13,145.9 acres of land within the BCP. For a detailed account of all BCP tracts assembled see Appendices C, D, and E. All City of Austin and Travis County FY22 BCP Land acquisitions are shown by tract in Table 5.

Table 4 - Travis County and City of Austin FY22 BCP Land Acquisitions.

Tract Name	Agency	Date Acquired	Acreage	Total Expenditures
Flying K	Travis County	12/22/2021	621.05	\$15,600,020.35
Murfin	Travis County	10/29/21	70.410	\$10,460,430.27
		Total	691.46	\$26,060,450.62
	City of Austin	0	0	\$0
		Total		\$0

Funds Expended for Operations and Maintenance

In FY22, the Permit Holders, LCRA, TNCTX, the Travis Audubon Society (TAS) and the City of Sunset Valley spent \$5,647,491.81 on operation and maintenance of BCP lands (Table 6).

The City of Austin spent a total of \$2,325,825.24 for FY22 to fund BCP management expenditures by the Austin Water Wildland Conservation Division - Balcones Canyonlands Preserve Program (WCD-BCP). This figure understates the City's total expenditures on this program since it does not include (1) work by other staff in Austin Water 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 projects related to offices, fencing, and other

facilities/ infrastructure. The aforementioned expenditures cannot be readily determined from their program budgets.

Table 5 - Annual FY20 through FY22 BCP Budgets (excluding land acquisition costs) for Permit Holders, the Managing Partners, and Cooperating Entities with Summary of Total Budgets since Plan Inception.

BCP Partner	FY 2020	FY 2021	FY 2022	Total Budget: 1996 to Present
City of Austin*	\$2,184,506	\$2,183,787	\$2,325,825	Up through FY22 \$29,357,753
Travis County	\$2,760,549	\$3,992,882	\$3,218,065	Up through FY22 \$35,117,602
LCRA**	\$5,639	\$5,537	\$4,215	Up through FY22 \$1,832,279
TNCTX	\$10,000	\$10,000	\$10,000	Up through FY22 \$1,130,000
TAS	\$85,000	\$85,000	\$85,000	Up through FY22 \$646,986
City of Sunset Valley****	\$3,200	\$6,000	\$4,386.81	Up through FY22 \$32,447.81
TOTALS	\$5,048,894	\$6,283,206	\$5,647,491.81	Up through FY22 \$68,111,067.81

* City of Austin budget includes BCCP Participation funds.

** Does not include expenditures by Westcave Preserve Corporation

**** The City of Sunset Valley does not track staff time in regard to open space management. Budgetary expenditures only reflect the cost of consultants.

The Travis County Natural Resources budget for the BCP Program in FY22 was \$3,218,065. This total includes Travis County General Fund expenditures, BCP Participation funds, funds for land acquisition 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 does not include estimated expenditures by St. Edwards University, which holds a contract to conduct educational programming and management of the County-owned Wild Basin Wilderness Preserve.

Lands Dedicated to the Balcones Canyonlands Preserve

As of FY22, 33,273.84 acres of black-capped vireo and golden-cheeked warbler habitat have been assembled by the Permit Holders with the assistance of cooperating landowners and entities. Even though the minimum 30,428 acres of endangered bird habitat has now been acquired, additional acreage will still be needed to meet the configuration requirements for the bird habitat blocks by macrosite and to acquire additional specific karst features required in the Permit.

Fifty-two of the 62 karst features which are identified to be protected in the permit have been afforded some level of protection. Eleven 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 BCP is enclosed as Appendix E. Summaries of BCP lands sorted by macrosite and managing entity are attached as Appendices C and D, respectively.

FY 2022 Research or Investigative Reports

Research reports for activities that occurred on the BCP are included as Appendices F through N, and W1 through W15. See the table of contents for a list of appendices which include the 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 (COA) land counted as part of the BCP. The COA's BCP tracts are managed by WCD-BCP and PARD with different management responsibilities assigned to each entity (Table 7). PARD operations performs regular maintenance such as mowing, trash pickup, management of public access, and some trail management activities, while WCD-BCP staff assumes primary responsibility for BCP management and monitoring.

Table 6 - Management Status of City of Austin BCP Properties

Tract	Primary Management Responsibility	Acreage
Upper Bull Creek Unit (Franklin, Gass, Lucas, Hanks, Lanier, COA Canyon Creek plus MUD tracts, Gardens at Bull Creek, Bowman, and Sam Hamilton Memorial Reserve (former WTP 4 "entire tract")	Austin Water (AW)	1166.50
Middle Bull Creek Unit (Kent Butler Ecological Reserve, Beard Trust)	AW	996.71
Lower Bull Creek Unit (Jester, Forest Ridge, 3M, Hilltop, Gibson/Nott, Hiller, Kruger)	AW	1120.98
Lime Creek (incl. 100 acres of Austin-Simon, Ltd.)	AW	586.70
Park West, Coldwater/Cowfork, Long Canyon, Vaught Ranch	AW	1393.86
Carol Lee	AW	34.14
Cortaña	AW	1751.95
Double J&T	AW	1730.00
Reicher Ranch	AW	819.74

Bohls Ranch	AW	450.14
Bohls II	AW	18.81
Sansom	AW	13.00
Senna Hills	AW	35.00
Schramm Ranch	AW	100.63
Vireo Preserve	AW	214.00
Ullrich Water Treatment Plant	AW	18.00
Barton Creek Ventures	AW	13.62
Massey	AW	5.00
Whirlpool Preserve	AW	4.70
Bright Leaf	AW	215.15
	AW Subtotal	10,688.63
Bull Creek District Park, Bull Creek Greenbelt	PARD/AW	129.48
St. Edward's Park	PARD/AW	50.00
Barrow Preserve	PARD/AW	8.00
Emma Long Metro Park	PARD/AW	950.00
Commons Ford Park	PARD/AW	115.00
Barton Creek Wilderness Area (Barton Creek Venture)	PARD/AW	1075.24
Barton Creek Greenbelt	PARD/AW	814.64
Friesenhahn	PARD/AW	62
Mt. Bonnell	PARD/AW	6
	PARD/AW Dual-Managed Subtotal	3,210.36
	TOTAL ACREAGE	13,898.99

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

Table 7 - 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	Lucas	Lanier	Sam Hamilton Memorial Reserve	Beard Trust	Kent Butler Ecological Resv	Jester Estates Cave Preserve	Barrow Preserve	Bull Cr. Greenblt.	Forest Ridge	Gibson/Nott	Hiller/Hilltop	Jester	Krueger	St. Edwards Park	3M
Monitoring Activities	mist-net, band, and spot-map golden-cheeked warblers									X		X				X							
	search for banded golden-cheeked warblers	X							X	X		X				X	X	X	X	X		X	
	mist-net, band, and spot-map black-capped vireos											X				X							
	karst monitoring (faunal surveys, cricket counts, karst feature searches)			X						X		X	X			X							
	spring/stream monitoring (including Jollyville Plateau Salamanders)						X			X		X			X	X			X				
	bracted twistflower monitoring														X								
	canyon mock-orange monitoring											X											
	vegetation monitoring				X			X		X	X	X											
	fuel moisture sampling of junipers											X											
	deer & hog trap photo monitoring		X		X			X		X	X	X	X							X	X		X
	monitoring of oak wilt	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Management Activities	deer control																						
	feral hog control		X		X			X		X	X	X	X								X		
	red imported fire ant control												X										
	habitat restoration (native plants & karst)			X	X	X		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	X	X	
	trash removal	X	X	X	X	X	X	X	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	
	maintenance of roads, fences, signs	X	X	X	X	X		X		X	X	X	X			X	X	X	X	X	X	X	
	inspect utility corridor maintenance				X	X							X			X			X		X	X	

Table 8 - 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

	Barton Creek macrosite					Cypress Creek	North Lake Austin macrosite							South Lake macrosite					West Austin macrosite				
Monitoring and Management Activities on the Canyonlands Preserve (City of Austin tracts)	Barton Creek Wildemess	Barton Creek Greenbelt	Bohls II	Friesenhahn	Senna Hills	Austin-Simon	Lime Creek	Carol Lee	Coldwater	Cortaña	Cowfork/Vaught	Emma Long	Long Canyon	Parke West	Bohls	Commons Ford	UJ&T/Sansom	Reicher Ranch	Schramm Ranch	Bright Leaf	Mount Bonnell	Ullrich	Vireo Preserve
mist-net, band, and spot-map golden-cheeked warblers	X	X								X		X					X	X					X
search for banded golden-cheeked warblers	X	X				X	X	X		X		X	X				X	X		X			X
mist-net, band, and spot-map black-capped vireos							X			X					X								X
karst monitoring (faunal surveys, cricket counts, karst feature searches)	X	X				X	X			X				X								X	
spring/stream monitoring (including Jollyville Plateau Salamanders)			X					X		X			X	X	X		X			X		X	X
bracted twistflower monitoring	X	X																		X	X	X	X
canyon mock-orange monitoring																							
vegetation monitoring	X	X				X				X		X	X		X		X	X					X
fuel moisture sampling of junipers										X								X					
deer & feral hog trap photo monitoring							X								X			X					
monitoring of oak wilt	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
deer control																							
feral hog control																							
red imported fire ant control							X							X									
habitat restoration (native plants, karst)							X			X			X	X			X	X					X
non-native plant control	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	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	X	X
maintenance of roads, fences, signs			X		X		X	X		X		X	X	X	X		X	X		X			X
inspect utility corridor maintenance	X	X			X								X							X			X

Table 9 - City of Austin Monitoring and Management Activities on Karst Preserves

Monitoring and Management Activities on the Canyonlands Preserve (City of Austin tracts)		Karst Preserves											
		Village at Western Oaks Karst Preserve	William H Russell Karst Preserve	Goat Cave Karst Preserve	Dick Nichols Park	Testudo Tube Cave Karst Preserve	Circle C Metro Park	Tabor tract (WQPL)	Stillhouse Hollow Preserve	Schroeter Park	Shoal Creek Greenbelt	Massey Tract	Whirlpool Preserve
Monitoring Activities	mist-net, band, and spot-map golden-cheeked warblers												
	search for banded golden-cheeked warblers												
	mist-net, band, and spot-map black-capped vireos												
	karst monitoring (faunal surveys, cricket counts, karst feature searches)	X	X	X	X	X	X	X					X
	spring/stream monitoring (including Jollyville Plateau Salamanders)					X							
	bracted twistflower monitoring												
	canyon mock-orange monitoring												
	vegetation monitoring	X											
	fuel moisture sampling of junipers												
	deer & hog trap photo monitoring												
	monitoring of oak wilt		X	X									
	Management Activities	deer control											
feral hog control													
red imported fire ant control		X					X	X					
habitat restoration (native plants & karst)		X					X						X
non-native plant control		X		X	X	X	X		X	X			X
trash removal		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
maintenance of roads, fences, signs		X	X	X		X	X	X	X				X
inspect utility corridor maintenance													

In addition to the activities in the tables above, BCP staff conducted or coordinated the following activities within each macrosite. Land management activities are also summarized in the BCP Quarterly Staff Reports found in Appendix V1. Activities specific to golden-cheeked warbler, black capped vireo, and karst invertebrates are covered in separate species reports.

FY 2022 BCP Partners Outreach

Each quarter, BCP partners with outreach programs meet to coordinate efforts and produce a summary report for the BCCP Coordinating Committee. These reports are found in Appendix V4 and include the number of hours worked by volunteers that quarter, the number of people reached through educational programs, and outreach highlights from each BCP partner. An annual summary is included in the final report of the year.

TRAVIS COUNTY

Travis County Natural Resources staff conducted a variety of resource monitoring and management activities on County-managed BCP lands in FY22, which are summarized in the BCP Quarterly Staff Reports found in Appendix V2 and in Tables 12, 13, and 14. The wildlife and plant management activities are described in more detail in Appendices M and N. Additionally, the annual reports for Wild Basin Wilderness Preserve and the Baker Sanctuary can be found in Appendices O and Q, respectively. Wild Basin is owned jointly by Travis County (164 acres) and St. Edwards University (63 acres) and is managed by St. Edwards University under contract with Travis County. Travis Audubon Society owns and manages the 715-acre Baker Sanctuary as part of the BCP, with Travis County holding a conservation easement over 675 acres of the sanctuary.

Table 10 - FY22 monitoring and management activities on Travis County-managed BCP tracts within the Bull Creek and North Lake Austin Macrosites.

Monitoring and management activities on Travis County-managed BCP tracts		Bull Creek Macrosite								North Lake Austin Macrosite							
		Canyon Vista	Colina Vista	Concordia CE	Karpik/ Richarda/ Wendland	Orger	Ripelin	Sam Hamilton East	Woody Hollow	Franzetti Webb	Gray Mountain CE/ Coldwater Canyon CE	Greenhore	Hereford/ Leno	Hunt, Brown, Martin, and Ross Conservation Easements	Steiner Ranch CE	Woods of Greenhore	
Monitoring Activities	intensive plot survey for golden-cheeked warblers																
	enumeration survey for golden-cheeked warblers						X	X									
	presence/absence survey for golden-cheeked warblers							X*									
	enumeration survey for black-capped vireos																
	presence/absence survey for black-capped vireos						X	X							X		
	karst surface monitoring																
	karst faunal survey																
	cave cricket exit count																
	Jollyville plateau salamander survey																
	water quality			X													
deer survey																	
Management Activities	deer control																
	feral hog control						X	X									
	cowbird control																
	red imported fire ant control																
	non-native plant control	X	X	X			X	X	X	X					X	X	
	habitat restoration						X									X	
	trash removal						X										
	patrol for evidence of trespass, vandalism, and dumping	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	fence maintenance or construction								X						X	X	
	road and trail maintenance	X		X			X	X		X					X		
wildfire fuel mitigation														X			

* Re-sighting of banded warblers only

Table 11 - FY22 Monitoring and Management Activities on Tracts Managed by Travis County within the Cypress Creek Macrosite.

Monitoring and management activities on Travis County-managed BCP tracts		Buntan	Collins/ Franklin	Cuevas East	Cuevas/ TSNL/ Blackmore	Crossings	Grandview Hills North	Grandview Hills South	King/ Atwood/ Blake	Lake Perspectives	Lime Creek Unit	Lucas/ Lake Travis Bluffs	New Life	Nootale	Romberg	SAS	Snowden	Spazia	Trails End/ Seven 05	Wheless	Vireo Ridgely straiton	Vista Point	Volente Unit**
Monitoring Activities	intensive plot survey for golden-cheeked warblers	X	X														X			X		X	
	enumeration survey for golden-cheeked warblers					X							X								X	X	
	presence/absence survey for golden-cheeked warblers	X*	X*														X*				X*	X*	
	enumeration survey for black-capped vireos											X									X	X	
	presence/absence survey for black-capped vireos											X									X	X	
	karst surface monitoring			X	X	X						X										X	
	karst faunal surveys			X	X	X						X										X	
	cave cricket exit counts			X	X							X											
	Jollyville Plateau salamander survey												X							X			
	water quality	X										X								X		X	
Management Activities	deer survey	X				X							X				X				X		X
	deer control																						
	feral hog control																						
	cowbird control												X										
	red imported fire ant control			X	X							X										X	
	non-native plant control	X	X		X	X	X		X				X	X		X	X			X			
	habitat restoration	X			X												X				X		
	trash removal	X			X					X	X	X		X		X	X		X	X	X		
	patrol for evidence of trespass, vandalism, and dumping	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	fence maintenance or construction	X									X	X				X	X			X	X		X
	road and trail maintenance	X	X				X	X				X	X	X		X		X		X	X	X	
	wildfire fuel mitigation			X							X				X	X							

* Re-sighting of banded warblers only

** The Volente Unit consists of the Volente, Volente Peak, Volente Valley, and Volente tracts.

Table 12 - FY22 monitoring and management activities on Travis County-managed BCP tracts within the South Lake Austin, Pedernales River, West Austin, Big Sandy Creek Macrosites and Cave Tracts.

Monitoring and management activities on Travis County-managed BCP tracts		South Lake Austin			Pedernales River	West Austin	Lake Travis	Cave Tracts		
		Chandler	Medway	Murphy CE	Hamilton Pool/Martin	Wild Basin	Kofia Unit*	Ireland's Cave	McNeil	Starks North Mine/Juddwell
Monitoring Activities	intensive plot survey for golden-cheeked warblers					X				
	enumeration survey for golden-cheeked warblers	X	X	X	X		X			
	enumeration survey for black-capped vireos						X			
	presence/absence survey for black-capped vireos						X			
	karst surface monitoring						X	X	X	X
	karst faunal survey						X	X	X	X
	cave cricket exit count						X		X	X
	Jollyville Plateau salamander survey									
	water quality				X	X				
Management Activities	deer survey				X		X			
	deer control									
	feral hog control				X		X			
	cowbird control				X		X			
	red imported fire ant control						X	X	X	
	non-native plant control					X	X			X
	habitat restoration									
	trash removal			X	X	X				X
	patrol for evidence of trespass, vandalism, and dumping	X	X	X	X	X	X	X	X	X
	fence maintenance or construction						X			X
	Road and trail maintenance						X			
	wildfire fuel mitigation									

* The Kofia Unit consists of the Kofia, Scott and White, Flying K, and Endres tracts.

LITERATURE CITED

- 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*.
- U. S. Fish and Wildlife Service. 1996a. *Federal Fish and Wildlife Permit No. PRT-788841*.
- U. S. Fish and Wildlife Service. 1996b. *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*.