City of Austin's BCCP Activities
Bi-Annual Update: 1 October 2022 – 31 March 2023

BCCP Administration	
Infrastructure Projects	• WCD staff devoted many hours in February to clearing ice-felled limbs and trees from critical roads, trails, and fences after Winter Storm Mara. Much work remains to clear debris from fences after the avian breeding season concludes. • Austin Energy completed extensive vegetation clearing along powerlines plus extensive vegetation removal along access roads in response to the recent ice storm damage, all within the Bull creek macrosite. • LCRA: contractors repaired damage (deep ruts) on Kent Butler from their contractors recent work. Work was completed by March 6. • Ten Infrastructure Habitat Assessment Applications were processed, and Determination Letters were issued from October 2022 through March 2023.
Land Acquisition /Management Agreements	• AW BCP was approached in April 2022 by developer representatives of the proposed Juniper Apartments on FM 620 near Zimmerman Lane adjacent to existing AW BCP-managed Bull Creek Preserves. Because of the proximity of Jollyville salamander springs nearby on Bull Creek, the creek channels making up the proposed preserve, the frequent observation of endangered Golden-cheeked Warblers, the high frequency of nearby caves with endangered karst species, AW BCP offered to manage a small preserve here. A site inspection of Aug 25 revealed several potential filled caves within a block of several federal permit caves. In August, Parks & Recreation requested the site for a public trail through parkland dedication of the development review process and AW BCP has offered to co-manage it as a preserve with public trails. • AW BCP is working with the owner of Four Points Preserve to transfer ownership to the City. This site is a high priority acquisition, containing 4 BCCP permit caves and springs with Jollyville salamanders. • Brodie Oaks Mall representatives drafted an access easement for the portion of Airmen's Cave beneath the mall as requested. It is currently awaiting signature by Brodie Oaks representatives.
Reports and Events	• Submitted annual BCCP report to USFWS 2022 Annual Report (traviscountytx.gov) • Gave presentations and led field trips for the HCP Coalition Conference (October 25-27), which was held in Austin this year. • Austin Water (AW) BCP, Wildlands Conservation staff, Austin Fire Department, and local neighborhood Firewise coordinators toured Bright Leaf Preserve on March 24 to examine wildfire risk elements and get feedback for its management. • Hosted a volunteer appreciation event to summarize the first MycoBlitz on the BCP (September 24-October 2) to learn about the role of mycorrhizal communities (symbiotic with plant roots) in habitat restoration and land and natural resources management. • A Whirlpool Patio Ribbon Cutting Event was held at the Violet Crown Trail/Whirlpool Cave Preserve at Mopac South and Convict Hill Rd. Councilwoman Paige Ellis and other were guest speakers. A permanent cave mural, cave educational signs, and a salamander sculpture were unveiled. Professionals provided information on bats,tawny crazy ants, UT Grotto,including live bats.A tour of Whirlpool Cave was offered to 118 explorers. The event was sponsored by Public Works, Hill Country Conservancy, and Austin Water Balcones Canyonlands Preserve.
Dual-managed Properties	• Mountain-bikers continue to create new, unauthorized trails within the Barton Creek Wilderness and Greenbelt. BCP staff continue to work with Austin Parks & Recreation Dept. (PARD) staff to close them down. • Coordinating with PARD on issues related to homeless camps.

Personnel	Karlee Taylor joined Wildlands Conservation Division's Outreach Program. Trish Porter joined WCD staff as a ranger.
Rare and Endangered Resources Management	
Golden-cheeked Warbler (GCWA) and Black-capped Vireo (BCVI)	Initiated BCVI and GCWA surveys and color-banding in March. Conducted a volunteer training to search for banded GCWAs outside the study plots. Seventy volunteers signed up to assist with search efforts this year.
Bracted Twistflower	U.S. Fish and Wildlife Service published a final rule to list the Bracted Twistflower as endangered with critical habitat on April 11, 2023 (88 FR 21844).
Jollyville Plateau Salamander	• BCP continues to conduct aquatic life surveys of springs across the BCP on a periodic basis in hopes of locating new salamander locations and other rare stygobitic life. • BCP staff conducted the twice yearly JP salamander survey in Testudo Tube, all salamanders captured were photographed for future population analysis. • eDNA: staff assisted TXDOT by allowing their consultant Stantec consulting staff to collect water samples from the Franklin tract at a long term JPS monitoring site (main branch just upstream of tributary 7). TXDOT is taking water samples springs impacted by new road work projects, this method has proven successful in determining JPS presence without actual observations.
Karst invertebrates/ karst work	• AW BCP conducted cave faunal surveys and cave cricket exit counts on all other assigned caves (ongoing). • In regards to USFWS's five year status review of the 7 listed karst invertebrates in Travis and Williamson Counties, staff provided comments on the current status and documented threats negatively impacting these species. • Collaboration Cave (located on the BCNWR): final day of excavation work was completed in March, now efforts will focus on bringing in more rock to improve habitat and periodic species monitoring, since it's likely we will request that this cave be utilized as a substitution for nearby private caves (Jack's Joint and Armadillo Ranch Sink) which we can not access since they are on private property. • Currently hydrogeological studies continue in the FM 2222 and RM 620 area. Contractors and staff continue to excavate filled caves on AW BCP preserves along FM 2222 and RM 620 with funding provided from Texas Department of Transportation to mitigate the FM 2222 bypass to RM 620. • Mapping and faunal surveys of a new cave (Lady Bird Lounge) on Wildflower Center continues
Plant and Animal Control	
Mammals	In an effort to reduce feral hog numbers, staff continue to operate several hog pen traps
Red-imported fire ants and Tawny crazy ants	With funding provided under the interlocal agreement with the University of Texas at Austin, Ed LeBrun continued monitoring TCA and native ant densities and effectiveness of management strategies.
Invasive Plants	BCP staff continue to remove non-native plants on COA BCP tracts. American Youth Works helped remove invasive plants from Long Canyon in January and February.
Land Stewardship	

Habitat Restoration	• Staff and volunteers continued working on restoration projects on the JJ&T and Vireo Preserve tracts to promote water infiltration, slope stabilization, soil restoration, and reforestation on degraded sites to promote future habitat for GCWA and BCVI. Planted over 1,000 native trees and shrubs from October-March.
	• With the abundance of shin oak acorns available in the mast year of 2022, staff planted over 8,000 acorns on Cortaña, JJ&T, Lime Creek, and Vireo Preserve tracts to initiate new BCVI habitat patches and augment existing habitat. • Staff used downed juniper limbs from Winter Storm Mara to block and prevent erosion from an unauthorized road carved by a contractor through a stream bed. • Scheduled 7 weeks with American Youthworks to restore habitat remove invasive plants, and clean up after Winter Storm Mara.
Fencing	• Contractor completed approximately 3000' of fence installation plus a new access gate on a portion of the 3M tract. • In preparation for new fence installation projects, BCP staff completed prep work including finding property monuments and determining contractor access for Bright Leaf. Contractor installed approximately 3,300' of fencing on the Bright Leaf boundaries. • Kent Butler at Jancy/ Amelia Cv: met on site with 3 adjacent homeowners to discuss options for helping secure our boundaries, following a neighbor meet and greet open house Sept 28. Currently the private fencing along Amelia Cove/Jancy Court are all in compliance with no gates and sufficiently high fence. • Installed approximately 800' of fencing on the Whirlpool Karst Preserve.
Oak Wilt	Most monitoring takes place during the summer, but BCP staff did inspect one known oak wilt center during this period, in Emma Long Park.
Wildfire Preparedness	• Shaded fuel break work completed along a boundary on the Bright Leaf Preserve. • An annual Wildfire Risk Assessment of Bright Leaf Preserve on March 24 with Austin Fire Department and neighborhood Firewise coordinators, followed by neighbor question and answer session.. • Shaded fuel break was completed along the Canyon Creek and Stovepipe karst preserves. • BCP staff collected data on tree damage along shaded fuel breaks following winter storm Mara. • WCD and Travis County BCP staff met to consider ramifications of winter storm damages to future of shaded fuel break projects.
Law Enforcement	

Trespass and Criminal Mischief	• Staff have initiated efforts to curtail illegal mining of minerals from the base of the bluff along PARD's Hough tract and BCP's Hiller and Gibson tracts. Staff also observed new climbing routes on the Hough tract immediately adjacent to BCP's Hiller tract, this activity was reported to Pard Rangers. • Staff have noted a major upswing on trespass at Forest Ridge and the Hiller tracts; this illegal trespass is coming in from the adjacent PARD Hough tract. • Staff and neighbors have noted an upswing in illegal activities at the end of Old Lampasas Trail including starting fires, so staff is assisting neighbors in efforts to close this problematic portion of Old Lampasas Trail. • Kent Butler: staff investigated a stolen vehicle incident, apparently a LCRA contractor accidentally left the entry gate open which allowed someone to park a stolen vehicle inside the property. Police were called and the vehicle was removed and the gate was secured. • Vandals tore down part of an old corral and damaged vegetation at a relic ranch building on the Cortaña tract. Signs of a recent campfire within the structure were also found. WCD rangers reconstructed the corral and posted a "no trespassing" sign. • Staff reported via 311 in March a pair of homeless camps still in existence within the Barton Creek Wilderness near Loop 360. • Bright Leaf: a repeated fence cutter and sign vandal was identified, had warrants issued, and made payment for damages assessed.
	Continued patrols of Preserve boundaries.

Outreach/Volunteers

- Produced 4 short educational videos to help dispel myths about Ashe juniper (Ashe Juniper - YouTube).
- HCP Conference Field trip: staff led a field trip at Reicher showcasing GCWA habitat, plus had information on karst and other management activities.
- Assisted volunteers with restoration and re-installation of the kiosk at Bright Leaf.
- VWO Karst Preserve: donated native plants and loaned weed wrenches to Stephanie Simmons for the annual Texas Most Wanted native plant give-away event and invasive plant removal work on (March 18, 2023).
- Whirlpool/ VCT educational kiosks: staff helped with wording and provided photos for on HCC's educational signs which were posted near Whirlpool Cave along the adjacent Violet Crown Trail, much of content is karst related.
- Staff gave away many native plants grown from the Reicher greenhouse to various local organizations tasked with multiple restoration projects.
- On behalf of AW BCP, a simulated cave experience was provided to about 450 6-8th grade students at McBee Elementary and Brentwood Elementary by CaveSim on March 10 and March 20
- Mark Sanders gave a brief presentation to 6 Science classes at McNeil High, the focus was on cave fauna and the restoration work we are doing in the courtyard, staff also led in cave tours to approximately 64 students. (Nov 18)
- Balcones Master Naturalist Field Trip Avery Ranch Cave by Nico (37 attendants on Dec 3, 2022)
- CAMN Master Naturalist Geology training Nico + Jacob Eickstead McKinney Falls (42 attendants on Jan 7, 2023)
- Two Explore Austin Goat Cave Tours by Nico (20 and 19 attendants on Feb 4 and 18, 2023
- Univ of Wisconsin Goat Cave Field trip by Nico and Drew Thompson at PARD's request (16 attendants on March 13)
- Goat Cave tour for Camacho activity Center with Colin Strickland, Cait McCann, Jaya, and Karlee (March 7)

City of Austin's BCCP Activities
Bi-Annual Update: 1 April 2023 – 30 September 2023

BCCP Administration	
Infrastructure Projects	Nine Infrastructure Habitat Assessment Applications were processed, and Determination Letters were issued from April 2023 through September 2023.
Land Acquisition/ Management Agreements	Austin Water (AW) BCP was approached in April 2022 by developer representatives of the proposed Juniper Apartments on FM 620 near Zimmerman Lane adjacent to existing AW BCP-managed Bull Creek Preserves. Because of the proximity of Jollyville salamander springs nearby on Bull Creek, the creek channels making up the proposed preserve, the frequent observation of endangered Golden-cheeked Warblers, the high frequency of nearby caves with endangered karst species, AW BCP offered to manage a small preserve here. A site inspection of Aug 25 revealed several potential filled caves within a block of several federal permit caves. In August, Parks & Recreation requested the site for a public trail through parkland dedication of the development review process and AW BCP has offered to co-manage it as a preserve with public trails.
	AW BCP is working with the owner of Four Points Preserve to transfer ownership to the City of Austin. This site is a high priority acquisition, containing 4 BCCP permit caves and springs with Jollyville salamanders.
	Brodie Oaks Mall representatives drafted an access easement for the portion of Airmen's Cave beneath the mall as requested. It is currently awaiting signature by the City of Austin's Law Department.
Reports and Events	BCP staff gave presentations/tours at local and international conferences and events to educate the public about BCP species, research, and restoration work, including the Society for Ecological Restoration's World Conference, Balcones Canyonlands Master Naturalists, McNeil High School, and Healthy Soils/Healthy Trees, Wildflower Center, Barton Springs University, Clay Minerals Society, and National Cave and Karst Day.
	A Whirlpool Patio Ribbon Cutting Event was held at the Violet Crown Trail/Whirlpool Cave Preserve at Mopac South and Convict Hill Rd. Councilwoman Paige Ellis and others were guest speakers. A permanent cave mural, cave educational signs, and a salamander sculpture were unveiled. Professionals provided information on bats, tawny crazy ants, UT Grotto, including live bats. A tour of Whirlpool Cave was offered to 118 explorers. The event was sponsored by Public Works, Hill Country Conservancy, and AW BCP.
	BCP staff are updating and modernizing Land Management Plans.
Dual-managed Properties	Mountain-bikers continue to create new, unauthorized trails within the Barton Creek Wilderness and Greenbelt. BCP staff continue to work with Austin Parks & Recreation Dept. (PARD) staff to close them down.
	BCP staff provided comments on PARD's draft land management plan (Climate Vulnerability Analysis and Land Management Strategies).
	Met with PARD staff and Austin Archery Club members to discuss renewal of use agreement at Emma Long Metropolitan Park.

City of Austin's BCCP Activities
Bi-Annual Update: 1 April 2023 – 30 September 2023

Personnel	Justin Bates joined WCD as Division Manager. Erik Ruben joined WCD staff as a ranger. Guin McDade was promoted to WCD Environmental Program Coordinator. Cait McCann was promoted to WCD Conservation Program Supervisor.
Rare and Endangered Species Resources Management	
Golden-cheeked Warbler (GCWA) and Black-capped Vireo (BCVI)	BCP contractors and staff published the following paper in July 2023: Urban land cover and El Niño events negatively impact population viability of an endangered North American songbird (wiley.com). Findings attribute an observed decline in GCWA abundance between 2015 and 2019 to a single, strong El Niño event that occurred during the winter of 2015 to 2016. The publication also concludes that management to promote nesting success, including minimizing impacts from urban encroachment by protecting, maintaining and creating high quality Ashe juniper-oak woodlands, is critical to overcoming threats that the GCWA faces throughout its limited range.
	In collaboration with BCP staff, Dr. Giri Athrey/Texas A&M submitted the following report to U.S. Fish and Wildlife Service (USFWS) on March 31, 2323: Athrey, G., L. Moulton, and L. O'Donnell. 2023. Golden-cheeked warbler population genomics: a report on the current population genetic status of golden-cheeked warblers.
	BCP staff mapped territories, color-banded adult birds, and documented nesting success of GCWAs on 11 intensive study plots (including one on The Nature Conservancy's Barton Creek Habitat Preserve) from March through June. BCP staff also searched one former study plot for returning banded birds.
	Between 60 and 70 volunteers searched for banded GCWAs outside the study plots on more than thirty 100-acre search areas between late March and late May. An appreciation event for those volunteers took place on July 29.
	From March through July, BCP staff mapped territories, color-banded adult birds, and documented nesting success of BCVIs in eight areas where the birds have attempted to establish territories in the past.
	During summer months, BCP staff entered data into ArcProject, performed quality assurance/quality control, and prepared spreadsheets for future analysis.
Bracted Twistflower	USFWS published a final rule to list the bracted twistflower as threatened with critical habitat on April 11, 2023 (88 FR 21844).
	BCP staff conducted census surveys for bracted twistflowers at Ullrich Water Treatment Plant, Bright Leaf Preserve, and Bull Creek District Park, and guided volunteers and PARD rangers for census surveys at Mt. Bonnell and Barton Creek Greenbelt.
Karst Invertebrates/ Karst Work	BCP staff conducted cave faunal surveys and cave cricket exit counts on all assigned caves (ongoing).
	BCP staff continue to assist USFWS by collecting *Texella* spp. from several preselected caves, which will aid in future molecular work to accurately determine species boundaries/locations.

	Hydrogeological studies continue in the FM 2222 and RM 620 area. Contractors and BCP staff continue to excavate filled caves on AW BCP preserves along FM 2222 and RM 620 with funding provided from Texas Department of Transportation (TxDOT) to mitigate the FM 2222 bypass to RM 620.
	Mapping of new cave at Wildflower Center (Cricket Cave) continues.
	Eight days of restoration work led by BCP staff at Wildflower Cave.
	One day of restoration work conducted at Sacred Grove Cave on Stovepipe Preserve.
Jollyville Plateau Salamander (JPS)	BCP continues to conduct aquatic life surveys of springs across the BCP on a periodic basis in hopes of locating new salamander locations and other rare stygobitic life.
	BCP staff continue to conduct twice yearly JPS surveys in Testudo Tube, all salamanders captured are photographed for future population analysis.
	Watershed Protection's (WP) Upper Bull Dam removal/Low Head Dam notching proposal: WP staff are leading efforts to improve habitat for JPS and GCWA, and prevent future flooding/erosion/sedimentation issues by notching 5 failing dams on upper Bull Creek. The proposal is in the planning stages, and WP is coordinating with BCP, USFWS, and Corps of Engineers.
	JPS/DNA: Pete Diaz (USFWS) along with WP and BCP staff took tail clips from salamanders at several JPS sites. Pete needed genetic material for a larger project examining species boundaries and determining migration events of these salamanders across the Edwards Plateau.
	JPS/eDNA: BCP staff met with Stantec consulting staff for the final water sampling collection event for the TxDOT-funded eDNA study to help determine if there are salamanders present at springs that may be impacted by future TxDOT road expansion work. The water collected at the Franklin tract (main branch just upstream of tributary 7), a known JPS site, was to show that their methodology is sound.
Plant and Animal Control	
Mammals	To reduce feral hog numbers, BCP staff continue to operate several hog pen traps.
Red-imported Fire Ants (RIFA) and Tawny Crazy Ants (TCA)	With funding provided under the interlocal agreement with the University of Texas at Austin, Ed LeBrun continued monitoring TCA and native ant densities and effectiveness of management strategies.
	BCP staff treated RIFA at several BCP cave sites with boiling water.
Invasive Plants	BCP staff continue to remove non-native plants on City of Austin BCP tracts.
Land Stewardship	
Habitat Restoration	BCP staff and volunteers continued working on restoration projects on the JJ&T and Vireo Preserve tracts to promote water infiltration, slope stabilization, soil restoration, and reforestation on degraded sites to promote future habitat for GCWA and BCVI. Provided trainings for Master Naturalists, American YouthWorks, and corporate groups.

	Staff continued to maintain and expand hyper-local native plant nurseries for restoration projects across the BCP.
	Staff led habitat restoration workdays for volunteers on BCP tracts 3-5 times each week.
	Staff gave away many native plants grown from the Reicher greenhouse to various local organizations tasked with multiple restoration projects.
Oak Wilt	BCP staff inspected several known oak wilt centers in this period.
Wildfire Preparedness	Work began in September, after the avian breeding season ended, to restore shaded fuel breaks compromised by limbs and trees felled by Winter Storm Mara.
	Work on a new shaded fuel break began along the boundary between the Cortaña tract and the UT Golf Club in Steiner Ranch.
	Finalizing an application for the FEMA Hazard Mitigation Grant Program through the Texas Division of Emergency Management (TDEM) for proposed fuel reduction projects on BCP.
Fencing	No fences were installed during the GCWA/BCVI nesting season.
Infrastructure Maintenance	In September, Wildland Conservation Division (WCD) and BCP staff resumed clearing trees and limbs downed by the ice of Winter Storm Mara from roads, trails, and boundaries, and chipping them into mulch – work that was suspended during the avian breeding season.
Law Enforcement	
Trespass/ Criminal Activity	WCD and BCP staff continued to work on efforts to curtail illegal mining of minerals from the base of the bluff along PARD's Hough tract and BCP's Hiller and Gibson tracts.
	Staff continued to observe serious trespass issues at Forest Ridge and the Hiller tracts; this illegal trespass is coming in from the adjacent PARD Hough tract.
	Staff and neighbors continued to notice illegal activities at the end of Old Lampasas Trail. Staff are assisting neighbors in efforts to close this problematic portion of Old Lampasas Trail and working directly with the Travis County Sheriff's office.
	Vandals tore down part of an old corral and damaged vegetation at a relic ranch building on the Cortaña tract. Signs of a recent campfire within the structure were also found. WCD rangers reconstructed the corral, posted a "no trespassing" sign, and recommended demolishing this "attractive nuisance" to further discourage trespass.
	A neighbor on the northeast boundary of the Cortaña tract trespassed onto the property to cut up ice-downed limbs. WCD and BCP staff advised the neighbor that such trespass is prohibited.
	Staff found a recently marked new trail on the Senna Hills tract in August. WCD rangers monitored and found no further activity on the trail over the next month.

	The yard crew of a neighbor on the northeast boundary of the Cortaña tract dumped limbs from an ice-damaged tree across the fence onto BCP property. Response pending.
	Continued patrols of BCP boundaries.
	Rangers investigated a large brush pile on Long Canyon near the HOA trail.
Outreach/Volunteers	
See above and *BCP Partners Education Summary April – September 2023*	