

City of Austin's BCCP Activities
Quarter 1 Update: 1 October – 31 December 2018

BCCP Administration	
Infrastructure Projects	Four Infrastructure Habitat Assessment Applications were processed, and Determination Letters were issued from October - December 2018.
Land Acquisition	<p>In September 2018, the 5 acre Massey tract adjacent to Barton Creek Greenbelt preserve was acquired through an Urban Forestry grant. It contains Golden-cheeked warbler habitat and at least 1 known cave (Spider Wire).</p> <p>The Champions Tract has been sold to a new owner and the new owner, City Real Estate, and AW BCP are moving forward with steps for a 30-acre acquisition that has along FM2222 and City Park Road.</p>
Reports and Events	On Nov 14, AW BCP and PARD staff met with motorcycle users at Emma Long Park to examine trail requested for reopening or constructing. AW BCP staff are working on an update to the Tier III plan to include potentially reopening specific trail(s) requested. Park BCP staff participated in the Westcave Christmas Bird Count, where the count area overlaps BCP property, Dec. 18.
Personnel	No update
Administrative	
Rare and Endangered Resources Management	
Golden-cheeked Warbler (GCWA) and Black-capped Vireo (BCVI)	BCP staff completed avian data entry and quality control, then began drafting annual report.
	Despite efforts to reclassify the GCWA from endangered to "species of least concern," the GCWA will remain listed as endangered on the IUCN Red List, which was published on November 14, 2018.
Bracted Twistflower	BCP staff drafted a report of recent survey data, analyses of short-term trends, and influence of climatic variables (temperature and rainfall) on plant abundance.
Jollyville Plateau Salamander	BCP continues to locate and conduct flow measurement, aquatic life surveys, and water-quality sampling of springs across the BCP on a periodic basis in hopes of locating new salamander locations. An annual report was prepared for USFW.
Karst invertebrates/ karst work	Blowing Sink Restoration. Watershed Protection Department staff has interpreted that the City Land Development Code prohibits cave restoration for some projects such as the Blowing Sink Cave restoration as a development activity within a CEF buffer that requires a development permit and variance. AW BCP will request City Council to clarify the City's intentions as revisions to the LDC to allow compliance with our federal permit. AW BCP intends to offer guidelines for cave restoration.
	Equipment for long term sampling of Flint Ridge Cave Drip was ordered and expected to arrive in January 2019. However, on January 4 2019, Watershed Protection reported they had ceased monitoring runoff into Flint Ridge since Oct 1, 2018. AW BCP expects to order additional flow meters to replace the previous equipment and expects to assume all monitoring and reporting requirements for Flint Ridge Cave. An annual report on Flint Ridge Cave monitoring is included in the annual BCP report.
	Conducted cave faunal surveys and cave cricket exit counts (ongoing)

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	<p>Conducted cave excavation and restoration work at several sites. Locating and assessing undocumented karst features (ongoing), currently focusing on Rollingwood and Balcones National Wildlife Refuge Karst Faunal Regions, where staff have excavated a feature discovered by FWS staff, the new feature has been excavated down to a stream passage and rare troglobitic and stygobitic species have been observed and collected for species identification. A survey for potential caves was conducted on Circle C Ranch at Slaughter Creek Park to locate addition caves for substitution or education. AW Wildlands staff and contractors worked to remove trash from several likely caves on Hudson WQPL in Hays County in order to potentially open new karst ecosystem habitat and increase recharge quantity and quality. Two new caves were discovered on AW BCP Park West preserve by removing fill.</p> <p>Air monitoring of three caves (Irelands, Whirlpool and Grassy Cove) is continuing through Zara Environmental. An update on results to date is included in the annual BCP report. The monitoring is intended to study cycles and sources of carbon dioxide and airflow, improve cave safety, and examine effects on the cave ecosystem.</p>
Plant and Animal Control	
Mammals	11 white-tailed deer and 20 hogs were removed by contractors and City staff this quarter.
Red-imported fire ants and Tawny crazy ants	Tawny crazy ants continue to be monitored per established protocol from Section 6 grant.
Soft ticks/ Relapsing Fever	AW BCP staff are monitoring caves in the Austin area for soft ticks to improve public safety and study means for discouraging their habitation of caves. A newly acquired BCP preserve cave (Spider Wire) was discovered to contain soft ticks that contain bacteria transmitting relapsing fever, temporarily ceasing cave restoration operations there. AW BCP staff continue to work with Texas State University, Baylor College of Medicine, Austin Health Department, and Center for Disease Control to study factors influencing the expansion of soft ticks in the Austin area. AW BCP staff placed warning signs at both Bullet Cave on Barton Creek and gated Live Oak Cave in the Village of Western Oaks Karst Preserve and Watershed Management Area to alert the public for possible hazards.
Invasive Plants	BCP staff and volunteers are continuing efforts to remove non-native plants on COA BCP tracts.
Land Stewardship	
Habitat Restoration	Staff and volunteers continue to implement demonstration projects at the Vireo Preserve to promote water retention, slope stabilization, soil restoration, and regeneration of native plants on degraded areas that are currently not habitat for either the GCWA or BCVI. Since Vireo Preserve supports many of the habitat types observed throughout the BCP, lessons learned from restoration work at this site are applicable to other areas within the BCP.
	Following removal of old transient camps and trash dumps by a contractor on Friesenhahn and adjacent parts of Barton Creek Wilderness in spring 2018, BCP and PARD staff cooperated to clean up remaining fine debris; the project was officially completed in December 2018.

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	<p>BCP staff collected shin oak acorns from different BCP tracts in September and October 2018, for use in re-vegetation work and studies elsewhere on the Preserve.</p> <p>BCP staff planted over 3000 shin oak acorns in areas being managed for BCVI on the Cortaña tract. Of these, flagged grouped plantings of 1360 acorns in three areas, so sprouting rates can be estimated.</p> <p>As part of a study to evaluate effects of herbivory and shade on oak seedling germination and survival, BCP staff planted 1,120 acorns of each of shin oak, live oak, and Texas red oak (3,360 total) in unshaded, caged/unshaded, caged/shaded, and Ashe juniper-oak canopy plots at two BCP sites on October 29 and 30. Results from similar studies on BCP indicate shade is critical for shin oak and Texas red oak seedling survival, especially during late summer months.</p>
	<p>BCP staff is collaborating with the University of Texas to investigate endophyte-plant relationships on Ashe juniper bark and leaves. Endophytes are fungi that live on the plant and may enhance host growth, nutrient acquisition, and/or improve the plant's ability to tolerate abiotic stresses such as drought and pathogens. Potential medicinal benefits and interactions with the oak wilt fungus are also being explored.</p>
Fencing	None.
Wildfire Preparedness	No current projects.
Law Enforcement	
Trespass and Criminal Mischief	<p>Wastewater discharge from Western Travis County Public Utility Agency occurred on November 6, 2018 to a creek through Bohls BCP preserve. A water sample was collected on Nov. 7 from a remnant pool and sent to LCRA for analysis that showed elevated nitrate + nitrite nitrogen (11.8 mg/l), sodium (67.8 mg/l), chloride (93.3 mg/l), sulfate (94.7 mg/l), lithium (9.26 ppb), lead (0.626 ppb), nickel (5.21 ppb), copper (2.49 ppb), and zinc (4.55 ppb). LCRA lab also reported low ammonia (<0.008 mg/l), undetected arsenic (<0.7 ppb) and cadmium (<0.4 ppb), and 4 colonies/100 ml of E. Coli bacteria.</p>
Outreach/Volunteers	
<p align="center">See <i>BCP Partners Education Summary October - December 2018</i>.</p> <p><i>AW BCP staff facilitated cave tours for non-profit Explore Austin (on Nov 10, Nov 17) which mentors children from low-income families, Master Naturalist Annual Conference (Oct 26), Jarrell High School (Nov 5), and Wildlands Volunteer Appreciation Cave tour (Nov 3).</i></p>	