

Colorado Fish and Wildlife Conservation Office



Lakewood: Pam Sponholtz, Project Leader

US Air Force Academy, Colorado Springs: Brian Mihlbachler, Biological Scientist, Diane Strohm, Biological Scientist, Greg Speights, Biological Technician, Steve Wallace, Forestry Technician

Buckley Air Force Base, Aurora: Krystal Phillips, Fish and Wildlife Biologist

US Army Pueblo Chemical Depot, Pueblo: Max Canestorp, Natural and Cultural Resources Manager

Rocky Mountain National Park, Estes Park: Chris Kennedy, Fish Biologist

August 2013 Accomplishment Report

Leadership in Science and Technology

Time of travel studies: Chris Kennedy conducted time of travel studies on several creeks in Rocky Mountain National Park. The purpose of these studies is to determine the rate at which chemicals used in renovation will travel and disperse through the system.

Southern redbelly dace surveys: Max Canestorp, Pam Sponholtz and Paul Foutz (Colorado Parks and Wildlife) conducted a population estimate of southern redbelly dace, a state-listed endangered species, at the AWS Pond on Pueblo Chemical Depot (PCD).



Colorado Fish & Wildlife Conservation office's Project Leader, Pam Sponholtz and Paul Foutz (CPW) measuring Southern redbelly dace

Partnerships and Accountability

EQCC meeting: Max Canestorp participated in the quarterly Environmental Quality Control Committee (EQCC) meeting at PCD, updating staff on natural and cultural resource issues.

Impacts to creeks on the Academy: Brian Mihlbachler photo-documented riparian habitat and stream channel impacts to Monument Creek and the tributary creeks as a result of the 4-inch rainfall event in August. Significant habitat loss, channel incision, sedimentation, and headcutting occurred on Black Forest Creek, Smith Creek, Monument Branch, Middle Tributary, and Black Squirrel Creek. Storm runoff volume estimates range from 300-1600 cfs for the tributaries to over 7000 cfs on Monument Creek. Unfortunately, 4+ years of stream stabilization and habitat restoration on Monument Branch and Middle Tributary, at an estimated cost of \$2.5M, was lost entirely as a result of the storm and other factors (i.e., ineffective off-base stormwater management).



Colorado Spring's Air Force Academy - Loss of the designed channel, floodplain, and grade control structures on Middle Tributary from the August rainfall.

Bird Airstrike Hazard (BASH): Air Force level flight safety compliance directs each installation with a flying mission to establish a Bird Hazard Working Group (BHWG). Krystal Phillips with Buckley Air Force Base (BAFB) participated in the monthly meeting and served as technical point of contact, contracting officer representative, and coordinator for the airfield wildlife barrier fence contract. The fence is to be installed in the fall of 2013 in an effort to prevent wildlife and avian conflicts by discouraging black-tail prairie dog, rabbit, and coyote access to the airfield.

Assess wetland and Preble's habitat impacts: As a result of the four-inch rain event in August, Brian Mihlbachler met with Colorado Department of Transportation (CDOT) and Corps of Engineers staff to assess wetland and Preble's habitat impacts resulting from the rain event in August. Significant channel incision and sedimentation occurred at all highway culvert crossings from heavy runoff, but no additional CDOT mitigation for the I-25 widening project was determined to be practical or warranted.



Erosion and sedimentation of Preble's meadow jumping mouse habitat west of Interstate 25 on Black Forest Creek.

Integrated Natural Resources Management Plan (INRMP) Work Plans: Revised guidance from the Air Force outlines how each installation is to publish work plans for their five year INRMP implementation. Krystal Phillips authored and revised BAFB INRMP five year work plans in order to meet Air Force level expectations and streamline BAFB natural

resources program by individualized task and prioritization.

Native American Consultations: Diane Strohm participated in consultations with the Zuni and Sioux tribes. The group looked at numerous sites of potential significance as they continued building positive partnerships with tribal members.



Cathedral Rock, a site of special significance to numerous tribes, is in a restricted area of the Academy

Explosive Ordinance Disposal (EOD) Range Siting Meeting: Krystal Phillips participated and served as technical expert for natural resources for the discussion on location options and quantity distance arcs to known migratory nesting locations on BAFB. Overall Krystal's role allowed for effective planning and input on natural resource limitations and solutions thus ensuring the military mission is able to be accomplished.

Support to National Firefighting Program: Diane Strohm spent the last ten days of August on her second assignment this season as an infrared interpreter (IRIN). She mapped several fire complexes in southern Montana and Yellowstone National Park.

Upper Monument Creek Landscape Restoration Initiative: Diane Strohm performed reconnaissance of fuels reduction and forest thinning treatments north of the Academy with the Pike-San Isabel National Forest Silviculturist, as part of the Upper Monument Creek forest restoration planning initiative. Treatments in close proximity to the Academy could impact future wildfire hazard and forest

health across the region. The US Forest Service will consider the group's proposal in its upcoming environmental analysis of this area.

Cadet Research on Natural Resources: Diane Strohm and Brian Mihlbachler met with an Academy professor to discuss research projects for cadets interested in natural resources. Potential projects include aerial reconnaissance to locate beetle-infested trees; regrowth of Gamble oak following fuels reduction treatments; tree growth response to forest thinning; and wildlife habitat monitoring.

Data call: Max Canestorp responded to an annual programmatic data call from Headquarters, requesting information on PCD's natural and cultural resources.

Union Pacific railroad: Brian Mihlbachler continues to try and engage the Union Pacific railroad to partner with U.S. Air Force Academy to stabilize an advancing headcut on Monument Creek which threatens a railroad bridge and upstream riparian and wetland habitat. Previous attempts to coordinate with the railroad have been mostly unsuccessful, but damage from the August 2013 storm highlights the importance of such action.



Headcut advancing upstream of railroad crossing on Monument Creek which could undermine the bridge abutments and erode high quality riparian habitat.

Species Conservation and Management

Mark-recapture population estimate on cutthroat trout: Chris Kennedy completed mark-recapture population estimate on Adams Lake cutthroat trout population. The estimate is expected to be below the necessary to be considered a stable, self-sustaining population.



Adams Lake cutthroat trout

Native cutthroat trout restoration projects: Chris Kennedy gathered information on Boundary Lake and Paradise Creek for purposes of conducting a native cutthroat trout restoration projects. Activities at Boundary Lake included fish surveys (no fish detected), depth measurements, water quality measurements and aquatic invertebrate sampling (in cooperation with USGS). Activities on Paradise Creek included collection of fish for disease testing (in cooperation with USFWS Bozeman Fish Health Center).



National Park Service Employee Jon Simonds taking water flow measurement on Paradise Creek

Electrofishing survey on Hague Creek: Chris Kennedy conducted electrofishing survey on Hague Creek cutthroat trout population. Brook trout were found to outnumber cutthroat trout with only 11 cutthroat trout captured. All brook trout were removed.

Wildlife Barrier Fence: The installation of a metal wildlife barrier skirt on existing perimeter fence is one wildlife management strategy BAFB employs to ensure wildlife species such as black-tailed prairie dogs, coyotes, and rabbits, are effectively managed in unimproved areas per the BAFB Integrated Natural Resources Management Plan (INRMP). Krystal Phillips coordinated and led a site visit for U.S. Fish & Wildlife Service (USFWS) Engineers to view existing wildlife barrier material, site locations, and successes and failures of effective barrier installation near East Toll Gate Creek and surrounding floodplain to strategize the design method for future installation(s). The USFWS team will install the next section of wildlife barrier on BAFB tentatively in late October or early November 2013.

Burrowing owl surveys: Max Canestorp conducted burrowing owl surveys over a prairie dog colony in an area slated for construction. No burrowing owls were observed in the area.

Preble's Conservation Agreement annual report: Brian Mihlbachler collected post-construction photos and vegetation cover information from numerous project sites to be included in the 2013 Preble's Conservation Agreement annual report to U.S. Fish & Wildlife Service.

Commissary's bear-proof trash compactor: Brian Mihlbachler continues to work with Contract Services to provide a bear-proof trash compactor at the Commissary, where the base typically has the highest incidence of bear sightings and human encounters.



Unsecured food waste attracting bears to the Commissary.

Habitat Conservation and Management

Academy Leadership briefing: Diane Strohm briefed senior leadership on the forestry and fuels reduction programs, including forest health issues and recent forest thinning and fuels mitigation projects.

Pine Valley Home Demolition Area: Steve Wallace and Diane Strohm surveyed a portion of the Pine Valley housing area scheduled for demolition on the Academy. They marked and mapped native trees with a good chance of survival, primarily ponderosa, pinon pine and juniper. This will enable project managers to incorporate removal of remaining trees into the demolition project. A nearby area which was demolished several years ago has many dying trees, due to the lack of watering to which these trees were accustomed, and the persistent drought. Most of these are non-native or off-site trees that are not commensurate with restoring the site to a natural condition.



A dying white fir in the Pine Valley Housing area, to be removed as part of home demolition

General Officer's Quarters (GOQ) Forestry Assistance: Steve Wallace provided technical assistance to the GOQ staff to evaluate the health of several large pines in close proximity to several Generals' homes.

Forest Health surveys: Steve Wallace and a contractor have stepped up field inventory to locate beetle-infested trees, which are immediately cut and chipped or de-barked to minimize insect spread. Drought conditions have stressed trees and greatly increased mortality from the Ips pine engraver beetle and twig beetles this year, with over 700 trees removed this year.

Jacks Valley Forest Thinning: Steve Wallace started marking a 15-acre area of forest along Northgate Boulevard in south Jacks Valley, to be thinned early this autumn on the Academy. This area has suffered high beetle mortality due to densely overstocked conditions and dwarf mistletoe infection.

Habitat impacts: Max Canestorp investigated damage done to habitat by guards patrolling off road during wet weather conditions.

Noxious weed control: Max Canestorp assisted with control efforts of Canada thistle and Russian knapweed.

Noxious weed spraying pre-bid meeting: Brian Mihlbachler participated in a pre-bid meeting with noxious weed spraying contractors interested in bidding the upcoming base contract. Over 20 state-listed noxious weeds are targeted by the base's integrated noxious weed management plan.

Weed spraying priorities for fall 2013: Brian Mihlbachler coordinated with Open Range Weed Control to develop weed spraying priorities for the fall 2013 season. A new population of Dalmation toadflax was

identified and treated along upper West Monument Creek.

Lake Williams Invasive Species Vegetative Management: Vegetative invasive species management on BAFB is accomplished using a variety of methods such as chemical, mechanical, and biological control treatments. Krystal Phillips successfully planned and executed the mechanical treatment (tractor mowing) of targeted invasive species such as kochia, bindweed, and Canada thistle, near and around Lake Williams. This treatment was necessary in order for BAFB to follow established goals and objectives outlined in the BAFB Integrated Natural Resources Management Plan (INRMP), and reduce any potential for wildland fire fuel building at this site as Family RV Camping is located to the west of the site.



Targeting invasive weed species on BAFB

Improperly managed stormwater: Brian Mihlbachler identified erosion, sediment, and boundary fence damage on U.S. Air Force Academy property as a result of improperly managed stormwater directed to the base from the Copper Ridge development near Northgate. The potential for stormwater impacts was discussed several months ago with the City stormwater engineer and the Copper Ridge developer, but no action was taken to address the base's concerns.



Sediment flowing toward Smith Creek and Preble's meadow jumping mouse habitat from the Copper Ridge development.

Public Use and Recreation

Geographic Information System (GIS) mapping of natural resource data: Brian Mihlbachler and Diane Strohm met with Academy GIS specialists and representatives from the Colorado State University Center for Environmental Management of Military Lands to review GIS data needs and develop a plan to fill data gaps and incorporate this into the Academy Geobase.

Stocking rainbow trout: Greg Speights stocked 9-11" rainbow trout in the U.S. Air Force Academy and Farish Recreation Area lakes.

Maintenance on trails including erosion control: Greg Speights identified repairs needed on the Falcon Trail and performed routine maintenance on approximately 6 miles of trail on the Academy. Greg also worked with

Medical Group volunteers to close and install erosion controls on undesired social trails.

Monitoring water quality at creek diversions: Greg Speights and Brian Mihlbachler continue to monitor the water quality at creek diversions which feed the fishing lakes to help minimize ash and sediment impacts from the Black Forest Fire and Waldo Canyon Fire.

Myrtle spurge sites: Greg Speights resurveyed several myrtle spurge sites and pulled new plants that had sprouted since late-spring.

Workforce Management

Revision of Position Description: Krystal Phillips authored and edited position description for a biological science technician at BAFB to assist with in house field surveys, habitat modification, and invasive species management. Krystal was selected to participate on the interview panel to staff a newly acquired position to serve as a Fish and Wildlife Biologist on Francis E. Warren Air Force Base located in Cheyenne, WY.

Cultural Resources

Isolated find (IF) at BAFB: Archeologist, Bret Hoffberger, of Terra Graphics contractors, found an isolated find (IF) in February 2013, while in the field working on a habitat modification project; Krystal Phillips and identified the object as a historical stone drill point. As a result, the cataloged IF needed to be transported to the Colorado State University-Boulder curation repository to be added to the BAFB existing artifact collection. Krystal participated in transporting the artifact to the facility and assisting in gather additional photographs of the existing BAFB artifact collection to be used in the BAFB Integrated Cultural Resource Management Plan update and revision currently in progress.

Edited by: Emily R. Fausch