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Grand Mesa, Uncompahgre, and Gunnison National Forests

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THE MISSION OF THE WILDLIFE, FISHERIES, AND RARE PLANTS PROGRAM IS TO PROVIDE FAVORABLE ECOLOGICAL CONDITIONS TO SUPPORT ALL NATIVE AND DESIRED NON-NATIVE SPECIES OVER THE LONG-TERM AND TO PROMOTE RECOVERY OF FEDERALLY LISTED SPECIES.

The Grand Mesa, Uncompahgre, and Gunnison National Forests (GMUG, for short) encompass about 3.15 million acres of western Colorado. The Forest includes a diverse array of ecosystem types ranging in elevation from 6,500 feet to over 14,000 feet. The Forest supports 74 species of mammals, 274 species of birds, 19 species of fish, 8 species of amphibians, 11 species of reptiles, and thousands of plant species. There is 1 endangered species, 4 threatened species, and three species that are candidate or proposed for listing under the Endangered Species Act found on the GMUG.

Fiscal Year 2012 was a great year for the GMUG staff biologists. We provided written biological support, which is required by the National Environmental Policy Act (NEPA), on 25 projects. We completed formal or informal consultation with the U.S. Fish and Wildlife Service on the potential effects of four projects on threatened, endangered, and proposed species. We collaborated with several federal and state agencies, and local governments on a Candidate Conservation Agreement for Gunnison sage-grouse. We completed restoration activities on approximately 45,000 acres of terrestrial and riparian habitats, over 25 miles of stream, and 515 acres of lake habitat. This newsletter highlights a few of the projects we completed last year.

In addition you will find a detailed accounting of how the GMUG Wildlife, Fish, and Rare Plants program allocated its budget in Fiscal Year 2012 (October 1, 2011— Sept 30, 2012). Each year the Forest is responsible for doing specific work in an assigned amount of aquatic or terrestrial habitats. These assignments are called targets. Targets are one way the Forest Service measures its success in protecting and restoring the land it manages.

Most importantly, this newsletter is a way to let our partners and other stakeholders know their involvement is critical to the success of the work we do each year.

2012 SCIENCE AND ENGINEERING APPRENTICES STUDY GENETICS, FISH MOVEMENT



Brook holds while Sarah marks a rainbow trout.



Brook releases marked fish downstream of the barrier.
Photos: Matt Dare

In 2012 the Science and Engineering Apprenticeship students worked with GMUG fisheries biologists to collect information on native cutthroat trout genetics and fish passage over a natural barrier on Dominguez Creek. Delta High School students, Brook Taylor and Sarah Stalcup, spent six weeks of their summer with GMUG specialists learning about land and resource management. Their experience culminated in two weeks of fieldwork during which they helped collect tissue samples from a cutthroat trout population suspected to be native to Colorado's Western Slope. Additionally, Brooke and Sarah conducted an experiment in which they marked rainbow trout collected upstream of a suspected barrier in Dominguez Creek and then released them downstream of the barrier. The purpose of the experiment was to determine if the rock formation prevented upstream fish movement in the summer. Dominguez Creek is a candidate for reclamation to create a native cutthroat trout population.

The tissue samples Brooke and Sarah helped collect proved to come from a native cutthroat trout population which was previously unknown to Federal and State biologists. The population is now managed as a native cutthroat trout Conservation Population. When Brooke and Sarah returned to the barrier a week after they marked fish they located three marked rainbow trout upstream of the barrier. Their findings indicate that the barrier cannot be used to separate a potential native cutthroat trout population from non-natives downstream.

COLLABORATION THE KEY TO REPLACING SEVERAL GMUG CULVERTS



BEFORE; Photos: Clay Speas

AFTER



In 2012 we replaced or updated seven stream crossings to maintain system roads, restore a functional floodplain, and provide aquatic organism passage. A low-water ford was installed on Dominguez Creek, on the Uncompahgre Plateau, and six culverts were replaced on other GMUG streams. Existing culverts were in poor condition resulting in environmental damage and public safety concerns. Species benefited include boreal toad, brook trout, brown trout, and numerous small mammals who use riparian corridors for movement. Our partners paid for all installation costs. The Forest Service contributions paid for design and contract administration. Local contractors were used to install the six culverts and the Mesa County Road Crew installed the low-water ford. Total contract award costs were \$202,904; culvert purchase and supplies cost \$177,413. The Forest has completed replacement of all non-functional culverts in three priority watersheds, restoring over 50 miles of high-quality aquatic habitat.

NATIVE CUTTHROAT TROUT RELEASED IN WOODS LAKE

The release of native cutthroat trout into Woods Lake was the culmination of a 5-year collaboration between the GMUG National Forest and Colorado Parks and Wildlife. The project involved the construction of two in-stream barriers, two years of chemical treatments to remove brook trout, and the collection and release of native cutthroat trout into the reclaimed watershed. Fifteen Forest Service professionals and over 30 CPW biologists participated in the fieldwork.

Two-hundred and sixty-seven cutthroat trout were collected from a stream on the Uncompahgre Plateau and transported by truck to Woods Lake. In 2013 GMUG biologists will assist CPW in collecting eggs from the same population in order to stock them into tributaries to Woods Lake.



CPW Biologist, Dan Kowalski, holding a cutthroat trout destined for Woods Lake. Photo: Lauren Buchholz, CPW.

CULVERT INVENTORY REPORT

Since 2004 the GMUG has been evaluating aquatic organism passage at road-stream crossings on the Forest. Forest personnel used a standard aquatic organism passage protocol to evaluate road-stream crossings, which typically feature culverts. In 2012 the survey was completed; a total of 355 culverts were sampled. Of the 355 crossings surveyed, 153 were found to be passable and 34 required computer-based analysis of passage. The additional analysis is on-going. The survey identified 168 crossings that are barriers to movement of aquatic organisms like fish and amphibians. Information on culvert barriers is one factor Forest staff will use to identify priority watersheds for landscape restoration.



Technician Missy Tracy inspects a culvert that blocks fish passage. Photo: Tory Eyre, USFS.

GMUG BIOLOGISTS ASSIST IN RECLAMATION OF WATER DOG RESERVOIR

Water Dog Reservoir is located on the Grand Mesa, north of Delta, Colorado. The reservoir, managed by Colorado Parks and Wildlife as a recreational fishery, required chemical treatment to remove white suckers. White suckers are a non-native, non-game species that were introduced into the reservoir illegally. Last July, GMUG Biologists Mike Carrillo and Matt Dare assisted Lori Martin and other CPW biologists in applying rotenone to the reservoir. After reclamation, the reservoir will be stocked with rainbow trout, a non-native gamefish that is favored by anglers.



Matt Dare modeling a chemical suit after spending a hot day in July dispensing rotenone. Photo: Lori Martin, CPW

VEGETATION TREATMENTS DESIGNED TO RESTORE UNCOMPAHGRE PLATEAU LANDSCAPE



Hydro-axing juniper in Calamity basin.
Photo: Julie Grode, USFS



Monitoring a 1,000 acre burn in Ponderosa pine. Photo: Curtis Keetch, USFS



Uncompahgre Fritillary butterfly habitat near Uncompahgre Peak in the San Juan Mountains of Colorado.
Photo: Kevin Alexander, Western State College

The restoration of forest habitat on the Uncompahgre Plateau continued in 2012 as the USFS and our partners worked to 1) enhance resiliency, diversity and productivity of native ecosystems; 2) reintegrate and manage wildfire as a natural landscape ecosystem component; 3) re-establish meadows and open parks; and 4) establish robust native understory communities. Restoration activities in 2012 included fuels treatments by hydro-axe, traditional forestry, and controlled use of fire. Numerous species benefit from this work including Gunnison sage-grouse, neo-tropical birds, elk, deer, and variety of native plants and plant communities.

Partner funds provided through a State-Wide Habitat Partnership Program grant covered 50% of all contract costs associated with hydro-axe and mastication treatments. Approximately \$26,220 of the grant funded prescribed burning and mechanical and hand-line construction. The Veterans Green Crew, from Durango, Colorado, completed much of the hand line construction associated with controlled burns. The Uncompahgre Partnership applied native seed to treated areas.

In 2012 the USFS and our partners accomplished fuels treatments on 1,668 acres of oak, Ponderosa pine, pinyon-juniper, and sagebrush habitat. We also prepared 3,750 acres for prescribed burning, which will be conducted in 2013.

2012 BUTTERFLY MONITORING

The GMUG, in cooperation with several partners, including other National Forests, the BLM, USFWS, and Western State College in Gunnison, CO., continued monitoring the federally protected Uncompahgre Fritillary Butterfly (shown below). The butterfly occurs in the San Juan Mountains in 11 colonies. 2012 monitoring found butterflies in all 11 colonies. A quantitative estimate of the size of three populations found about 7,000 individuals. Genetic work completed by South Dakota State University indicates the 11 colonies are reproductively isolated and exist independently of each other. 2012 was the 12th year of monitoring, which will continue in 2013.



Photo: Kevin Alexander, Western State College

GMUG PART OF A CANDIDATE CONSERVATION AGREEMENT FOR GUNNISON SAGE-GROUSE

In 2012, the GMUG National Forest, in partnership with the BLM, NPS, NRCS, USFWS, Colorado Parks and Wildlife, and Gunnison and Saguache Counties completed and signed a Candidate Conservation Agreement to promote conservation of the Gunnison Basin population of Gunnison sage-grouse. A CCA is a formal, voluntary agreement between the U.S. Fish and Wildlife Service and one or more federal parties for species that are candidates for listing under the Endangered Species Act. The CCA specifies habitat conservation measures that would be implemented to address threats with the goals of (1) avoiding, (2) minimizing, and or (3) mitigating impacts.

The CCA applies to 395,458 acres of occupied habitat on federal lands, including 84,026 acres on the GMUG's Gunnison Ranger District. Gunnison Ranger District Wildlife, Range, Recreation, and Lands/Special Uses staff contributed in the development of the CCA. If the species is listed, the conference opinion will be converted to a biological opinion covering many of the ongoing actions on federal lands in the Upper Gunnison Basin essentially easing the transition from a sensitive species to an ESA federally protected species. The goal in 2013 is to expand applicable pieces of the CCA to sub-populations outside the Gunnison Basin.



Gunnison sage-grouse habitat on the Gunnison Ranger District.
Photo: Matt Vasquez, USFS

2012 DROUGHT BRINGS CHALLENGES TO HABITAT IMPROVEMENT PROJECT

In 2012 the Gunnison Ranger District continued its work on a habitat improvement project in Taylor Canyon, near Gunnison and Crested Butte. The project, as planned, was supposed to rely primarily on prescribed burning to improve habitat for mule deer, elk, and bighorn sheep. Because of extreme drought conditions last summer fire restrictions were enacted in May and the team switched their focus to mechanical thinning to accomplish the project. Two Smokejumpers from Idaho were brought in to assist Forest personnel in thinning dense stands of lodgepole pine using chainsaws. Seasonal staff continued these treatments in the fall. Of the 160 acres of habitat that has been treated 110 were accomplished using mechanical techniques.



A male Gunnison sage-grouse strutting on a lek during the breeding season. Photo: U.S. Bureau of Land Management



A controlled burn in Taylor Canyon. Photo: Matt Vasquez, USFS



Mechanical thinning in Taylor Canyon. Photo: Matt Vasquez, USFS



Above: mountain lion
Below: cottontail rabbit
Photos: Matt Vasquez,
USFS



Wildlife biologist, Luke Holguin, with a group of 5th graders. Photo: Curtis Keetch, USFS

CPW Biologist assists with a snow-tracking workshop. Photo: Matt Vasquez, USFS



GUNNISON RD INITIATES WINTER WILDLIFE MONITORING PROGRAM WITH HELP OF PARTNERS, PUBLIC

Tracks can tell a lot about the movement and occurrence of animal species. Throughout the winter fresh layers of snow can provide a diary of animal activities. The Gunnison NF wildlife biologist, Matt Vasquez has initiated a snow tracking program (associated with Nature Watch) involving interested students from Western State Colorado University and volunteers. On February 11, 2012, an experienced tracker from Colorado Parks and Wildlife and Vasquez provided field training on snow tracking to 12 students and 2 public volunteers. We surveyed a 1.5 mile route, documenting tracks from 9 mammalian species in a relatively narrow and diverse forested corridor between the Gunnison Ranger District and the Rio Grande NF that seems to funnel wildlife near Cochetopa Hills. Volunteers and students conducted an additional 3 surveys. In total, 13 mammal species were detected, including mountain cottontail, coyote, bobcat, mouse, moose, short-tailed weasel, red squirrel, elk, snowshoe hare, deer, bear, vole, and mountain lion.

In FY 2013, Vasquez is working with Western State Colorado University to establish a snow-tracking internship program. Two students have been selected for 2013. "The goal is to document lynx presence within a known lynx travel corridor," says Vasquez. "But, we also get a pretty good idea about the occurrence and abundance of other forest carnivores and prey species such as snowshoe hares." The long-term goal is to survey routes several times each winter. Using the data it may be possible to estimate relative abundance for some species and determine population trends.

GMUG BIOLOGISTS' PUBLIC OUTREACH EFFORTS IN 2012

Each year program staff participate in numerous outreach activities where members of the public can learn about the wildlife, fisheries, and rare plant conservation work done by the GMUG and its partners. These are some highlights from outreach activities in 2012:

- Mike Carrillo and Matt Dare demonstrated electrofishing and discussed stream fish ecology with students at Cedaredge Middle School.
- Curtis Keetch and Luke Holguin hosted 8 programs for local students that explored local wildlife and forest management.
- Matt Vasquez and other Gunnison RD staff hosted a Junior Snow Ranger program at Crested Butte Ski Area.
- Matt Vasquez hosted a wildlife tracking booth at a local fishing derby in May.
- Matt Dare conducted a stream ecology workshop at a Native American Youth Camp, near Telluride.
- Mike Carrillo helped with the USBLM Take It Outside program, for elementary school children.
- Teachers from three schools used Aquatic Sampling Kits provided by the GMUG.

2012 TRAVEL MANAGEMENT SUMMARY

Travel management is an on-going activity on many National Forests. Last year the GMUG personnel implemented a number of projects to close user-created routes and improve wildlife habitat on three Ranger Districts. On the Gunnison RD, about 100 miles of roads were closed, which improved approximately 32,000 acres of wildlife habitat. Staff on the Norwood and Paonia RDs each closed about 24 miles of illegal roads, which secured 11,710 acres of wildlife habitat. Road closures increase the quality of habitat for a number of species, including big game and Gunnison sage-grouse.



A decommissioned road in sage-grouse habitat. Decommissioning typically involves destruction of the road, barriers, and signage.

Photo: Matt Vasquez, USFS

GMUG FEN REPORT AVAILABLE ONLINE

Fens are a rare type of wetland that are present on the GMUG. In 2012 the GMUG Fen Team completed and published a comprehensive fen report.. You can find the completed report and learn more about fens here:

http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5363703.pdf

GMUG WFRP PROGRAM STATISTICS

WFRP Program Expenditures FY 2012					
Program area	Fish and Aquatics	Terrestrial Wildlife	Ecology and Rare Plants	Inventory and Monitoring	Total
Appropriated funds (Core)	\$ 188,365	\$ 483,421	\$ 80,500	\$ 60,100	\$ 812,386
Internal partnerships (Integrated)	\$ 79,490	\$ 369,026	-	-	\$ 448,516
External partnerships	\$ 446,317	\$ 210,671	-	\$ 1,100	\$ 658,088
				Grand total	\$ 1,918,990

WFRP Program Accomplishments FY 2012				
Program area	Fish and Aquatics	Terrestrial Wildlife	Ecology and Rare Plants	Inventory and Monitoring
Appropriated funds (Core)	6.5 stream miles; 2.50 lake acres	12,436 acres		
Internal partnerships (Integrated)	0.4 stream miles	11,203.5 acres	-	18,700 acres, 13 species, 7 Forest Plan monitoring questions addressed
External partnerships	9 stream miles; 2.89 lake acres	22,132.5 acres	-	
T+E species tasks accomplished	1	1	1	

Program Plans for FY 2013

Fisheries

- Collect temperature data from our network of 41 permanent stream temperature sensors.
- Deploy 30 additional stream temperature sensors in GMUG streams to enhance efforts to model the potential for climate change to affect fish populations.
- Continue surveys to identify previously undocumented populations of native cutthroat trout.
- Work with the Watershed Team to replace a culvert on Cow Creek.
- Begin data collection to obtain conservation flows on Kelso Creek and Roubideau Creek on the Uncompahgre Plateau.

Terrestrial wildlife

- 3,500 acres of mechanical vegetation treatments and prescribed burning.
- 75-100 miles of road closures designed to secure wildlife habitat and improve habitat for sage grouse.
- Implementation of CCA for Gunnison sage-grouse and expand it to other sub-populations where feasible.
- Update Management Indicator Species assessments for terrestrial species.
- Continue monitoring MIS species, bighorn sheep, Uncompahgre fritillary butterfly, and Gunnison sage-grouse.
- Work with partners to collect data for a Forest-wide viability assessment for bighorn sheep, to be completed in 2014.

Rare plants and ecology

- Implement a 100-acre fencing project to protect De Beque phacelia.
- Response monitoring for managed and prescribed fire projects.
- Establish a monitoring program to evaluate success of native seed use on the Uncompahgre Plateau.
- Complete a wetland mitigation plan for proposed water development on the Grand Mesa.

Our Partners are integral to the success of these projects!

We gratefully recognize and acknowledge our many partners whose contributions and efforts are invaluable to us in successfully fulfilling our mission.

Bear Ranch, LLC

Bureau of Land Management

City of Grand Junction

Colorado Bird Atlas Partnership

Colorado Mule Deer Association

Colorado Parks and Wildlife

Colorado State Forest Service

Curecanti National Recreation Area

Delta High School

Delta County Resource Advisory

Committee (RAC)

Gunnison Basin Habitat Partnership

Gunnison County

Gunnison County RAC

Gunnison Valley Sage-grouse

Mitigation Committee

Gunnison Basin Sage-Grouse

Strategic Committee

Habitat Partnership Program

Mesa County RAC

Montrose High School

Mule Deer Foundation

National Audubon Society

National Park Service

National Wild Turkey Federation

North Fork Habitat Partnership

Program

North Rim Landscape Working

Group

National Resources Conservation
Service

Ouray Grazing Permittees

Rocky Mountain Elk Foundation

Saguache County RAC

Uncompahgre Habitat Partnership
Program

Uncompahgre Plateau Project

U.S. Fish and Wildlife Service

Western State College

Wild Sheep Foundation

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