

**COLORADO
STATE REPORT**
June 1, 2006

Jeffrey M. Ver Steeg, Assistant Director
Colorado Division of Wildlife
6060 Broadway
Denver, CO 80216

\$20 MILLION PROVIDED FOR HABITAT PROTECTION

The Colorado Division of Wildlife (CDOW) has announced the availability of up to \$20 million for funding habitat protection in Colorado. This new initiative is known as the Colorado Wildlife Habitat Protection Program. The program provides an avenue for private landowners, land trusts or other conservation organizations to conserve critical habitat throughout the state. Open enrollment for all program applications will be from June 1, 2006 to July 31, 2006. Emphasis will be placed on the purchase of conservation easements rather than fee title (as required by the General Assembly). However, fee title purchases are allowed.

The main priorities for the program are 1) important habitat for sagebrush-dependent species in general and sage grouse in particular, 2) critical winter range and migration corridors for big game species, 3) Front Range riparian communities, 4) important access for wildlife recreation opportunities, and 5) shortgrass prairie-dependent species in general and lesser prairie chicken habitat specifically. More information can be found on the CDOW website.

TWO NEW CREP PROGRAMS

Colorado has submitted and obtained approval from USDA to proceed with the High Plains Conservation Reserve Enhancement Program (CREP) and the Republican River CREP, both encompassing parts of five counties in extreme eastern Colorado. Signup for both CREPs will begin on June 12, 2006. The Division will be providing the required match for the High Plains CREP, an initiative that focuses on pheasant habitat and hunting access by securing undisturbed nesting cover, brood habitat, and year-long survival habitat, in addition to improving water quality, soil moisture retention and reducing soil erosion. This unique program establishes small (40-acre maximum) CREP parcels as a focus and partners other USDA programs (EQIP Residue Management) and Delayed Minimum Tillage (DMT) wheat fallow on non-CREP associated farmland to provide for whole farm management. High Plains CREP goal is 30,000 acres, in addition to 65,000 adjacent, non-CREP acres of DMT wheat farming. This program will provide conservation incentives totaling nearly \$20 million from USDA and \$6 million from non-federal partners, primarily CDOW through the Pheasant Habitat Improvement Program and Small Game Walk-In Access Program. All acres enrolled in the High Plains CREP will be enrolled in the Walk-In Access Program, providing small game hunters with hunting opportunity on high quality CREP enrollments.

The Republican River CREP's target is enrolling irrigated acres to increase stream flow in the Republican basin. Local water districts are providing match for this program, which will enroll

up to 30,000 acres of irrigated land and 5,000 acres of associated non-irrigated land. While this CREP is primarily water-driven, Colorado will derive significant wildlife benefits in the form of upland bird habitat (greater prairie chicken and pheasants), stream flow to benefit aquatic species of concern, and some short-grass prairie habitat. The Republican River CREP will provide incentives totaling \$62 million (22% from partners) to producers to permanently eliminate irrigation and establish permanent grass cover on enrolled acres.

SPECIES OF CONCERN

J. W. Mumma Native Aquatic Species Restoration Facility

The facility has been able to serve as a refugium for several populations threatened by drought conditions including roundtail chub, Arkansas darter, Northern redbelly dace and Rio Grande chub. These refugia populations now serve as broodstock for restocking fish into their native habitats. The facility also produces bonytail, boreal toads, plains minnow, Colorado pikeminnow, Rio Grande sucker, Southern redbelly dace and suckermouth minnow. Progeny that were released from the facility in 2005 totaled 96,744 fish from eight species. The Native Aquatic Restoration Facility is working closely with Kansas and Nebraska to collect plains minnow to provide additional spawning populations that should produce fish for stocking in 2006. In 2005 a total of 10,265 roundtail chubs were stocked into the Mancos River and La Plata River drainages and 1,120 Arkansas darters were stocked into Big Sandy Creek.

There are approximately 500 boreal toads on the unit from 20 separate breeding sites around the state. In 2005 a total of 8,270 tadpoles and toadlets were experimentally released on the Grand Mesa. Tadpoles and toads were also supplied to research facilities to further the study of chytrid fungus. More release sites are being evaluated for the presence of chytrid fungus in preparation for additional releases in the next few years.

Rio Grande Cutthroat Trout

The CDOW, New Mexico Department of Game and Fish, U.S. Forest Service, Bureau of Land Management, and Jicarilla Apache Nation will begin a systematic, rangewide assessment of Rio Grande cutthroat trout in June, 2006 using the Inland Cutthroat Protocol developed by the U.S. Forest Service for other subspecies of cutthroat trout. The rangewide assessment will employ an ArcGIS mapping tool to geographically reference stream segments containing Rio Grande cutthroat populations. A geographically linked database will be developed that summarizes existing distribution, population status, genetic purity, and habitat information for Rio Grande cutthroat populations. It is anticipated this effort will take two years to complete, with the final status assessment report due by June, 2008.

Arkansas basin greenback cutthroat trout broodstock development

Greenback cutthroat trout from three Arkansas River basin streams were transferred to DOW hatcheries during the height of the drought in 2002. Those fish were spawned in 2003 at the Pitkin Hatchery as a beginning for a new Arkansas basin captive broodstock. The progeny from that breeding became mature in 2006 and were spawned during the month of May with a

result of over 200,000 eggs. Once hatched and reared to 1.5” those fish will be stocked into 11 waters that will provide significant gains towards federal delisting of this species. In addition, some of the fish will be used to further perpetuate a broodstock program at the Poudre Hatchery.

Sagebrush Steppe Activities

Colorado Sagebrush: A Conservation Assessment and Strategy was completed in September, 2005 to identify and address declining sagebrush associated species that are currently not being dealt with in other Colorado planning efforts. The strategy estimates current and historic sagebrush distribution, assesses current status of, and threats to, Colorado sagebrush communities, and proposes conservation goals, objectives, and strategies to avert further decline of sagebrush dependent species of concern. Profiles of 11 species of concern are provided in the appendices. The document will soon be available on the CDOW web site.

Black-footed ferret

Reintroduction of ferrets into Colorado began in 2001 in two separate areas – Coyote Basin and Wolf Creek. To date, a total of 189 animals have been released into Wolf Creek and 8 into Coyote Basin (The majority of Coyote Basin is in Utah). Reintroductions have occurred each fall since 2001. Reproduction in the wild was confirmed for the first time in the Wolf Creek Management Area (WCMA) in November of 2005 when a wild-born female was captured. Minimum end-of-year (2005) population estimate was 13 (4 males, 8 females, 1 unknown). This number is considered a minimum as several additional ferrets were observed, but not confirmed, during the same time frame. This would indicate the population is nearing the reintroduction goal of 20 pre-breeding individuals.

FISH PRODUCTION REPORT

The water supplies for the fish production system increased slightly in 2005 due to the snow pack in 2004-2005. The hatchery system produced and distributed 3.37 million 10” catchable size trout. Fingerling production of trout and kokanee salmon exceeded 13 million fish. Warm-water production was slightly above 54 million fish. The hatchery system continues to develop new brood stock strains of native cutthroat trout for conservation programs. We presently have five strains of pure greenback, one Rio Grande and four of the Colorado River Cutthroat.

The hatchery system is also developing a brood stock of the Hofer strain of rainbow that has shown Whirling disease resistance and may have the potential to help us manage around WD in the wild. The CDOW’s Aquatic Research group are developing a Hofer crossed with a wilder strain of rainbow with the hope it will function well in our sub-catchable program.

The 2005 Walleye/Saugeye spawning season was successful with 102 million eggs being taken.

PUBLIC ATTITUDE SURVEY REGARDING MOUNTAIN LIONS

The Division recently completed a survey of Colorado residents to determine and better understand their attitudes toward mountain lions and lion management. Initial objectives of the survey were to determine acceptable management actions/tools; informational and educational needs and gaps; current attitudes toward hunting lions, the social carrying capacity for lions; the degree of perceived human/lion conflict; the perceived impacts of current lion populations on deer, agriculture, and recreation; and the perceived responsibility for human/lion conflict. Below are some of the findings:

- Nearly 1 in 7 respondents reported seeing a mountain lion in their community and almost half have read or heard about such a sighting
- More than three-quarters of respondents believed that it was at least slightly likely that someone in their household could be attacked by a mountain lion while recreating in or near mountain lion habitat
- Respondents were more likely to be highly concerned about their pet(s) being attacked by a mountain lion while recreating in mountain lion habitat than about being attacked themselves
- When asked their opinion about banning mountain lion hunting, 46% disagreed with a ban and 34% agreed
- 47% percent of the respondents indicated support for the legal and regulated hunting of mountain lions and 41% did not support the activity (support was weakest in urban areas)
- 77% of respondents considered it unacceptable to destroy a mountain lion that was simply seen in their community (52% felt such action highly unacceptable); 75% considered it acceptable to just monitor the situation, but take no action
- In a hypothetical situation where a mountain lion attacked and injured or killed a person in a residential area, 67% of respondents considered it acceptable to destroy the mountain lion and 80% indicated the “monitor, but no action” response unacceptable
- 40% of respondents supported the management goal of maintaining opportunities to hunt mountain lions and 37% opposed the goal
- 79% of all respondents supported taking action toward individual mountain lions that are dangerous to people
- More people obtained information about mountain lions from the newspaper or television than from any other source; the next most common source was trailhead signs or interpretive signs
- The two most common sources people would turn to for additional information about mountain lions were the Internet and a state governmental agency such as the Division of Wildlife

WILDLIFE HEALTH

The Division’s Wildlife Health Program continued with activities to investigate and advise managers and policy-makers on disease problems with potential impact on Colorado’s wildlife resources. Over 200 necropsy cases were submitted for evaluation, and a larger number of diagnostic samples were collected in conjunction with various field projects. In addition to providing data on occurrence and distribution of disease problems like canine distemper, locoism, hemorrhagic disease, salmonellosis, plague, and pasteurellosis, surveillance provided

data to help minimize opportunities for spreading disease problems (e.g., pasteurellosis, mycoplasmosis) by translocating wildlife within Colorado.

As has been the case for the last several years, chronic wasting disease (CWD) surveillance and research continued to dominate programmatic activities for Wildlife Health Program staff. Surveys conducted during 2002–2005 have shown that CWD is widely distributed in Colorado. At least one case of CWD had been detected in 18 of 55 deer Data Analysis Units (DAUs) and 11 of 46 elk DAUs. Much of the change in the known distribution of CWD in Colorado since 2002 is due to improved surveillance efforts rather than true geographic spread. Although understanding about the true distribution of CWD in Colorado has improved substantially in Colorado since 2002, surveillance data from many DAUs in the southern part of the state presently are insufficient to assure that CWD is truly absent from those areas.

Analyses of data to generate prevalence estimates and assess temporal trends for the 2005–2006 hunting seasons are preliminary. However, data from harvest surveys and sampling of clinically ill and vehicle-killed cervids have provided a few new insights into CWD distribution and natural host range in Colorado. CWD was detected for the first time in three more deer DAUs (D34, D47, D55), representing southern and southeastern extensions of known distribution in eastern Colorado. These findings helped to refine understanding about where CWD occurs in Colorado, and also illustrated the value of using several surveillance strategies to monitor CWD distribution: one of the three new DAUs was detected by sampling a sick or “suspect” deer, one by sampling a vehicle-kill, and the third by sampling a harvest submission. Within CWD-infected DAUs, estimates of prevalence from 2005–2006 harvest survey data varied from <1–10.3% among mule deer and <1–2.6% among elk.

In addition to improved understanding about the geographic distribution of CWD, this year’s survey results also extended knowledge about the natural host range of CWD: in September 2005, a male moose (*Alces alces*) harvested on the west side of the Never Summer Range in northcentral Colorado was diagnosed with CWD. The finding that moose are naturally susceptible to CWD confirmed suspicions arising from an experimental study conducted in Wyoming wherein a moose was infected with CWD after oral inoculation with infectious brain tissue. Whether CWD is maintained in moose populations or is a sporadic disease remains to be determined.

Surveillance data also were used to evaluate the effectiveness of attempts to reduce CWD prevalence through intensive localized culling of mule deer in northcentral Colorado. Areas where surveillance data revealed high prevalence or case clusters had been targeted by state wildlife management agency personnel for focal scale (on average < 17 km²) culling, primarily via agency sharpshooters, since 2001. Areas of sustained culling, along with spatially paired control areas constructed *post hoc* in a case-control design (collectively called “management evaluation sites”), were delineated using home-range estimators. The mean effect size on these treatment areas was not greater than on paired control areas. It followed that management benefits of focal culling were not evident, although whether this was due to true ineffectiveness or lack of data or insufficient duration of treatment could not be discerned. Consequently, focal culling activities were suspended in northcentral Colorado in 2005–2006; future management

activities of this nature likely will be pursued under a more rigorously designed field experiment based on findings and recommendations arising from this analysis.

In early 2005, the Division created a new, stand-alone section within the Terrestrial Resources Section dedicated to providing veterinary and diagnostic support services and conducting research related to wildlife health problems. This new section includes two of the Division's three wildlife veterinarian positions and five wildlife technicians; two additional professional positions, one to coordinate and guide statewide surveillance and data management and another dedicated to field research, will be filled in 2006. Although much of the Wildlife Health Program's ongoing work is related to chronic wasting disease surveillance and research, surveys or studies on bighorn respiratory diseases, plague, and avian influenza are in various stages of planning and initiation.

COLORADO'S VANISHING AGRICULTURAL LANDSCAPE

The following information comes from Environment Colorado Research and Policy Center:

Colorado's finest ranches and croplands are disappearing faster than ever before. Since 1992, Colorado has lost 2.89 million acres of agricultural land. Increased rural large-lot development and weakening agricultural economies contribute to the rapid loss of agricultural land, now nearly 690 acres per day, threatening the future of rural Colorado, our statewide economy, and key natural resources. If present trends continue, Colorado will continue to lose considerable amounts of agricultural land in the coming decades.

Why Colorado is Losing Agricultural Land?

Colorado is losing a large portion of its agricultural land to rural development and faltering agricultural economies. The biggest threat to agricultural land is large-lot residential development, commonly classified as one house per 2 to 40 acres. Between 1960 and 1990 the land area developed into exurban homes and rural ranchettes grew three times faster than the population growth rate. Land policy regulates development under 35 acres, but larger lots are exempt from the subdivision review process. Between 1972 and 2000, 2 million acres of agricultural land was lost in tracts sized just big enough to avoid regulation. Farmers and ranchers face increasing economic pressure to sell as farm and ranch land is appreciating in value. The average real estate value for agricultural land increased 16% between 1999 and 2003, to \$730 per acre. The yearly interest accrued from the profits of a multi-million dollar sale of ranchland is often more than property owners can earn from ranching in that same year. In addition, agriculture in Colorado has become relatively less profitable in recent years. Many children of farmers and ranchers are choosing careers outside of agriculture, leaving no one to operate family farms. The average age of farmers is 55, up from below 50 in 1972.

Recommendations

Ideas for discussion could include, but are not limited to: developing strategies that would make it easier for local farmers and ranchers to keep their land in production, studying the mechanics and feasibility of increasing conservation funding, and exploring options for managing growth.