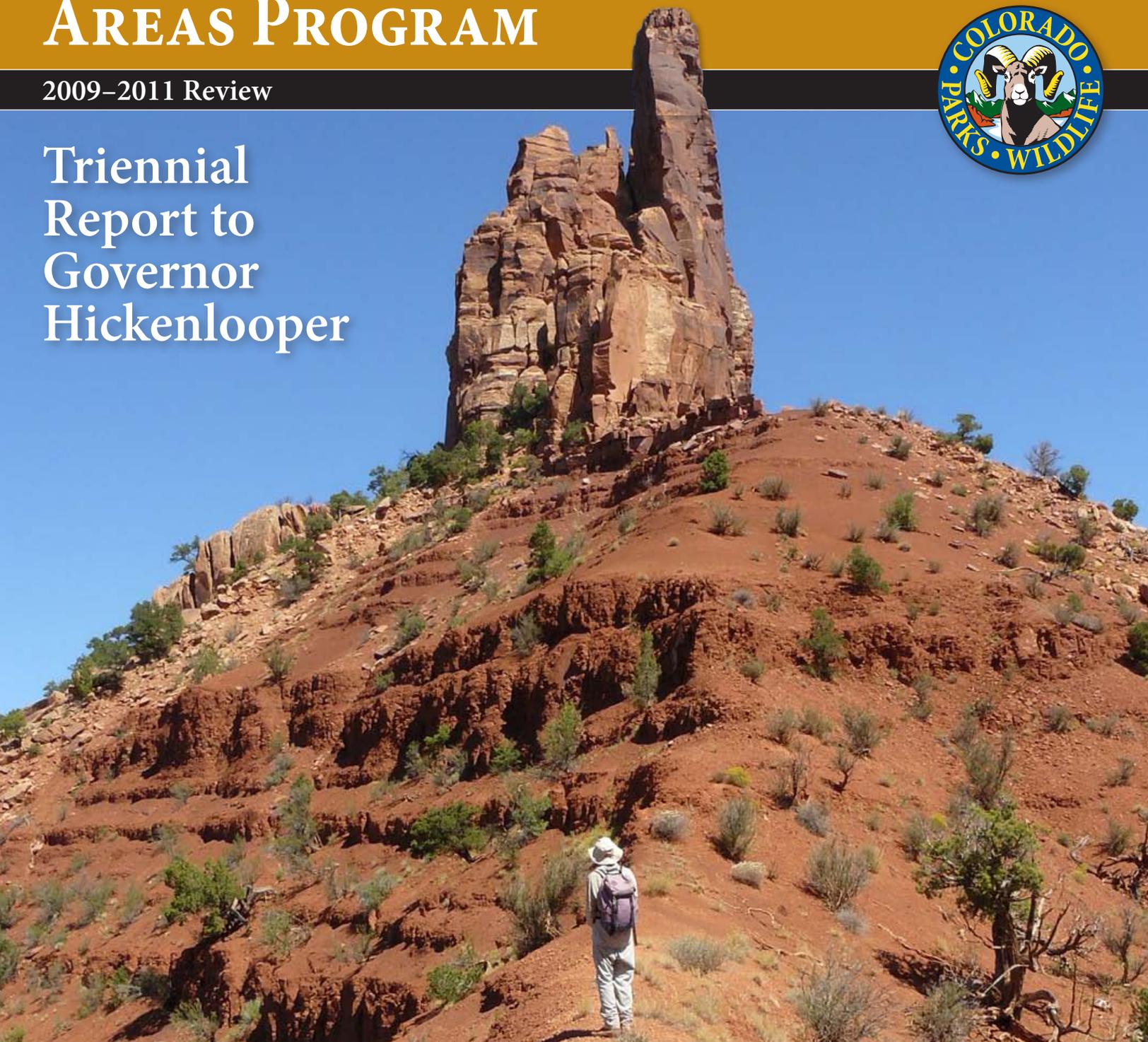


# COLORADO NATURAL AREAS PROGRAM

2009–2011 Review



## Triennial Report to Governor Hickenlooper



*Funds for printing provided by Friends of the Colorado Natural Areas Program*



# Natural Area Conservation is Important to Coloradans

Sixty-seven percent of Colorado voters identify themselves as conservationists and 93 percent agree that open spaces and natural areas are an essential part of Colorado's economy<sup>1</sup>. The Colorado Natural Areas Program (CNAP), within the Division of Parks and Wildlife, has been on the leading edge of conserving Colorado's most significant areas for 35 years. Through our collaboration with Colorado's landowners, we help conserve the state's best examples of endangered species habitats, geologic features, fossils and representative ecosystems. If there is a natural feature that is "pure Colorado", you'll find it on one of our Natural Areas. And whether in federal Wilderness or on private lands owned by the oil and gas industry, CNAP seeks out cooperative solutions to conservation issues around Colorado.

The 1977 Colorado Natural Areas Act (C.R.S. 33-33) states "it is in the public interest of present and future generations to preserve, protect, perpetuate, and enhance specific examples of [Colorado's] natural features and phenomena as an enduring resource". CNAP takes that role very seriously.

*As required in the Natural Areas Act, we are proud to present this report to Governor Hickenlooper to demonstrate our recent accomplishments and highlight the best places in Colorado.*

The Colorado Natural Areas Program efficiently monitors and protects Colorado's best natural features with 1.5 full-time employees, a handful of temporary employees and committed volunteers. The model for the Program's streamlined and effective conservation efforts are based on productive relationships.



Colorado Tallgrass and Boulder Mountain Park Natural Areas – Boulder County

From 2009 to 2011, the Colorado Natural Areas Program has continued to grow and strengthen our relationships with landowners, agency partners, volunteers, funders, conservation organizations and industry. Because of the foundation in these partnerships, the accomplishments over the last three years will have long-lasting results for Colorado's best places.



Mount Goliath Natural Area, Clear Creek County



### Colorado Natural Areas Council: Current Members

#### *Governor Appointed*

**Jill Ozarski**, Chair

Senator Udall Natural Resource Advisor  
Appointed 2010

**Bruce Schumacher**, Vice-Chair

U.S. Forest Service Paleontologist  
Appointed 2009

**Lee Shropshire**

University of Northern Colorado  
Professor Emeritus  
Appointed 2008

**Tom Nesler**

Retired Division of Wildlife Conservation Manager  
Appointed 2011

**Renée Rondeau**

Colorado Natural Heritage Program Ecologist  
Appointed 2011

#### *Board and Committee Representatives*

**Michele Bloom**

Board of Land Commissioners  
Appointed 2010

**Lenna Watson**

Parks and Wildlife Commission  
Appointed 2010

#### *Cover Photos*

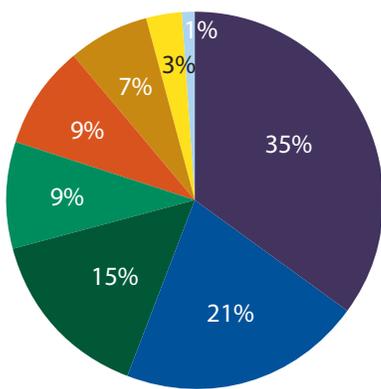
Main Photo: Gateway Palisade ©Dick Yeatts  
From left to right: Volunteer at Mt. Callahan;  
Dakota Hogback ©Frank Weston; Rare plant  
and pollinator ©Dave Elin; Mt. Goliath and  
Slumgullion ©Frank Weston

Escalante Canyon Natural Area – Delta County



Boulder Mountain Park

## New Colorado Natural Areas



OWNERSHIP OF NATURAL AREAS

- Bureau of Land Management
- State Land Board
- Private
- U.S. Forest Service
- Colorado Parks & Wildlife
- Local Government
- National Park Service
- Bureau of Reclamation

Colorado has many natural treasures that make our state unique. The Natural Areas Program seeks out and helps landowners to protect these treasures through voluntary land management agreements. Designated Natural Areas have formal agreements in place, while Registered Natural Areas are in the final stages of the designation process.

- **32,000 acres on nine new Designated or Registered Natural Areas were added to the Natural Areas System from 2009 to 2011.** These new sites are among the finest in Colorado and include:
  - **Two Buttes in Baca and Prowers Counties:** Working with a private rancher, CNAP is helping monitor one of the great landmarks of the Eastern Plains.
  - **Four sites in the Piceance Basin of Rio Blanco County:** CNAP is partnering with Shell Oil and the BLM to monitor federally-listed plants and irreplaceable fossil sites in this very active area.
  - **Two State Land Board properties in Park County:** Unique wetlands and rare species abound as CNAP assists our partner within the Department of Natural Resources.
  - **The Boulder Flatirons:** Unparalleled scenic, recreational and scientific values are given extra protection in the area surrounding a Colorado icon.

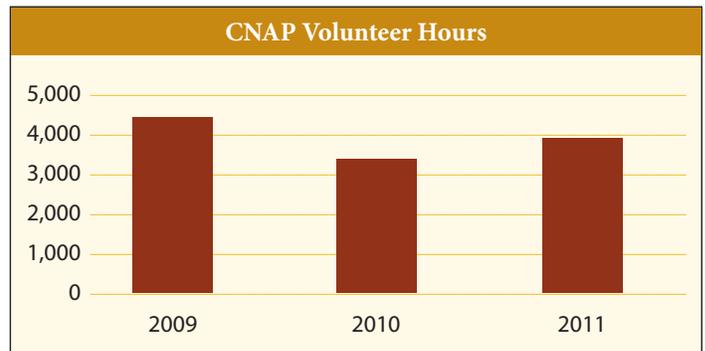
Natural Areas staff and volunteers now help to monitor and steward 235,000 acres on 115 Natural Areas in 40 counties. The Natural Areas Program builds partnerships with the best stewards of Colorado's land by working with a variety of land owners.

# The Value of Volunteers

To maximize the efficiency and effectiveness of the Natural Areas Program, we rely heavily on committed and skilled volunteers. Whether building fences or tracking rare plants, our valuable volunteers make the Program a success through citizen engagement.

- Between 2009 and 2011, **150 volunteers** contributed over **11,000 hours** with a resulting **value of \$244,000**. It would take over 5 full time workers to accomplish that work.
- The Denver Botanic Gardens and the Natural Areas Program jointly manage a **“Rare Plant Monitoring Steward” program** that has trained over 50 volunteers to collect valuable data to inform land management decisions.

The Public Lands Foundation named Natural Areas staff and volunteers as a recipient of the national **2009 Landscape Stewardship Award** for their collaboration with the BLM in the Piceance Basin of northwest Colorado. By providing much-needed monitoring and stewardship assistance, CNAP volunteers assured that our most significant public lands are adequately cared for.



Landscape Stewardship Award Ceremony

*“Volunteering for the Colorado Natural Areas program satisfies and enriches my life through my contribution towards the preservation of Colorado’s beauty for others, my children and my grandson.”*

*– Larry Allison, Volunteer*



From left to right: Volunteers at Rajadero Canyon, Duck Creek, Geneva Basin, Shell Rock and McElmo

Two generations of volunteers at Dave’s Draw (right).



©Alix Gadd



©Dave Elin

Rare plant with pollinator

## The Power of Partnerships

Collaboration and partnerships are most fruitful if objectives and roles are clearly defined. The Natural Areas Program has several examples of successful partnerships that expand Colorado's capacity to monitor and protect our most significant Natural Areas.

- Through work with the oil and gas industry, CNAP has been working to develop and implement **conservation actions that still allow for responsible energy development**. Partnership with Oxy USA on their private lands resulted in that company winning the 2009 Outstanding Environmental Protection Award from the Colorado Oil and Gas Conservation Commission.
- Within the **Department of Natural Resources**, the Natural Areas Program has sought greater collaboration to maximize efficiencies.
  - CNAP staff provides expertise in monitoring, stewardship and volunteer management to the **State Land Board** to help them address priority conservation needs on Trust Lands.
  - Working with local **Parks and Wildlife staff**, CNAP expertise in rare plants and native flora help assure that Colorado's most significant Parks and Wildlife Areas stay in the best condition possible.

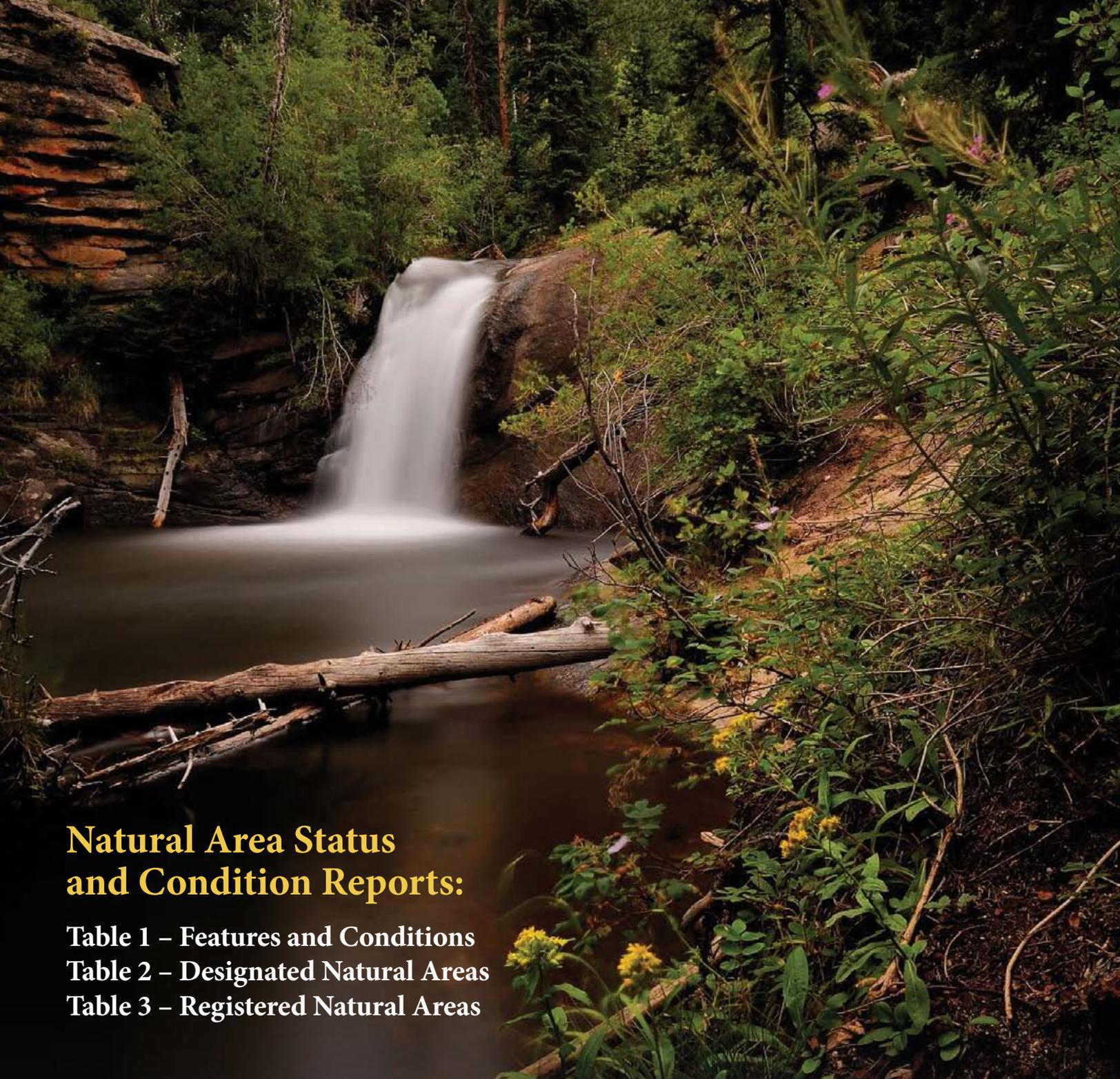
The Natural Areas Program is a leader of the Rare Plant Conservation Initiative, which includes a team of 25 partners that helps to recover all 15 threatened and endangered rare plant species in Colorado. CNAP staff member, Brian Kurzel, was awarded a **2011 Recovery Champion Award** from the U.S. Fish & Wildlife Service for being a leader of this partnership.



Parks and Wildlife Staff Inspecting Tamarack Ranch Natural Area.



CNAP shows Oxy staff rare species on their lands.



## Natural Area Status and Condition Reports:

Table 1 – Features and Conditions

Table 2 – Designated Natural Areas

Table 3 – Registered Natural Areas



**Table 1: Colorado Natural Areas – Features and Conditions**

DESIGNATED NATURAL AREAS

NATURAL AREA	OWNER	COUNTY	SIGNIFICANT FEATURES	CONDITION/ MANAGEMENT ACTION
Aiken Canyon	SLB	El Paso	Plants, Geology, Animals	Stable
Antero-Salt Creek	SLB	Park	Plants	Wetland evaluation and Ecosystem Services review
Badger Wash	BLM	Mesa	Plants, Plant Communities	Stable
Blacks Gulch	BLM	Rio Blanco	Fossils	Stable
Blue Mountain-Little Thompson Fault	Private	Larimer	Plant, Geology	Noxious weed management
Bonny Prairie Natural Area	CPW	Yuma	Plant, Plant Communities	Research/surveys
Boulder Mountain Park	City of Boulder	Boulder	Plants, Plant Communities	Stable
Brush Creek Fen	Private	Custer	Plants, Geology	Noxious weed management
California Park	SLB	Routt	Plants, Animals, Plant Communities	Stable
Castlewood Canyon	CPW/SLB	Douglas	Plants, Plant Communities	Stable; ongoing plant monitoring
Chalk Bluffs	SLB	Larimer/Weld/Logan	Plants, Geology, Plant Communities	Wind turbines monitored for potential impacts
Colorado Tallgrass Prairie	City of Boulder	Boulder	Plant Communities	Potential revision of property boundaries
Comanche Grassland Lesser Prairie Chicken	USFS	Baca, Prowers	Animals	Surrounding oil and gas development being monitored; lek surveys ongoing
Copeland Willow Carr	City of Longmont	Boulder	Plants, Animals, Plant Communities	Secure
Cross Mountain Canyon	BLM	Moffat	Plants, Geology, Fossils, Animals	Stable
Dakota Hogback	Jefferson County	Jefferson	Plant Communities, Fossils	Track stabilization; signage
Deer Gulch	BLM	Rio Blanco	Plants, Plant Communities	Stable
Dome Rock	CPW	Teller	Geology, Animals, Plant Communities	Noxious weed management
Dronery Gulch	BLM/SLB	Chaffee	Plants	Stable
Duck Creek	BLM	Rio Blanco	Plants, Plant Communities	Off-road vehicles managed through fencing and signage; ongoing plant monitoring
Dudley Bluffs	BLM	Rio Blanco	Plants, Plant Communities	Surrounding oil and gas development being monitored; ongoing plant monitoring
East Sand Dunes	SLB	Jackson	Plants, Rare Geology	Secure; rare plant research
Elephant Rocks	BLM	Rio Grande	Geology, Plants	Off-road vehicles managed through travel planning and implementation
Escalante Canyon	BLM	Montrose/Delta	Plants, Geology, Animals	Stable; ongoing plant monitoring
Fairview	BLM	Montrose	Plants	Off-road vehicle trespass addressed through fencing; ongoing plant monitoring
Fourmile Creek	SLB	Park	Plants, Plant Communities	Wetland evaluation and Ecosystem Services review
Fruita Paleontological Locality	BLM	Mesa	Fossils	Stable; interpretive and recreation improvements
Garden Park Fossil Locality	BLM	Fremont	Fossils, Plants	Road obliteration and restoration to reduce off-road vehicle trespass; ongoing plant monitoring
Gateway Palisade	BLM	Mesa	Geology, Plants	Stable; ongoing plant monitoring
Geneva Basin Iron Fens	Clear Creek County	Clear Creek	Plants, Rare Wetland	Road obliteration and restoration to reduce off-road vehicle trespass
Gothic	USFS	Gunnison	Plant Communities	Secure
Gunnison Gravels	BLM	Mesa	Geology	Off-road vehicles managed through travel planning and implementation
High Creek Fen	TNC/SLB	Park	Plants, Geology, Animals	Noxious weed management
High Mesa Grassland	BLM	Fremont	Geology, Plants	Stable
Hurricane Canyon	USFS	El Paso	Geology, Plant Communities	Noxious weed management
Indian Spring	SLB	Saguache	Geology, Animals	Land ownership transfer to NPS
Indian Springs Trace Fossil Locality	Private	Fremont	Fossils	Stable
Irish Canyon	BLM/SLB	Moffat	Plants, Geology, Plant Communities	Stable
Jimmy Creek	SLB	Larimer	Plants	Noxious weed management
Ken Caryl Ranch	Private	Jefferson	Plants, Geology, Plant Communities	Stable; recreation improvements
Kremmling Cretaceous Ammonite Locality	BLM/SLB	Grand	Fossils	Stable
Limestone Ridge	BLM/SLB	Moffat	Plants, Geology, Plant Communities	Stable
Lookout Mountain	BLM	Moffat	Plants, Geology	Stable

**Table 1 (continued): Colorado Natural Areas – Features and Conditions**

DESIGNATED NATURAL AREAS				
NATURAL AREA	OWNER	COUNTY	SIGNIFICANT FEATURES	CONDITION/ MANAGEMENT ACTION
Lower Greasewood Creek	BLM	Rio Blanco	Plants, Plant Communities	Stable; ongoing plant monitoring
McElmo	BLM	Montezuma	Geology, Animals	Stable
Mexican Cut	TNC	Gunnison	Plants, Geology, Animals	Stable
Mini-Wheeler	SLB	Fremont	Geology, Plant Communities	Stable
Mishak Lakes	TNC	Saguache	Animals, Plant Communities	Hydrologic monitoring of water table; noxious weed management
Mount Callahan	Private	Garfield	Plants, Plant Communities	Responsible oil and gas management with Best Management Practices; ongoing plant monitoring
Mount Callahan Saddle	Private	Garfield	Plants, Plant Communities	Responsible oil and gas management with Best Management Practices; ongoing plant monitoring
Mount Emmons Iron Fen	USFS	Gunnison	Plants, Insects, Rare Wetland	Potential mining operations being monitored; hydrologic and chemical research
Mount Goliath	USFS	Clear Creek	Plant Communities	Secure
Narraguinnep	USFS	Dolores	Plants, Geology	Post-fire monitoring
Needle Rock	BLM	Delta	Geology	Interpretive signage
North Park Phacelia	BLM	Jackson	Plants, Plant Communities	Stable
Orient Mine	Private	Saguache	Animals, Plant Communities	Stable
Owl Canyon Pinyon Grove	Private/ CPW/SLB	Larimer	Plants	Stable
Paradise Park	National Park Service	Grand	Animals, Plant Communities	Secure
Park Creek Hogback	SLB	Larimer	Plants	Noxious weed management; ongoing plant monitoring
Pyramid Rock	BLM	Mesa	Plants	Off-road vehicles managed through fencing and signage
Rabbit Valley	BLM	Mesa	Fossils	Stable
Rajadero Canyon	BLM/SLB	Conejos	Plants, Plant Communities	Stable; ongoing plant monitoring
Raven Ridge	BLM	Rio Blanco	Plants, Fossils, Plant Communities	Stable; ongoing plant monitoring
Redcloud Peak	BLM	Hinsdale	Animals	Interpretive signage
Rough Canyon	BLM	Mesa	Plants, Animals, Geology	Stable
Roxborough	CPW/SLB	Douglas	Geology, Plant Communities	Noxious weed management
Ryan Gulch	BLM	Rio Blanco	Plants	Surrounding oil and gas development being monitored; ongoing plant monitoring
Saddle Mountain	USFS/SLB	Park	Plant Communities	Stable
San Miguel River at Tabeguache Creek	TNC	Montrose	Geology, Plant Communities	Stable
Sand Creek	SLB	Larimer	Geology, Plant Communities	Stable
Shell Duck Creek	Private	Rio Blanco	Plants	Stable; ongoing plant monitoring
Shell Rock	SLB	Baca	Plants, Plant Communities	Stable
Slumgullion Earthflow	USFS/BLM	Hinsdale	Geology	Stable
South Beaver Creek	BLM	Gunnison	Plant, Animals	Stable; ongoing plant monitoring
South Boulder Creek	Boulder City	Boulder	Plant, Animals, Plant Communities	Stable; riparian improvements
South Cathedral Bluffs	BLM	Rio Blanco	Plants	Stable
Specimen Mountain	National Park Service	Larimer/Grand	Plants, Geology, Animals	Secure
Tamarack Ranch	CPW	Logan	Plants, Animals	Stable
Treasurevault Mountain	SLB	Park/Lake	Plants,	Secure; rare plant surveys
Trinidad K-T Boundary	CPW	Las Animas	Geology	Interpretive signage
Two Buttes	Private	Prowers/Baca	Geology, Animals	Research/surveys
Unaweep Seep	BLM	Mesa	Plants, Animals	Stable
Wacker Ranch	CPW	Montrose	Plants	Grazing impacts addressed through fencing; ongoing plant monitoring; noxious weed management
West Creek	National Park Service	Larimer	Animals, Plant Communities	Post-fire monitoring; noxious weed management
Wheeler Geologic	USFS	Mineral/Saguache	Geology, Plant Communities	Stable
White Rocks	Private	Boulder	Plants, Geology, Animals	Stable
Yanks Gulch/ Upper Greasewood Creek	BLM	Rio Blanco	Plants, Plant Communities	Stable
Zapata Falls	SLB	Alamosa	Geology, Animal	Stable

**Table 2: Colorado Natural Areas – Features and Condition**

REGISTERED NATURAL AREAS				
NATURAL AREA	OWNER	COUNTY	SIGNIFICANT FEATURES	CONDITION/ MANAGEMENT ACTION
Aiken Canyon	TNC	El Paso	Geology, Plant Communities, Animals	Stable
Ant Hill	Private	Archuleta	Plants, Geology	Stable
Arikaree River	SLB/Private	Yuma	Plant Communities	Noxious weed management
Boston Peak Fen	USFS	Larimer	Plants	Stable
Dave's Draw Research	USFS	Weld	Plant Communities	Stable
Deep Creek	USFS	Garfield	Geology, Plants	Grazing monitoring
East Lost Park	USFS	Park	Plants	Stable
Elk River At Moon Hill	Private	Routt	Plant Community	Stable
Escalante Creek	USFS	Montrose/Mesa	Plant Community	Stable
Farm In Boulder Valley Heronry	Private	Boulder	Animals	Stable
Haviland Lake	CPW	La Plata	Plant Communities, Plants, Animals	Stable
Hoosier Ridge	USFS	Park/Summit	Plants	Off-road vehicle trespass
Lake Pasture	Private	Larimer	Geology	Stable
Lake San Cristobal	Private	Hinsdale	Geology, Plant Community	Stable
Lost Park	USFS	Park	Plants	Stable
Miramonte Reservoir	CPW	San Miguel	Plants, Animals	Wildlife habitat improvement; interpretive signage
Moosehead Mountain	BLM	Moffat	Plant Communities	Stable
Park Mesa	National Park Service	Montezuma	Plant Communities, Plants	Stable
Pawnee Woodlands	Private	Weld	Plants, Plant Communities	Stable
Rocky Mountain Woodfrog Pond	Private	Grand	Animals	Stable
Running Creek	Private	Elbert	Plant Communities	Stable
Staunton	CPW/SLB	Park/Jefferson	Geology, Animals, Plant Communities	Research/surveys; travel planning
Tabeguache	USFS	Montrose	Plant Communities	Stable
Tern Island	SLB/BLM	Bent	Animals, Geology	Wildlife habitat improvement
Uncompahgre Fritillary	USFS	Hinsdale	Animals	Stable
Williams Creek	USFS	Hinsdale	Plant Community	Stable

BLM: Bureau of Land Management, CPW: Colorado Parks and Wildlife, SLB: State Land Board, TNC: The Nature Conservancy, USFS: US Forest Service



Volunteers help delineate OHV trails in Kremmling.

## Travel Management

Recreation is an important piece of Colorado’s culture and economy. Many of the State Natural Areas occur in areas with roads and trails that are used by a variety of recreationalists. The Natural Areas Program works closely with our partners to assure that appropriate recreational opportunities are preserved while protecting the State’s most sensitive habitats, species and fossils.

- In Grand County, the Natural Areas Program **worked with local off-road vehicle leaders** and other partners to clearly define an access route that travels through sensitive species habitat. By protecting an endangered species and assuring public access to motorized recreation, CNAP coordinated a true win-win solution.
- Over **2.5 miles of closed roads were restored** in Natural Areas in Fremont and Clear Creek Counties. Working with Wildland Restoration Volunteers and a variety of partners including the Mile High Jeep Club and the BLM, **120 volunteers gave 2,800 hours** over the course of two weekends. Unique wetlands, irreplaceable fossil quarries and rare plants that only occur in Colorado were protected from illegal uses on routes closed by public land managers.



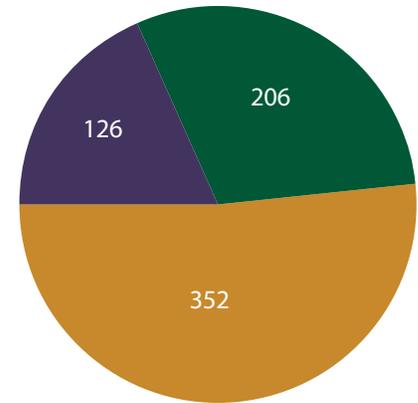
The Geneva Basin Iron Fen Natural Area houses one of the most unique wetlands in the world. A mix of plentiful groundwater and high concentrations of iron can cause peat moss and pine cones to turn into rock before your eyes! This sensitive habitat is open to non-motorized recreation, but illegal off-road vehicles were causing damage that could take centuries to undo. Working with the Mile High Jeep Club, Clear Creek County and Pike National Forest, Wildland Restoration Volunteers re-contoured, mulched, seeded and fertilized closed roads to help keep this Colorado treasure intact.

## Species Conservation

In the Natural Areas Act of 1977, a Natural Area is defined as an area which may “provide habitat for rare or endangered animal or plant species”. The Natural Areas Program has a unique role in Colorado as a statewide steward to native vegetation and rare plants, and CNAP plays an important role in protecting Colorado’s irreplaceable natural heritage.

- There are **688 records of rare species and vegetation communities** monitored and protected on Designated Natural Areas. This primarily includes rare plants and rare communities, but significant wildlife habitats are also protected on many Natural Areas.
- Of the 50 states, Colorado ranks **13th for plant diversity** and **8th for most plants at risk**. The rarest plants in Colorado inhabit **less than 60,000 acres** across the state, making them relatively easy to conserve.
- Recent research has shown that at least **6 percent of Colorado’s rarest plants contain active alkaloid chemicals that may be precursors to medicinal compounds**. Colorado plant compounds may prove valuable to humans and may be lost if these species are not conserved. One such plant may have potential as a “Colorado Ginseng” that is similar to plants used in other countries for commercial medicines and energy drinks.

The Natural Areas Program has been utilizing Species Conservation Trust Funding to address the highest priority rare plant conservation needs in Colorado. This includes efforts to keep species off federal lists, develop science-based Best Management Practices for oil and gas development and to map newly discovered species in Southwest Colorado. CNAP has brought in at least \$1.08 for every \$1 we spend, making Colorado’s species conservation very cost-effective.



OCCURRENCES OF RARE SPECIES AND VEGETATION COMMUNITIES ON NATURAL AREAS

- Rare Communities
- Rare Animals
- Rare Plants



Colorado Ginseng?



From left to right: OHV in Kremmling; Resortation at Geneva Basin; Mt. Goliath © Frank Weston; Rock forming in rare wetland; Rare moss

*“Coloradans and visitors to the state will benefit from the preservation of important programs, such as the natural areas program.”*

Legislative Declaration of Senate Bill 2011-208,  
the Colorado Parks and Wildlife Merger Bill

STATE OF COLORADO

**Governor:** John W. Hickenlooper

**Department of Natural Resources:** Mike King, Executive Director

**Colorado Parks & Wildlife:** Rick D. Cables, Director,

**Colorado Natural Areas Council:** Jill Ozarski, Chair • Bruce Schumacher, Vice-Chair

Mike Bloom, Board of Land Commissioners • Lenna Watson, Parks and Wildlife Commission

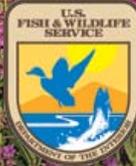
Renee Rondeau, Member • Dr. Lee Shropshire, Member • Tom Nesler, Member

Colorado Natural Areas Program

303-866-3437

[www.parks.state.co.us/NaturalResources/](http://www.parks.state.co.us/NaturalResources/CNAP/Pages/CNAP.aspx)

[CNAP/Pages/CNAP.aspx](http://www.parks.state.co.us/NaturalResources/CNAP/Pages/CNAP.aspx)



*Gothic Natural Area ©Frank Weston*

*Dome Rock Natural Area*

Colorado Parks & Wildlife  
Coloradan Natural Areas Program  
1313 Sherman Street, Room 618  
Denver, Colorado 80203