

Welcome to 7th Biennial CNHP Partners' Meeting

Please feel free to grab refreshments
We will begin the day's program at 9:00

Guest Wi-Fi: csu-visitor



Opening Remarks

David Anderson, Director
Colorado Natural Heritage Program



Lory Student Center Facilities



- Bathrooms
- Lactation Rooms
- AEDs
- Elevators

Wi-Fi Network: csu-visitor

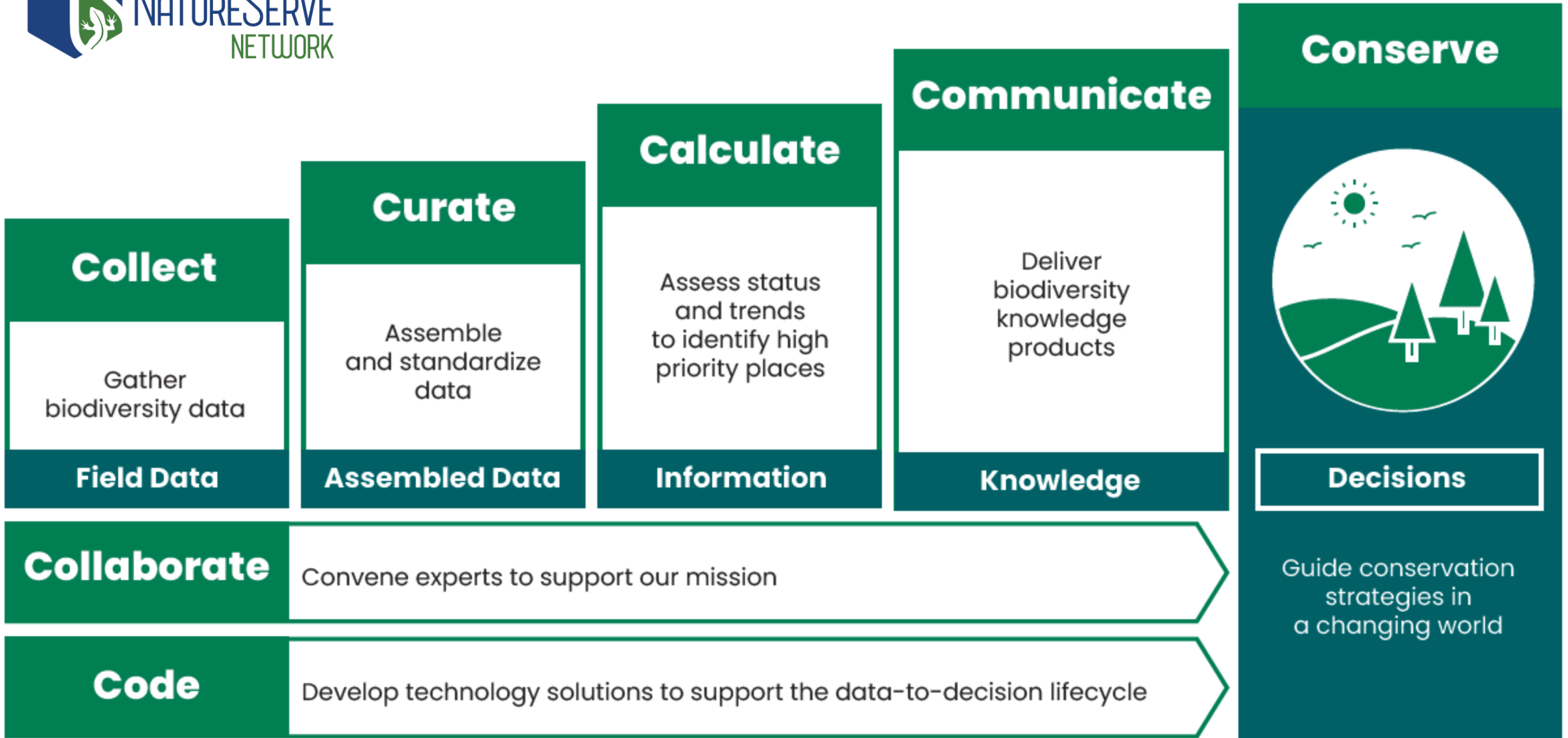


Purpose of Today's Meeting

- Better connect Colorado's professional conservation community
- Provide updates on CNHP's work
- Receive updates from some key partners

All of this is in the service of your conservation efforts for Colorado's Natural Heritage





Congratulations, Bob Gottfried!



Today's Agenda

9:00–9:25	Welcome and Land Acknowledgment
9:25–10:25	Statewide Natural Heritage Survey: Accomplishments, Field Stories & What's Next
10:25–10:40	Break
10:40–11:40	Statewide Natural Heritage Survey -- continued
11:40–12:00	Ms. Colorado Senior America, Terrilynn Moore Smith
12:00–1:00	Lunch
1:00–1:45	CNHP Team Updates
1:45–2:45	State Partners' Panel
2:45–3:15	Afternoon Break – Federal Partner Informal Updates and Conversations
3:15–4:15	Non-Government Organization and Science Partners' Panel
4:15–4:30	Closing Remarks
4:30–6:00	Happy Hour at the Ramskeller

CSU Land Acknowledgment



Welcome

Dr. Rich Conant, Interim Dean
CSU Warner College of Natural Resources



WARNER COLLEGE OF
NATURAL RESOURCES
COLORADO STATE UNIVERSITY

Statewide Natural Heritage Survey

Accomplishments, Field Stories & What's Next



Statewide Natural Heritage Survey

Segment 1

- 9:25–10:25 Introduction (David Anderson)
- Stories from the Field (Tristan Kubik, Dan Merewether, Rebecca Fries and Liam Bauer)
- Private Lands Conservation (Robyn Paulekas and Katelyn Toigo)
- Stories from the Field (Clark Hollenberg)
- Tribal Engagement (Gemara Gifford and Stacy Coleman)
- Community Science Partnerships (Jeanie Sumrall-Ajero and Maggie Gaddis)
- Stories from the Field (Rebecca Fries)
-
- 10:25–10:40 Morning Break



The Statewide Natural Heritage Survey





COLORADO
Climate Action

Is the climate changing?



Yes.

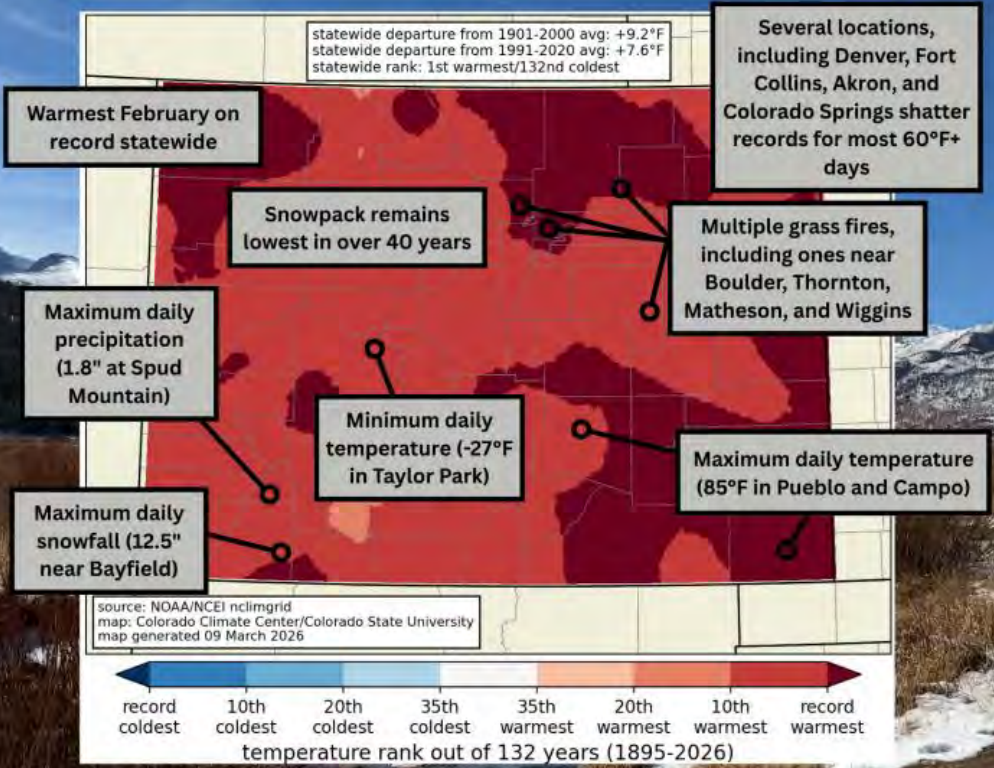
The Earth's climate has seen changes since the dawn of time. This can happen naturally through shifts in our orbit around the sun, solar cycles and fluctuations in solar radiation, and volcanic activity. Human activity can also impact the planet's climate.

Since the late 19th century, global temperatures have risen about 2 degrees Fahrenheit, and have continued to increase at faster rates through the mid-20th century, according to NASA. In fact, during the past 50 years alone, average global temperatures have increased about 1.5 degrees Fahrenheit. Colorado's climate has been slightly above these global changes, as the state's average temperature has increased over 2 degrees Fahrenheit in the past half-century.

[Glossary of Climate Change-related Terms](#)

[Climate.Colorado.gov/learn](https://climate.colorado.gov/learn)

February 2026 Colorado Monthly Climate Summary



February 2026 Temperature Rank (from NCEI nclimgrid)

Statewide Temperature and Precipitation Ranks for February 2026 (based on 1895-2026 data)

1st warmest (record warmest) ■ **37th driest (below average)**



Rocky Mountain National Park
February 22, 2026
Photo by Henry Reges



Top stories

FOX31 Denver

Hottest March temperatures on record shattered across all of Colorado

1 day ago

Colorado Public Radio

Temperatures soar nearly 30 degrees above normal in record March heat wave

2 hours ago

FOX31 Denver

Colorado's all-time low snowpack takes nosedive after record heat: Data

21 hours ago

The Crested Butte News

"Hold my beer?"

1 hour ago

More news >

The Biodiversity Crisis



34% of plant species
are at risk of extinction

Almost half of cactus species, about 200 tree species, and nearly 1 in 5 grass species are at risk.



40% of animal species
are at risk of extinction

Animals found in freshwater habitats, including amphibians, snails, mussels, crayfish, and many aquatic insects, are most at risk.

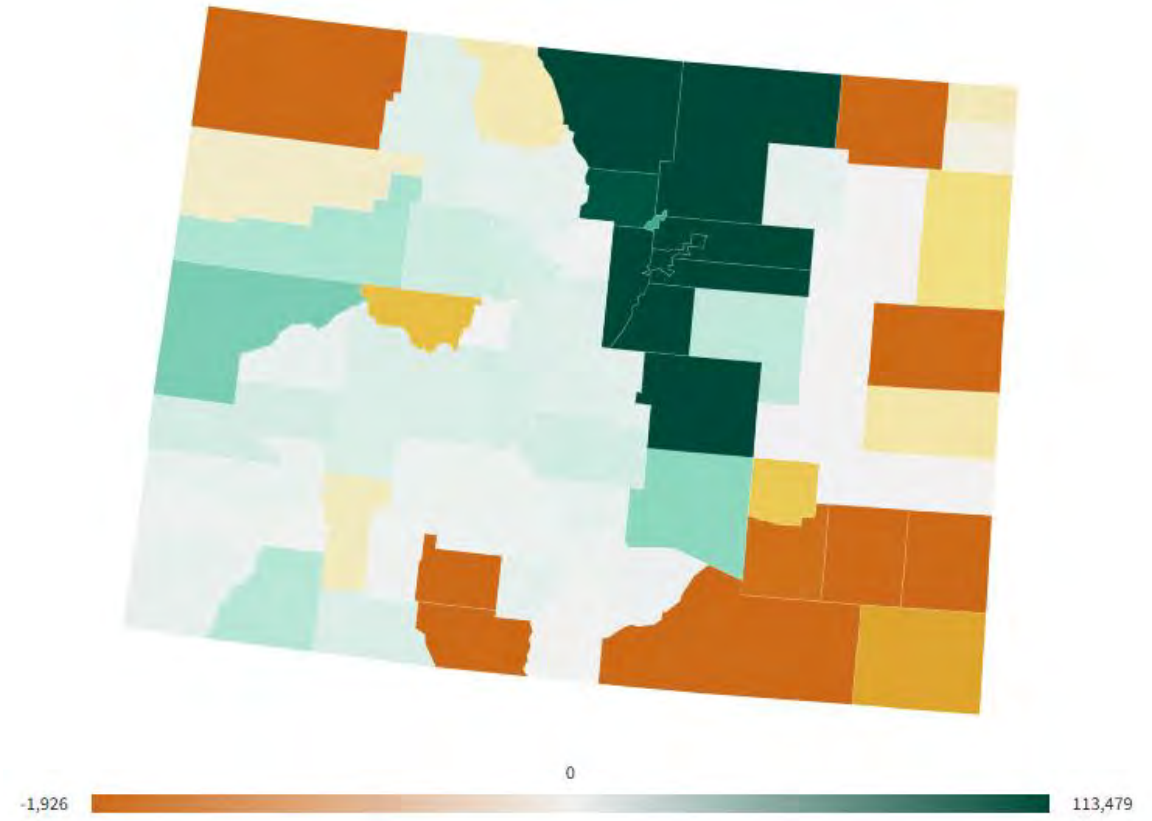
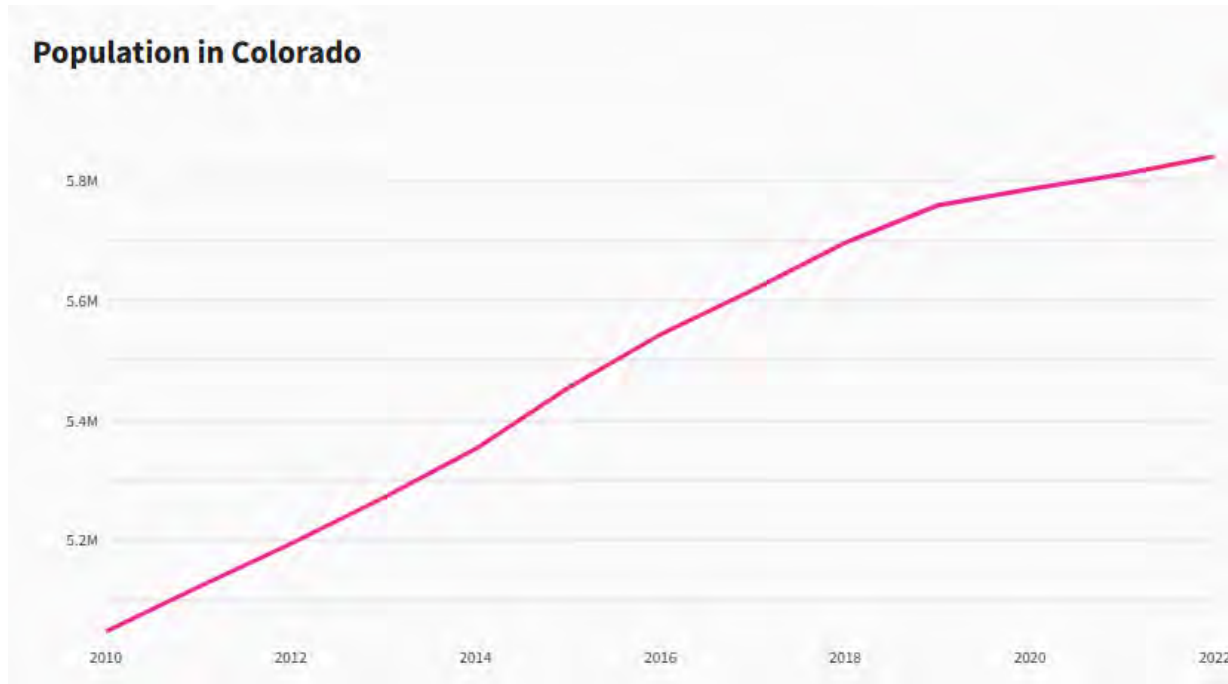


41% of ecosystems
are at risk of range-wide collapse

Temperate grasslands are among the most threatened ecosystems, with over half of known types to be at risk.

Graphic courtesy of NatureServe

Colorado's Population is Growing



Population increase by county from 2010-2022

Outdoor Recreation is Big

Key Facts & Figures

\$62
Billion
Total Economic
Contribution in Colorado

511,000
Jobs

\$21
Billion
Wages & Salaries

\$37
Billion
Consumer Spending

92%
of Coloradans
participate in some form
of outdoor recreation
every year

10%
Colorado GDP



COLORADO

Office of Economic Development
& International Trade

<https://choosecolorado.com/key-industries/outdoor-recreation/>

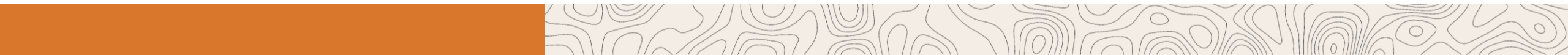


COLORADO'S

Outdoors Strategy

2025

*A collaborative vision for conservation,
outdoor recreation, and climate resilience*





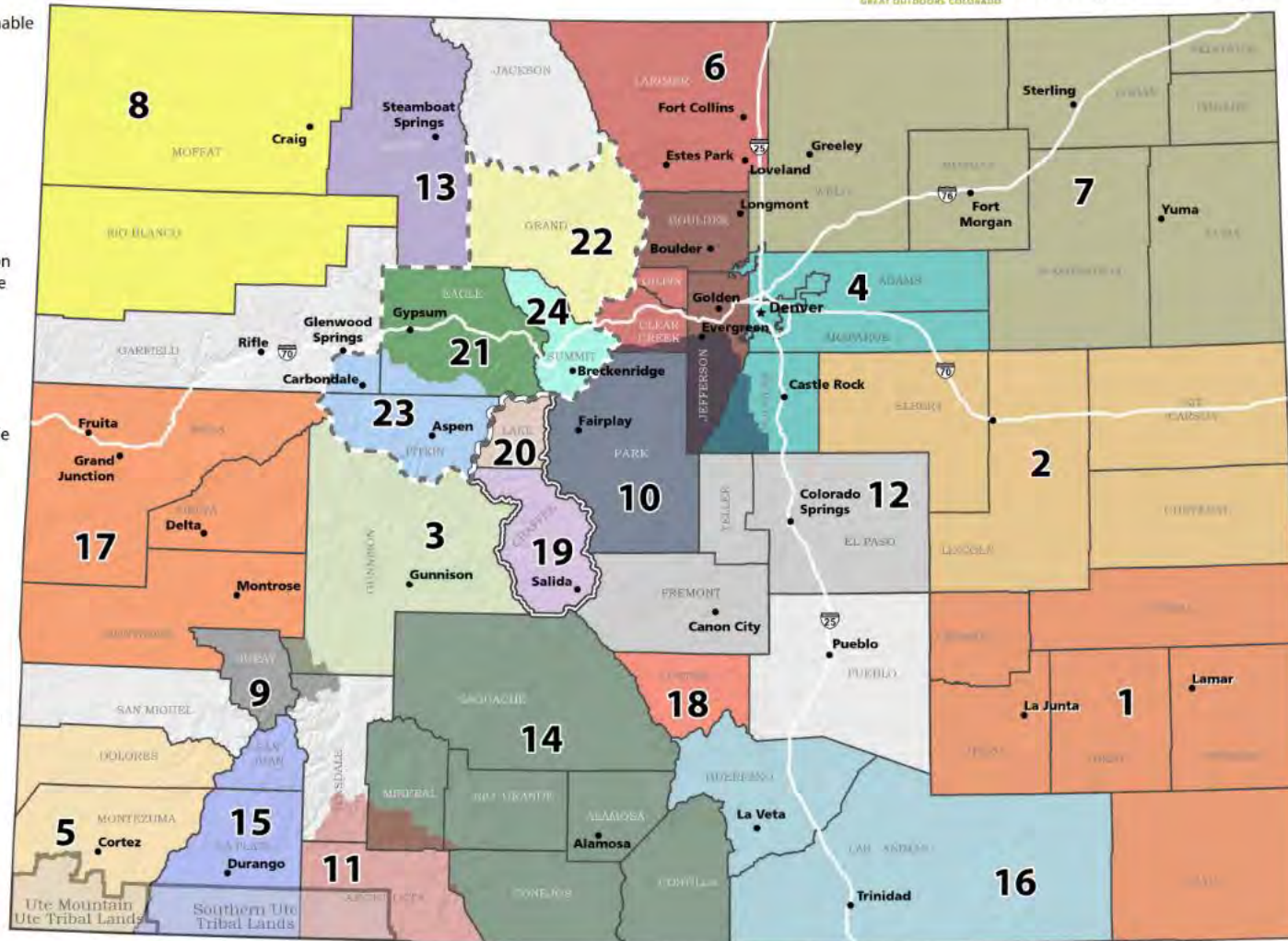
Colorado's Outdoors Strategy ensures a future where our people, outdoors, community character, and ways of life endure for generations to come.

Colorado Outdoor Regional Partnerships

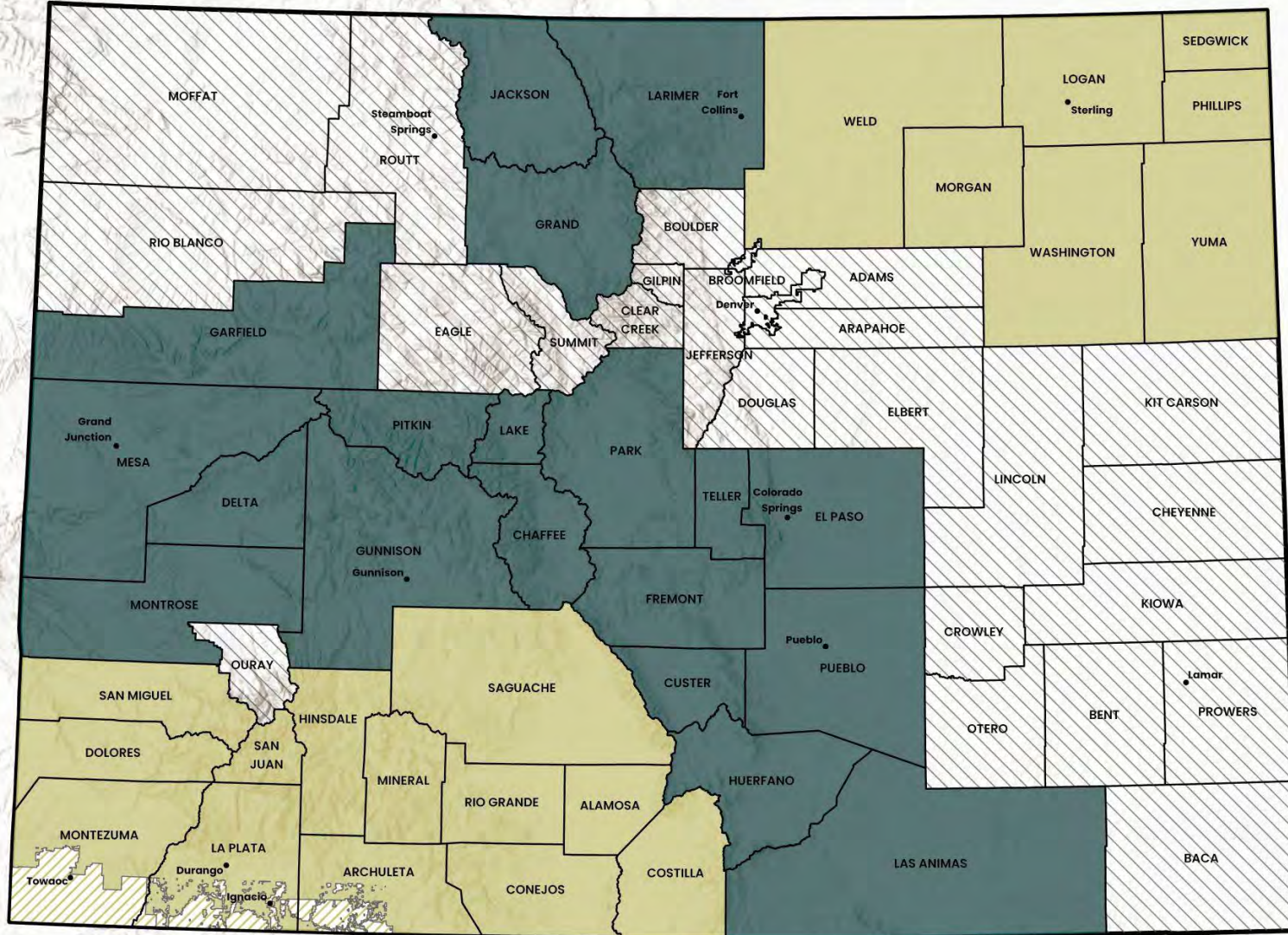
March 2026



1. Canyons & Plains Outdoor Partnership
2. Eastern Colorado Grasslands Coalition
3. Gunnison County Sustainable Tourism & Outdoor Recreation Committee
4. Metro Denver Nature Alliance
5. Montelores Coalition
6. NoCo Places
7. Northeast Colorado Regional Partnership
8. Northwest Colorado Outdoors
9. Ouray Regional Recreation and Conservation Alliance
10. Outside 285
11. Pagosa Area Recreation Coalition
12. Pikes Peak Outdoor Recreation Alliance
13. Routt Recreation and Conservation Roundtable
14. San Luis Valley Great Outdoors!
15. Southwest Colorado Conservation & Outdoor Recreation Roundtable
16. Spanish Peaks Outdoor Coalition
17. West Slope Outdoors Alliance
18. Wet Mountain Valley Outdoors
- Central Colorado Recreation Partnership
19. Envision Recreation in Balance Partnership
20. Lake County Outdoor Alliance
- Mountain Communities Outdoor Collective
21. Eagle County Regional Partnership Initiative
22. Grand Places 2050
23. Roaring Fork Outdoor Coalition
24. Summit County Outdoor Coalition



Statewide Natural Heritage Survey 2026–2027 Priority Counties



County and Tribal Boundaries

- 2026 Priority Survey Counties
- 2027 Priority Survey Counties
- 2024-2025 Surveyed Counties
- Tribal Lands

Thank you to the following partners for supporting our 2026–2027 biodiversity surveys.

Central Colorado Recreation Partnership:
Envision Inc., Gunnison STOR, Lake County Outdoor Alliance

Grand PLACES 2050

Montelores Coalition

NoCo Places

Northeast Colorado Regional Partnership

Ouray Regional Recreation and Conservation Alliance (ORRCA)

Outside 285

Pagosa Area Recreation Coalition

Pikes Peak Outdoor Recreation Alliance (PPORA)

Roaring Fork Outdoor Coalition

San Luis Valley Great Outdoors

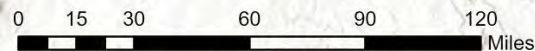
Southwest Colorado Conservation & Outdoor Recreation Roundtable

Spanish Peaks Outdoor Coalition

West Slope Outdoors Alliance

Wet Mountain Valley Outdoors

*Note: Regional Partnerships Initiative (RPI) boundaries not displayed on map. Refer to CPW RPI website for more information.



Map created by Roy Gilb, Colorado Natural Heritage Program. January 2026.
Data Sources: ESRI, USGS, CNHP, CO CPW, CO Outdoor Regional Partnerships Initiative



**WARNER COLLEGE OF
NATURAL RESOURCES**
COLORADO STATE UNIVERSITY

Stories from the Field

Tristan Kubik, Entomologist, CNHP

Liam Bauer & Rebecca Fries, Past CNHP Siegle Interns

Dan Merewether, Merewether Ranch



Private Lands Conservation

Robyn Paulekas, Executive Director

Katelyn Toigo, Special Project Coordinator

Keep it Colorado



Partnership for the Statewide Natural Heritage Survey

Robyn Paulekas, Executive Director

Katelyn Toigo, Special Projects Coordinator



KEEP IT COLORADO

conservation-minded. future-focused.

Conserving Colorado

A 10-year Roadmap for the Future of Private Land Conservation

2023



Conserving Colorado Roadmap



Climate-resilient Landscapes



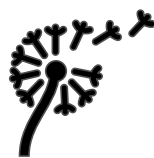
Community-centered Conservation & Diversity, Equity, Inclusion and Justice



Collaborative Water Solutions



Resilient Agriculture



Lasting Conservation Movement

View the full Roadmap



2026 Land Trust Partners



COLORADO WEST LAND TRUST
Conserving Land. Connecting People. Enriching Lives.



Stories from the Field

Clark Hollenberg, Wetland Ecologist
Colorado Natural Heritage Program





Rafting for Rare Plants

Clark Hollenberg, Wetland Ecologist

CNHP Partner's Meeting, 2026



Erigeron wilkenii
Wilken's Fleabane



Photo: Jennifer Ackerfield



Photo: Becca Harris



Photo: Clark Hollenberg

***Erigeron nematophyllus*???**





Obsession
Summit

Big Joe
Camp

One of three known locations globally!

Erigeron nematophylloides?



Tribal Engagement

Gemara Gifford, Tribal Engagement Specialist, CNHP

Stacy Coleman, Colorado Department of Natural Resources





Tribal Collaboration in the Statewide Natural Heritage Survey

2026 Partners' Meeting

March 31, 2026 | CSU Campus, Fort Collins, CO

Gemara Gifford, CNHP & Stacy Coleman, DNR





Statewide Natural Heritage Survey (SNHS)

From 2024-2029, the Colorado Natural Heritage Program will survey rare species and habitats across the state, focusing on prioritized areas each year.

- **Collaborate** with Ute Mountain Ute and Southern Ute Indian Tribes in the collection of natural heritage data
- **Collaborate** with the Regional Partnerships, land trusts, and other conservation partners to connect with communities and landowners
- **Engage** with community scientists to expand reach
- **Share** findings through an interactive website, partner's summit, and via Colorado's Conservation Data Explorers (CODEX)



Natural Heritage is Cultural Heritage

CNHP's goal is to help ensure that Tribes benefit from and are centered in the Statewide Survey.

- **Integrate** culturally-important and locally sensitive plant and animal species into CNHP survey efforts and datasets.
 - Target Survey dates: June–Sept 2027
- Build upon ongoing work with Tribal & Indigenous Peoples in Colorado through efforts such as **Colorado's Outdoors Strategy**.
 - Quarterly meetings with DNR/CPW with support from Stacy Coleman
- **Share and collaborate** on Colorado heritage biodiversity data.
 - Ongoing through 2028 (i.e., data-sharing, trainings, and workshops)



San Rafael Swell, Utah
Photo by Taylor Turner

Colorado's Outdoors Strategy Executive Summary

The four Rs: Relationship, Respect, Reciprocity, and Relevance

- **Long-term relationships**
 - Holistic partnerships that address environmental issues
 - Earning trust and seeking input on statewide/regional projects
- **Mutual Respect**
 - Honoring Tribal leadership in the outdoors
 - Supporting and honoring Tribal sovereignty
- **Mobilization of Resources**
 - Data-sharing agreements and grant funding for collaboration
- **Inclusion of Tribal Priorities in the Outdoors**
 - Linking cultural and natural resource protection



Tribal Collaboration Goals



Ensure local and statewide efforts include **clear, culturally-responsive and mutually beneficial** outcomes for Tribal Nations and communities



Bridge trust and build relationships between Tribal governments, Colorado's American Indian/Alaskan Native population and stakeholders



Facilitate a platform for Tribal governments to **interact, collaborate, and engage** with non-tribal entities, interested parties and partners

Action Steps

- Funding from Great Outdoors Colorado and Gates Family Foundation:
 - **Support participation** of Tribal Biologists and/or Tribal knowledge holders
 - **Engage** with Youth and Elders, with funding for honoraria, meals, and travel expenses
- Tribal Biologists and CNHP Biologists working together to collect biodiversity data
- Initial focus on surveying off-reservation lands of importance to Tribes (Brunot Area, State Parks, etc), and in which data sharing can be facilitated (i.e., data-sharing agreement)



How Partners Can Support Tribal Priorities in the Outdoors

TABLE 1:

UMUT and SUII priorities in the outdoors according to Tribal work sessions between December 2023 and February 2025. Each priority includes recommendations for how both the UMUT/SUII and non-Tribal partners can support these priorities.

TRIBAL PRIORITY (SUII AND UMUT)	RECOMMENDATIONS FOR NON-TRIBAL PARTNERS	RECOMMENDATIONS FOR TRIBAL PARTNERS (UMUT AND SUII TRIBAL COUNCIL, STAFF)
1. Honoring and Supporting Traditional Knowledge in the Outdoors	In all collaboration and engagement with Tribes, honor that Tribal expertise, wisdom and Traditional Knowledge is legitimate and respect that Tribes know what is best for their own people and lands.	Advocate for Tribal representation on and engagement within state commissions and boards and regional conservation, outdoor recreation, forest health, and water collaboratives so that Tribal expertise is represented.
2. Understanding and Reconnecting with Homelands as Healing and Reconciliation	Expand existing programs or create new initiatives and funding; provide resources/technical assistance for: <ul style="list-style-type: none"> • Cultural access to public and private lands for ceremonies and traditional foods and medicines. • Developing trails and outdoor recreation opportunities on and off Tribal lands (e.g., within State Parks) for Tribal members; conversely, working with Tribes to understand where not to allow or encourage public access due to sensitive cultural resources. • Increasing knowledge of and participation in hunting and fishing for Tribal members. • Co-stewardship of ancestral lands with land management agencies and organizations. 	Invest in programs that connect Tribal members to reservation and off-reservation lands, such as opportunities for outdoor recreation and increasing participation in hunting and fishing. <ul style="list-style-type: none"> • CPW's Outdoor Equity Grant Program is one example of funding that connects Native youth to the Outdoors. • Montezuma Land Conservancy's Cultural Harvest Project in collaboration with the Ute Mountain Ute Tribe is a potentially replicable model on private lands.
3. Awareness and Understanding of Reserved Hunting and Fishing Rights in the Brunot Treaty Area	At a minimum, Non-Tribal partners should learn about and understand the Brunot Agreement and its significance to the SUII and UMUT. Non-Tribal land, water, and wildlife agencies need to support and not create barriers to the legal right of SUII and UMUT members to hunt, fish, and gather in the Brunot Area by understanding the Agreement and educating their staff, particularly rangers and wildlife managers, on the Brunot Agreement	Increase outreach and education for Tribal members on their right to fish, hunt, and gather in the Brunot Area.
4. Increasing Hunting and Fishing Participation for Tribal Members	Provide resources, including funding and equipment, to support more Tribal participation in hunting and fishing. Create tailored programming for increasing participation in hunting and fishing to Tribal members specifically.	Invest in programs that remove barriers for new hunters/anglers and connect Tribal members, particularly youth, to hunting and fishing on and off reservation lands.
5. Engaging Youth and Fostering Intergenerational Knowledge Sharing	Sustain, expand, and/or create new grant programs and share resources to connect youth with the outdoors and their Elders (e.g., Great Outdoors Colorado Traditional Harvest Grant, Colorado Parks and Wildlife Outdoor Equity Grant Program).	Continue to invest in programming and relationship building that fosters intergenerational knowledge sharing between youth and Elders through activities such as hunting, fishing, and land walks

TRIBAL PRIORITY (SUIT AND UMUT)	RECOMMENDATIONS FOR NON-TRIBAL PARTNERS	RECOMMENDATIONS FOR TRIBAL PARTNERS (UMUT AND SUIT TRIBAL COUNCIL, STAFF)
6. Expanding Outdoor Recreation to Include Tribal Perspectives	<p>Remain flexible in grant criteria when funding outdoor recreation initiatives for SUIT/UMUT; outdoor recreation can be interpreted by Tribal members as a place-based, spiritual and cultural connection, or as a way to have fun and improve mental health (particularly for youth).</p> <p>Collaborate with Tribes to tell their own stories – particularly but not only – when new federal, state, or local public lands are designated for outdoor recreation access or when developing interpretation at State Parks.</p> <p>Extend funding and provide technical assistance to support Tribal management of outdoor recreation, including trail-based and water recreation and tourism development.</p>	<p>Reach out to non-Tribal partners, particularly at the state level, to understand opportunities for funding and technical assistance to manage and improve outdoor recreation on reservation and off-reservation lands, and articulate other specific priorities such as access to ski resorts and State Parks.</p>
7. Linking Cultural Resource Protection with Natural Resource Protection	<p>Involve, and take the lead from, the UMUT and SUIT in the conservation and restoration of culturally-important species and protection of culturally-significant sites.</p> <p>Provide funding, capacity, and technical assistance for cultural surveying on reservation and non-reservation Tribal lands.</p>	<p>Collaborate with non-Tribal partners on strategies to improve effective messaging, outreach, and enforcement that address public stewardship of natural and cultural resources.</p> <p>As appropriate, share with state, regional, and local partners which species of cultural importance are needed for surveying, habitat preservation, and filling data gaps.</p>
8. Addressing and Preparing for Climate Change and Drought	<p>Continue providing funding, technical assistance, and capacity to both develop and carry out climate action plans, especially when goals are mutually shared.</p>	<p>Continue investing in and implementing existing climate action plans, and seek support from non-Tribal partners when capacity, funding, and resources are needed to do so as appropriate.</p>
9. Protecting and Conserving Water Resources	<p>Be diligent about including Tribal representation in discussions regarding water conservation and allocation.</p> <p>Provide funding, technical assistance, and capacity to support water conservation goals, especially when goals are mutually shared</p>	<p>Continue advocating for Tribal representation in discussions regarding water rights, conservation and allocation.</p>
10. Data Sharing and Equity	<p>Take measures to ensure that the UMUT and SUIT are able to regularly find and access relevant plant, wildlife, and recreation data.</p> <p>Collaborate with the UMUT and SUIT to collect new data and information, particularly when goals are mutually shared.</p>	<p>Articulate to non-Tribal partners what data and information would be useful and ask how to access them, what data is the authority of the Tribe versus the state, and encourage the development of data-sharing agreements. At times, it may be appropriate to collaborate with the state or other partners to fill data gaps (e.g., for rare or culturally-important species)</p>

DNR Tribal Affairs

DNR Tribal Affairs Program – Strategic Priority

- Colorado's Outdoors Strategy
- Guidance Framework for Tribal Collaboration in Natural Resources, Conservation & Climate
- AI/AN Listening Sessions
- State Park Access Bill
- and more!

Contact: Stacy.Coleman@state.co.us



COLORADO

Department of
Natural Resources



Thanks to our Partners, Funders, & Collaborators



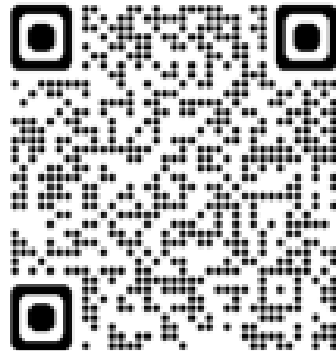
Thank you!

Questions?

Gemara.Gifford@colostate.edu

Stacy.Coleman@state.co.us

David.Anderson@colostate.edu



CNHP.colostate.edu/SNHS

Community Science Partnerships

Jeanie Sumrall-Ajero, Great Old Broads for Wilderness

Maggie Gaddis, Colorado Native Plant Society





CoNPS is a non-profit organization dedicated to furthering the knowledge, appreciation and conservation of native plants and habitats of Colorado through education, stewardship and advocacy.



Colorado Parks and Wildlife Partners in the Outdoors Grant

In support of the Statewide Natural Heritage Survey

- Rare plant identification training
 - [Penstemon crandallii var. procumbens](#)
 - [Azolla mexicana](#)
 - [Eriogonum umbellatum var. ramulosum](#)
 - [Azolla mexicana](#)
- Chapter programming to find rare plants
- Updates to element occurrences for historic EOs (SEINET)



Happy 150th Birthday Colorado!

Happy 50th Birthday Colorado Native Plant Society!



[Aquilegia slides](#)

*You are a champion for
Colorado native plants!*



ExecutiveDirector@CoNPS.org



Stories from the Field

Rebecca Fries, Past CNHP Siegele Conservation Science Intern



Morning Break

The Pagosa Skyrocket Suite

Composed by Dave Rodda with Renée Rondeau

Intro: Majestic Mountains

Winter Snowflakes Build a Reservoir

Germination Stirs to Life

Spring Rain Soaks In

Warming Sun, Shooting Up Skyrockets

Flowering Skyrockets

Bees are Drawn to Fresh Flowers

Baking Sun & Drying Soil

Going to Seed

Slipping into Winter

Outro: Majestic Mountain Scenery



Colorado Natural Areas Program

Statewide Natural Heritage Survey

Segment 2

- 10:40–11:40 Advancements in Data Collection (Roy Gilb)
Stories from the Field (Tyler Lovato)
CNHP Data Dashboard (Ellie Linden)
Data Successes (Amy Greenwell)
Stories from the Field (Grant Musgrave)
Sponsor Remarks (Dan Zimmerer)

Advancements in Data Collection

Roy Gilb, Spatial Analyst
Colorado Natural Heritage Program





Advancements in Data Collection

Roy Gilb, Spatial Analyst

Colorado Natural Heritage Program



Survey123 & Biotics

The screenshot shows a mobile application interface for 'Plant and Animal Observations'. The form is divided into several sections:

- Element Section:** Includes a 'Search Type' dropdown with options 'Element' (selected) and 'Higher Taxonomy'. Below it is an 'Element' dropdown menu. Fields for 'Scientific Name', 'Common Name', 'Global Rank', 'Subnational Rank', 'Track Status', and 'Group' are present.
- Form Type Section:** A 'Form Type' dropdown with options 'Long - Detailed Form' and 'Short - Quick Data Collection' (selected).
- Mapping Section:** Contains a 'Definitions' sub-section with 'Revisit?' (Yes/No) and 'Detected?' (Yes/No) radio buttons. It also includes 'Conceptual Feature Type' with three options: 'Point' (observed area ≤ 9m in all directions), 'Line' (observed area ≤ 9m in one direction & > 9m in the other), and 'Polygon' (observed area is a large area (observed area > 9m in all directions)).
- Locational Uncertainty Type Section:** Offers four options: 'Estimated - uncertainty is > 4.5 m minimum mapping unit and varies in more than 1 direction.', 'Linear - uncertainty is > 4.5 m minimum mapping unit and only varies in 1 direction.', 'Delimited - boundary is defined using a discrete border (ex. road, lake, pond, etc.).', and 'Negligible - uncertainty < 4.5 m the minimum mapping unit.'.
- Location of Observation:** A text input field at the bottom with a checkmark icon.

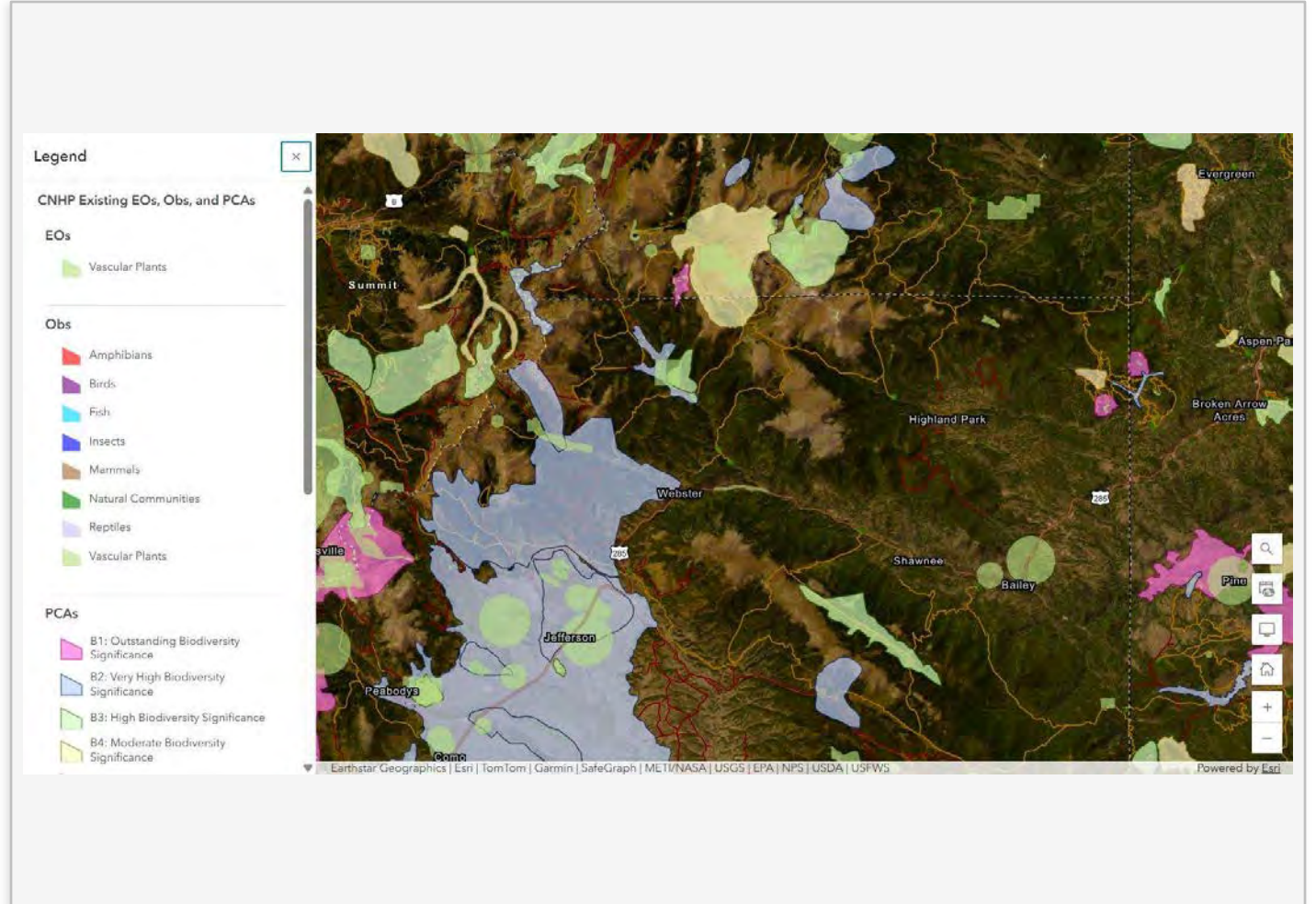
Survey123 – Mobile Data Collection

- Custom forms for plant, animal, and community observations
- Contextual fields and pick lists reduce field errors
- Auto-captures GPS location and supports photos
- Supports both detailed long-form and quick short-form entry

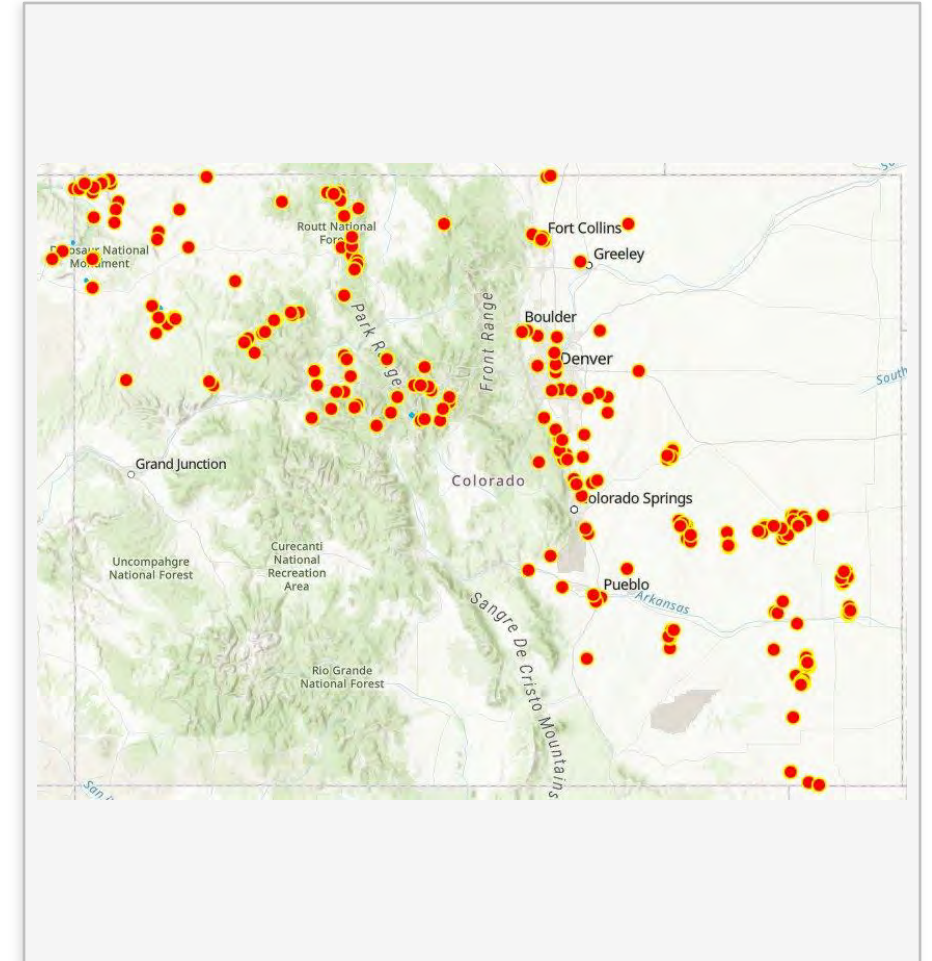
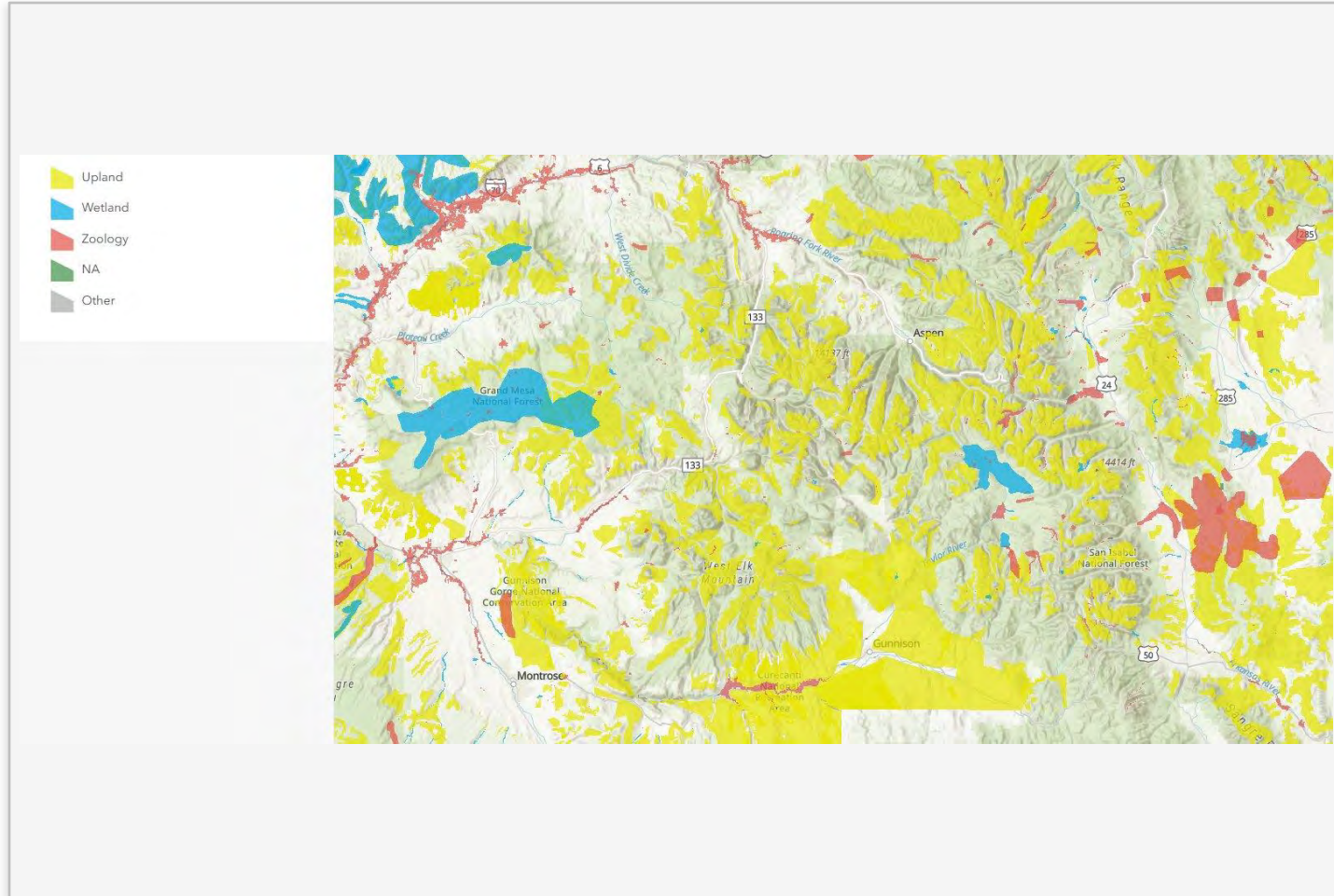
Biotics – Species Data Integration

- Survey123 submissions link to Biotics element occurrence records
- Field data validated against CNHP's species tracking database
- Eliminates manual re-entry; data flows directly from field to database

Field Maps



Targeted Inventory Areas (TIAs)



Landowner Contact Tracking

CNHP Landowner Tracking Dashboard 2026

Landowner Name Filter: No category selected
Parcel Land Access Status Filter: No category selected
TIA Discipline Filter: No category selected
County Filter: No Category Selected

Landowner N...	Landowner_ID	Total Acres in ...	Number_of_Ti...	Number_of_P...	Counties
BUREAU OF L...	335	46,735,200.05	207	1,036	Chaffee; Delta; ...
STOUT ROBE...	9,888	37,975,560.13	61	1	Montrose
U.S. FOREST S...	331	17,828,787.44	131	580	Chaffee; Clear...
UNITED STAT...	88	6,618,325.85	134	653	Chaffee; Custer...
WHITE RIVER...	3,382	2,265,637.74	9	7	Garfield
FOREST SERV...	13,626	1,570,707.69	5	1	Summit
PINION CANY...	9,115	708,320.73	3	1	Las Animas
U S A	4,013	336,699.93	20	38	Gunnison; Park

TIA List

Search...

TIA ID: U4073
TIA Name: NW of Graft
Discipline: Upland
Number of Parcels: 24

TIA ID: Z13901
TIA Name: Freezeout Creek
Discipline: Zoology
Number of Parcels: 22

TIA ID: Z13906

TIA Parcel Intersections

How It Works

- Landowner Contact dashboard
- Communication Log tracks follow-up, status, and outreach history
- All contacts linked to parcels, TIAs, and counties in the geodatabase
- Dashboard shows real-time contact counts and land access status
- Supports seasonal prioritization of outreach across all TIAs

Stories from the Field

Tyler Lovato, Zoologist
Colorado Natural Heritage Program



Highlights



Prowers County record

Texas Threadsnake
(*Rena dulcis*)



Roundtail Horned Lizard

(*Phrynosoma modestum*)

- 3 individuals
 - 2 separate areas in Otero



Eastern Hog-nosed Snake

(*Heterodon platirhinos*)

- 1 live adult
 - Furthest southwest they have been documented

CNHP Dashboard

Ellie Linden, Spatial Analyst
Colorado Natural Heritage Program





Colorado Natural Heritage Survey Dashboard

2026 Partners' Meeting

March 31, 2026 | CSU Campus, Fort Collins, CO

Ellie Linden





Colorado Natural Heritage Survey Dashboard



The Colorado Natural Heritage Survey dashboard presents summaries of survey effort to date, results, and status of statewide natural heritage data. Ongoing dashboard development will incorporate additional information on conservation status for species, natural communities, and ecosystems.

Species & Communities

Understand the current state of Colorado's biodiversity data by species and natural community, geography, and conservation status.

Survey Effort

Explore spatial summaries of survey effort by major taxonomic group and geography.

Potential Conservation Areas

Explore maps and summaries of places with documented value for conservation of biodiversity in Colorado.

Scorecard

Explore current conservation status of Colorado's rarest, most imperiled species, and most widespread ecological systems.

User StoryMap

Understand how to navigate the dashboard and interpret the information.

Current as of September 2025.

This dashboard presents information on the species and communities that make up Colorado's biodiversity. Species include vertebrate and invertebrate animals and plants. Natural communities (or "communities") are distinct assemblages of species, such as different types of forests, shrublands, grasslands, wetlands, and many others. Some species and communities are widespread and thriving, while others are rare or imperiled. Identifying each species or community and understanding its status is necessary for making informed choices about where and how humans inhabit and care for the land. Species and communities that are rare or imperiled are high priorities for focused conservation attention and are tracked by the Colorado Natural Heritage Program (CNHP). These tracked species and communities are the focus of this dashboard. Visit [CNHP's tracking list](#) for all

Snapshot Summary

Snapshot by Geography

Snapshot by Species and Community

Tracking List Changes

Snapshot comparison 2024 vs. 2025	Group All displayed	Tracking Status (most recent) Watchlisted (W)	Added to Tracking List Yes	Removed from Tracking List All displayed	Track Increase Yes	Track Decrease All displayed	G-Rank Change No	S-Rank Change All displayed
--------------------------------------	------------------------	--	-------------------------------	---	-----------------------	---------------------------------	---------------------	--------------------------------

Tracking List Changes Represent 2024 vs. 2025

Added to tracking list
143 species & communities

Removed from tracking list
0 species & communities

Increased Tracking Status
143 species & communities

Decreased Tracking Status
0 species & communities

G-Rank Changes
0 species & communities

S-Rank Changes
103 species & communities

Explore Individual Species and Community Changes

Group	Scientific Name	Common Name	Track (start)	Track (end)	G-Rank (start)	G-Rank (end)
Birds	<i>Aegolius acadicus</i>	Northern Saw-whet Owl	N	W	G5	G5
Birds	<i>Aquila chrysaetos</i>	Golden Eagle	N	W	G5	G5
Birds	<i>Callipepla squamata</i>	Scaled Quail	N	W	G5	G5
Birds	<i>Circus hudsonius</i>	Northern Harrier	N	W	G5	G5
Birds	<i>Leucosticte atrata</i>	Black Rosy-Finch	N	W	G4	G4
Birds	<i>Patagioenas fasciata</i>	Band-tailed Pigeon	N	W	G4	G4
Birds	<i>Psiloscops flammeolus</i>	Flammulated Owl	N	W	G4	G4
Insects	<i>Calophrys polios obscurus</i>	Obscure Elfin	N	W	G5T5	G5T5
Insects	<i>Calophrys spinetorum</i>	Thicket Hairstreak	N	W	G4G5	G4G5
Insects	<i>Neophasia menapia</i>	Pine White	N	W	G5	G5
Insects	<i>Polites mystic</i>	Long Dash	N	W	G5	G5



Select a county
All counties

Select a group
All displayed

Select a Rounded G-Rank
All displayed

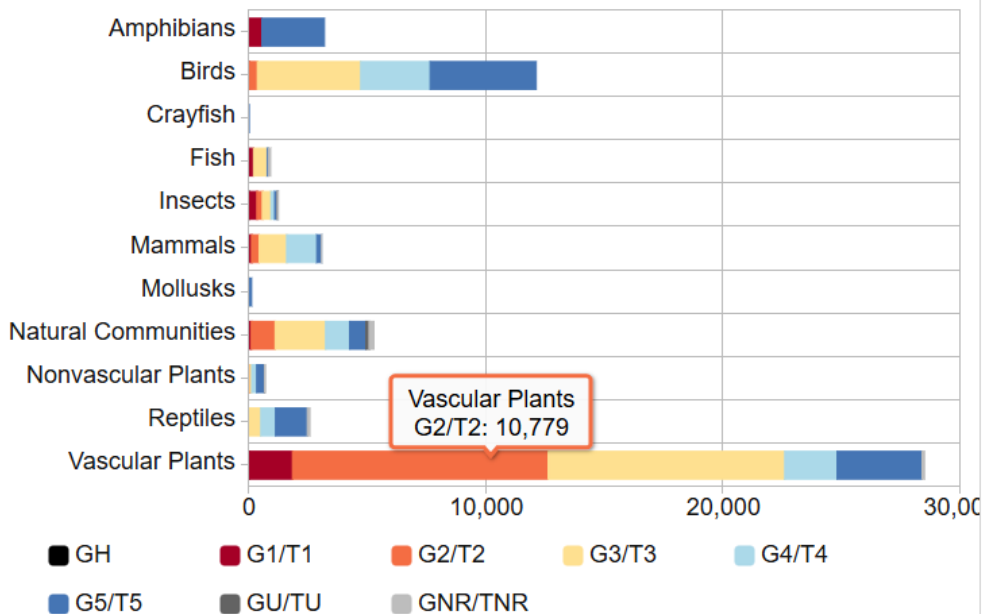
Select a tracking status
All displayed

Snapshot Represents 2025

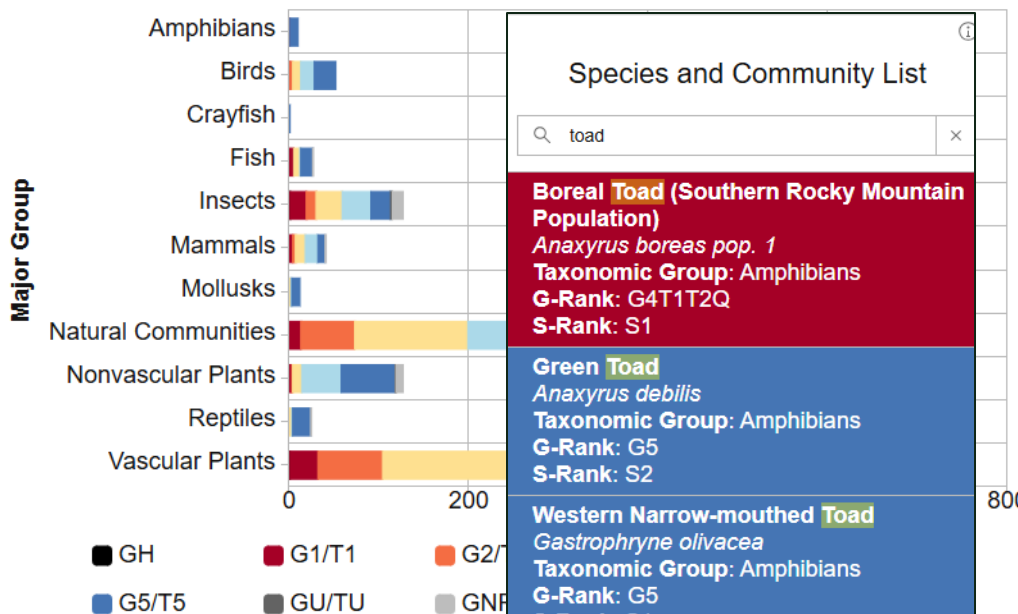
Total number of mapped locations in CNHP's data system by major taxonomic group and global imperilment rank.

The total number of distinct species and communities tracked by CNHP that have spatial data, by major taxonomic group and global imperilment rank.

Number of Mapped Locations 57,608



Number of Species and Communities 1,514



Species and Community List

Search...

Species and Community List

Search: toad

- Boreal Toad (Southern Rocky Mountain Population)**
Anaxyrus boreas pop. 1
Taxonomic Group: Amphibians
G-Rank: G4T1T2Q
S-Rank: S1
- Green Toad**
Anaxyrus debilis
Taxonomic Group: Amphibians
G-Rank: G5
S-Rank: S2
- Western Narrow-mouthed Toad**
Gastrophryne olivacea
Taxonomic Group: Amphibians
G-Rank: G5
S-Rank: S1

- Blanchard's Cricket Frog**
Acris blanchardi
Taxonomic Group: Amphibians
G-Rank: G5
S-Rank: SX
- Boreal Toad (Southern Rocky Mountain Population)**
Anaxyrus boreas pop. 1
Taxonomic Group: Amphibians
G-Rank: G4T1T2Q
S-Rank: S1
- Green Toad**
Anaxyrus debilis
Taxonomic Group: Amphibians
G-Rank: G5
S-Rank: S2
- Canyon Treefrog**
Dryophytes arenicolor
Taxonomic Group: Amphibians

Select a county
All displayed

Select a watershed
All displayed

Snapshot Represents 2025

Select a county or watershed in the top-right to zoom to its location.

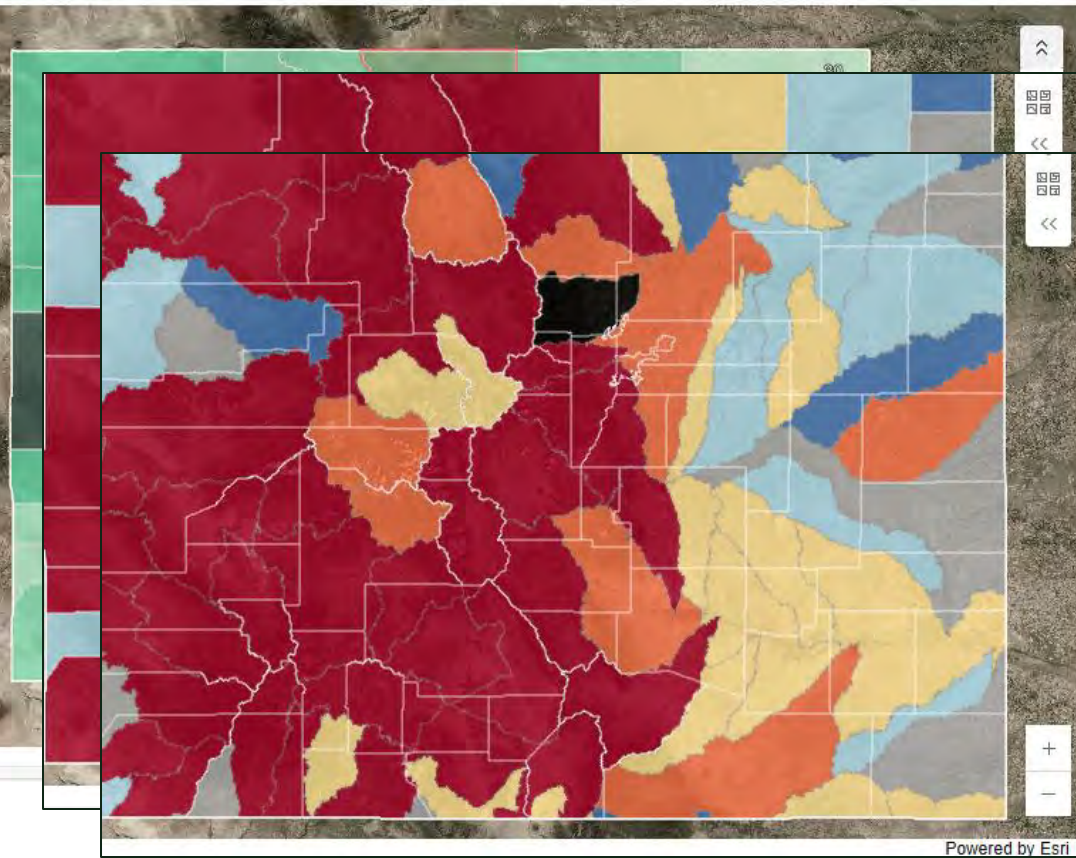
Larimer

Zoom to Pan

=== Number of CNHP Mapped Locations ===
 Total: 2,044
 Vertebrates: 644
 Invertebrates: 97
 Plants: 849
 Natural Communities: 454

=== Number of CNHP Mapped Species and Communities ===
 Total: 313
 Vertebrates: 42
 Invertebrates: 34
 Plants: 140
 Natural Communities: 97

=== Rarest Species or Community ===
 Overall: G1 or T1 Present
 Vertebrate: G1 or T1 Present
 Invertebrate: G1 or T1 Present
 Plant: G1 or T1 Present
 Natural Community: G1 or T1 Present



Reference Layers

Colorado Boundary

County Boundaries

County Boundaries

Latest Snapshot

Watershed Scale

Invertebrates

Rarest Species Present

- GH Present
- G1 or T1 Present
- G2 or T2 Present
- G3 or T3 Present
- G4 or T4 Present
- G5 or T5 Present
- No CNHP mapped species

ns
and Community Locations

Select a taxonomic group
Vascular Plants

Select a name
Ipomopsis polyantha (Pagosa ...

Snapshot Represents 2025

Select a species or community in the top-right to see its CNHP mapped locations.

Due to ongoing data revisions, only aquatic-dependent communities (wetland, riparian) are included in the map at this time.



Description and Phenology

[Back to top](#)

General Description:

Herbaceous biennial, or short-lived, monocarpic perennial, over 20 cm tall. The plant typically remains as a rosette in the juvenile stage for one or two growing seasons before sending up a flowering stalk and dying, though some plants have persisted as juvenile rosettes for three or more growing seasons. Flowers are white or white with pink mottles, located in axillary clusters along the stems and branches. Corolla is short tubular, and stamens are strongly exerted. Pollen is blue initially, then changes to yellow as it matures. Leaves are pinnatifid or deeply toothed with glandular hairs (Spackman et al. 1997, Collins 1995).

Look Alikes:

Not likely to be confused with any other species in the same habitat and range in Colorado (Spackman et al. 1997).

Phenology:

Plants produce flowers and fruit late May through early August. Since the plants are most conspicuous during flowering, the best inventory period is late May to late July (Anderson 1988).



Pagosa Skyrocket
Ipomopsis polyantha
[Element Profile](#)

Taxonomic Group: Vascular Plants

Track: Y

G-Rank: G1

S-Rank: S1

Endemic: Y

U.S. ESA: LE

Other Status: SWAP Tier 1

CNHP Sensitive Element: N

Aquatic Dependent: N

Snapshot Summary

Snapshot by Geography

Snapshot by Species and Community

Tracking List Changes

Snapshot comparison 2024 vs. 2025	Group All displayed	Tracking Status (most recent) All displayed	Added to Tracking List All displayed	Removed from Tracking List All displayed	Track Increase All displayed	Track Decrease All displayed	G-Rank Change All displayed	S-Rank Change All displayed
--------------------------------------	------------------------	--	---	---	---------------------------------	---------------------------------	--------------------------------	--------------------------------

Tracking List Changes Represent 2024 vs. 2025

Added to tracking list
409 species & communities

Explore Individual Species and Community Changes

Removed
99 species

Species and communities that have moved to a higher priority category within CNHP's tracking list (e.g., from watchlisted to partially tracked to fully tracked).

Increased Tracking Status
427 species & communities

Decreased Tracking Status
124 species & communities

G-Rank Changes
112 species & communities

S-Rank Changes
503 species & communities

Group	Scientific Name	Common Name	Track Increase	Track Decrease	G-Rank (start)	G-Rank (end)	S-Rank (start)	S-Rank (end)
		Blanchard's Cricket Frog			G5	G5	SH	SX
		Boreal Toad (Southern Ro...			G4T1T2Q	G4T1T2Q	S1	S1
Amphib...	Anaxyrus debilis	Green Toad	Y	Y	G5	G5	S2	S2

Track Increase
Yes

Track Decrease
All displayed

All displayed

Yes

No

Reset

Group	Scientific Name	Common Name	Track (start)	Track (end)
Birds	Aquila chrysaetos	Golden Eagle	N	W
Amphib...	Lithobates pipiens	Northern Leopard Frog	Y	Y
Amphib...	Lithobates sylvaticus	Wood Frog	Y	Y
Amphib...	Scaphiopus couchii	Couch's Spadefoot	Y	Y
Amphib...	Spea intermontana	Great Basin Spadefoot	Y	Y
Arachnids	Hypochilus bonneti	A Lampshade Weaver	N	Y



Data Successes

Amy Greenwell, Conservation Data Sciences Co-Lead
Colorado Natural Heritage Program



Data Focus Areas

- **Data Infrastructure/Tools**

- Targeted Inventory Areas/GPS Tracks
- Landowner Communication
- Survey 123 Digital Field Forms/Field Maps
- Survey 123 Data to Biotics Pipeline
- ArcPro Import Tools for External Data Sources
- CNHP Heritage Dashboard

- **Species & Communities in Colorado**

- **Mapped Locations**

Status of Plant Data

Tracking & Ranking changes from work done on SWAP

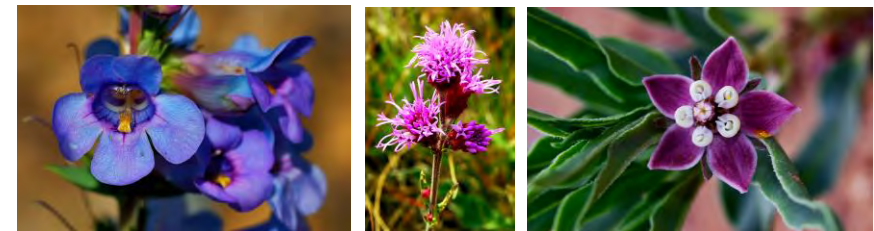
- **G1 – Critically imperiled**
- **G2 – Imperiled**
- **G3 – Vulnerable to extirpation or extinction**

Statewide data for these are in relatively good shape. We can now add G3 to this group.

- **G4 – Apparently secure**
- **G5 – Demonstrably widespread, abundant, and secure**

Many of these are disjunct/peripherals that are poorly understood. Efforts are underway to apply state ranks and assess tracking statuses. All plants added to tracking list have spatial data from herbariums/iNaturalist.

Nonvascular plants Partnership with the Bryophyte Conservation Alliance improved tracking and increased map locations of mosses fivefold. Hoping for a similar collaboration with fungi. Collaborations with taxonomic experts underway.



Status of Animal Data

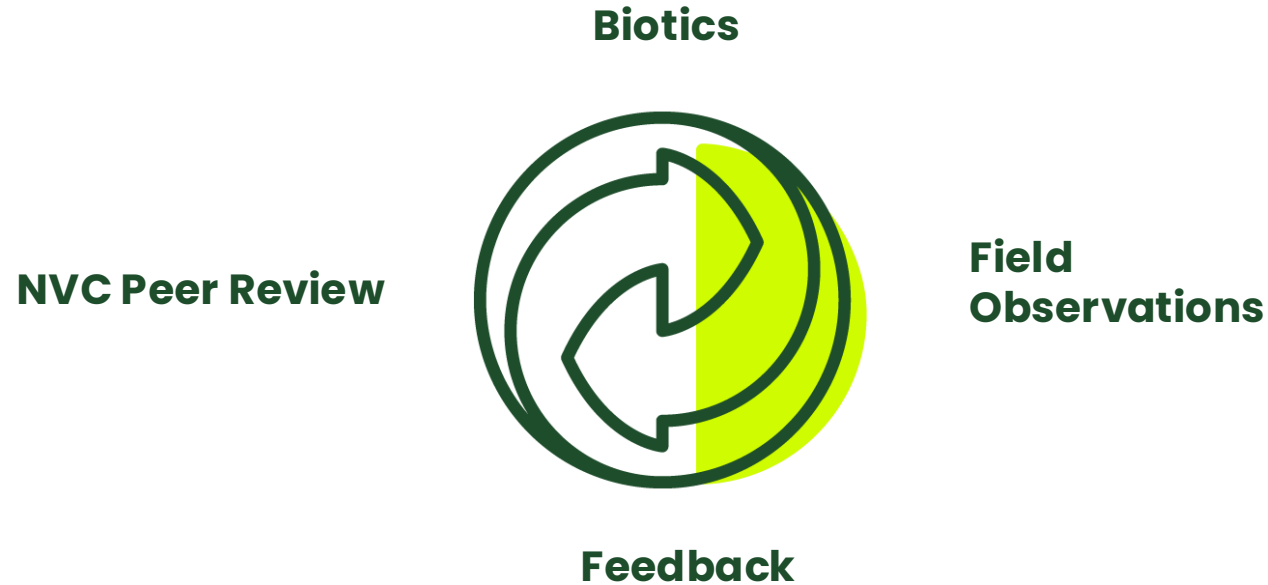
Tracking & Ranking changes for all groups from work done on SWAP

- **Amphibians & Reptiles** – good coverage, especially for rarest species; added 800+ mapped locations from HerpMapper and iNaturalist, leveraging relationships with trusted iNaturalist observers.
- **Birds** – under-mapped, large external datasets currently unincorporated; SNHS zoologist focused on birds – Pinyon Jay
- **Fish** – rely upon CPW and federal partners
- **Non-game Mammals** – under-mapped, more survey effort needed
- **Invertebrates** – good coverage for high-profile species and most SWAP Tier 1 and Tier 2 taxa; iNaturalist bulk upload thousands of mapped locations, about to do bulk uploads for museum specimens; SNHS Invert group; Scott Ellis, butterfly expert; sizeable backlog of un-cataloged specimens at museum, few taxonomic experts



Status of Community Data

- **Syncing to US National Vegetation Classification (USNVC) 3.0**
 - ✓ **Almost complete!**



We track at the plant association level of the hierarchy



Element Tracking

Major Group	CNHP Tracked (Full, Partial, Watchlist)
Amphibians	10
Arthropods & Insects	279
Birds	56
Fish	30
Mammals	51
Mollusks	16
Natural Communities	767
Nonvascular Plants	177
Reptiles	28
Vascular Plants	888
	2,302



Amphibians and Reptiles



Arthropods and Insects



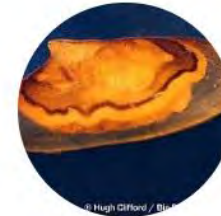
Birds



Fish



Mammals



Mussels and Clams



Nonvascular Plant



Plant Communities



Vascular Plants

CNHP tracks over 1,500 species

6,115 native species*
658 unknown origin
563 exotic species

*Approx. 190 endemics

Almost 400 elements added to tracking list in last 2 years

> 100 Colorado elements added to Biotics

Element Ranking

Global Rank / State Rank	Global Rank (NS) # of Elements in Biotics	State Rank (CNHP) # of Elements in Biotics
Critically Imperiled (G1/S1)	109	852
Imperiled (G2/S2)	212	785
Vulnerable (G3/S3)	657	1,378
Apparently Secure (G4/S4)	1,547	1,328
Demonstrably Secure (G5/S5)	4,068	560
Historically Known (H)	11	58
Presumed Extirpated (X)	2	14
Unrankable (U)	155	177
Not Ranked (NR)	1,324	2,091
Not Applicable (NA)	40	882

> 2,000 S Ranks Calculated

Approx 75% have state ranks

Range, threats, habitat, life history, mapped locations & EO ranks



Amphibians and Reptiles

Arthropods and Insects

Birds

Fish

Mammals

Mussels and Clams

Nonvascular Plant

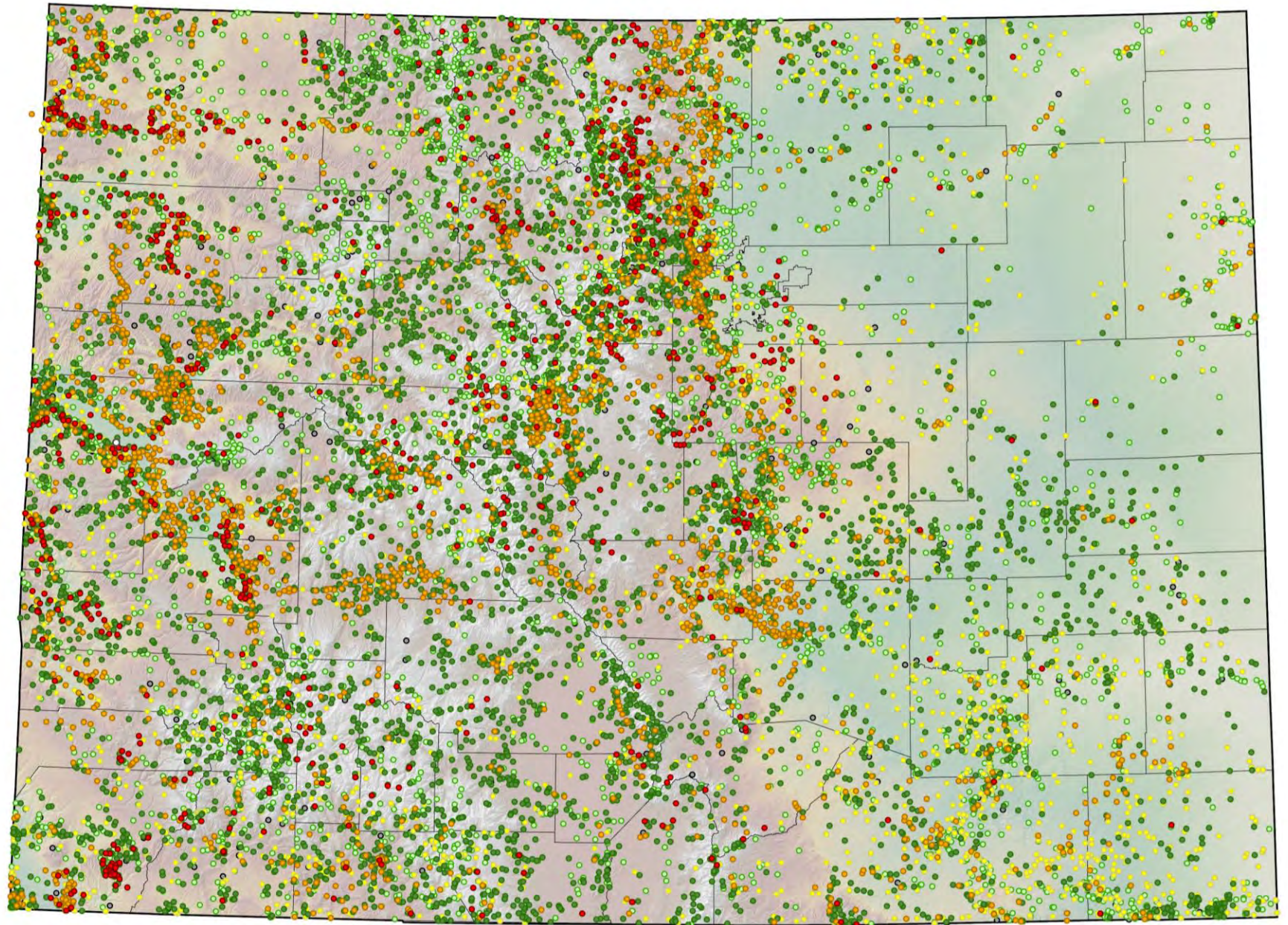
Plant Communities

Vascular Plants

Element Occurrences

- G1 - Critically Imperiled
- G2 - Imperiled
- G3 - Vulnerable
- G4 - Apparently Secure
- G5 - Demonstrably Secure
- GH - Historical
- GNR - Not Ranked

63,580 Mapped Locations

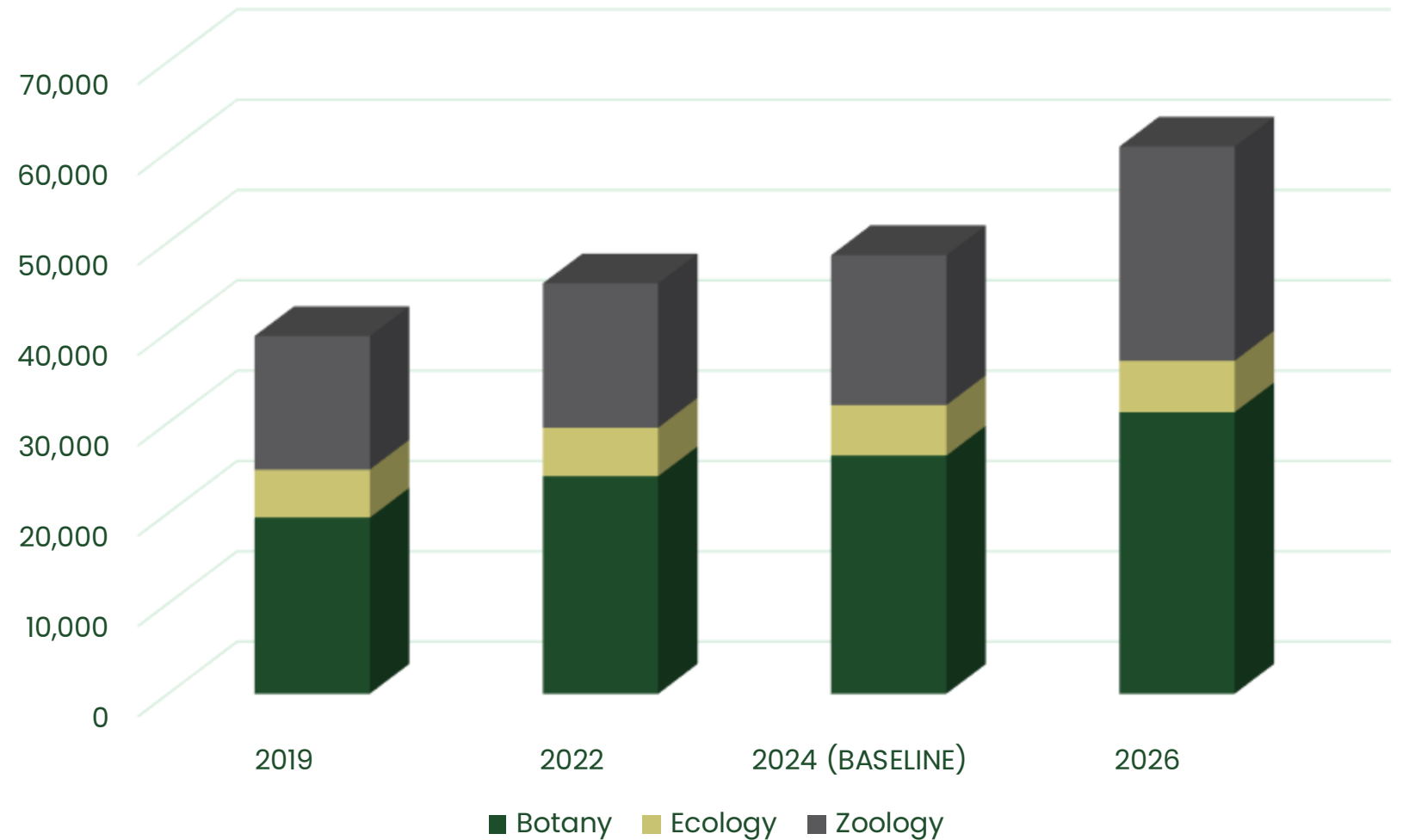


Mapped Locations Over Time

+15,546 new
+2,437 updates

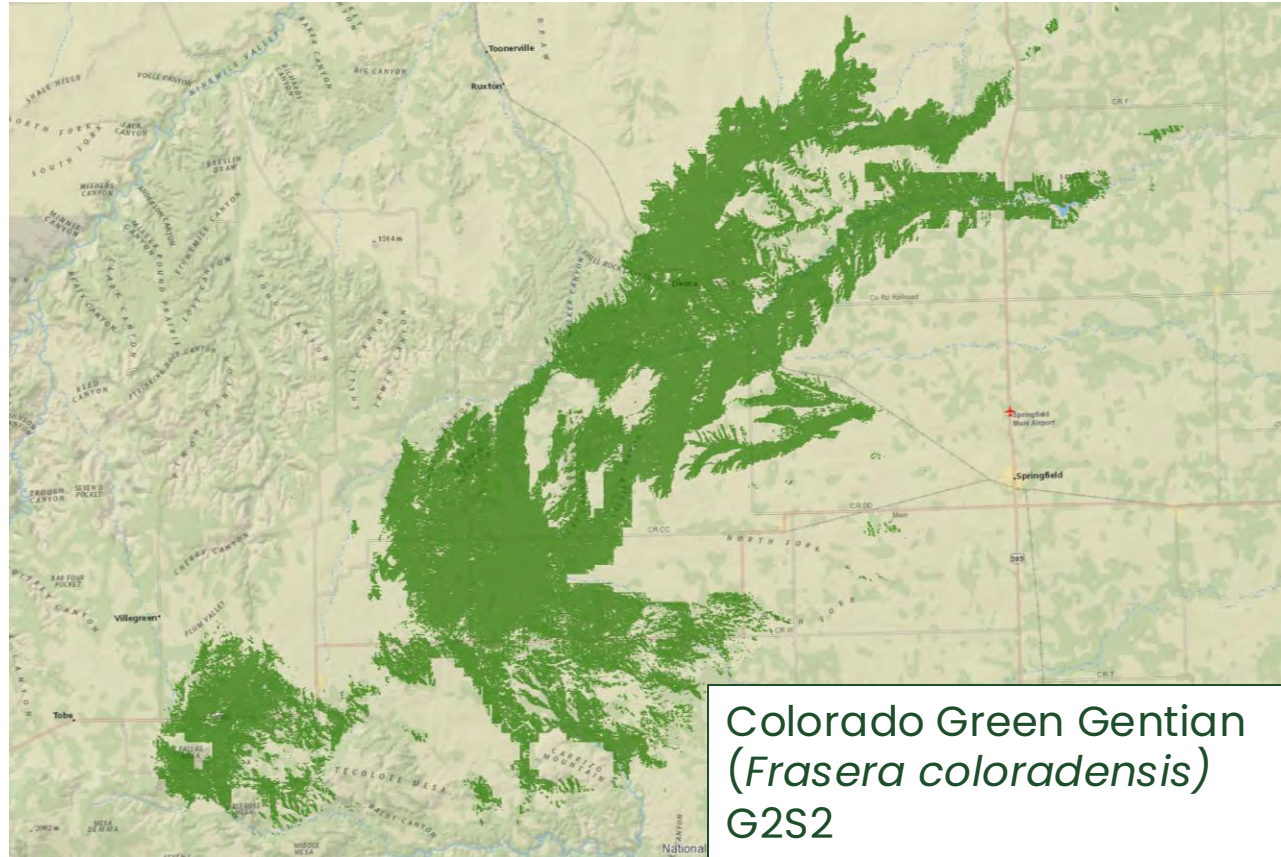
Increased an average
of 2k/yr to 7,500/yr

Mapped Locations 2019 - 2026



CNHP Models & Range Maps

Rare Plant Models, 113 Elements



15 new SWAP Tier 2 plants in the works

Zoology Range Maps, 194 Elements



152 new & updated SWAP Tier 1/Tier 2 inverts

Data Successes



Scientific Knowledge & Informed Decision Making

- ❖ **Online Resources & Data Sharing**
- ❖ **Increased Map Locations**
- ❖ **New Range Maps, Models & CO Profiles**
- ❖ **Improved Tracking & Ranking**
- ❖ **Network of Taxonomic Experts**
- ❖ **Special Status Updates (SWAP, BLM, USFS, ESA, State)**
- ❖ **Range, Threats, Habitat & Life History**
- ❖ **More Colorado Elements/NVC**
- ❖ **Data Infrastructure**

**Thank you
for your
Partnership!**

Stories from the Field

Grant Musgrave, Botanist/Ecologist
Colorado Natural Heritage Program



Sponsor Remarks

Dan Zimmerer, Parks and Wildlife Partnership Manager
Great Outdoors Colorado





GREAT OUTDOORS COLORADO

DAN ZIMMERER, GOCO

CNHP PARTNERS MEETING | MARCH 31, 2026

Heaven's Door Ranch Photo by Meegan Flenniken

33 YEARS OF IMPACT

Collard Ranch, Park County
Photo by Christi Bode



5,960

PROJECTS FUNDED
IN ALL



\$1.7 BILLION

IN LOTTERY PROCEEDS INVESTED
BACK INTO COLORADO



64/64

COUNTIES INVESTED IN
SINCE GOCO'S INCEPTION



1,465,505 ACRES
conserved



1,206 MILES
of rivers protected



1,856 CREATED/IMPROVED
parks and outdoor
recreation areas



66,688 ACRES
added to the state
parks system



1,276 MILES
of built/reconstructed
trail



11,369 YOUNG PEOPLE
employed through Colorado
Youth Corps Association

Select Projects Funded

Statewide Natural Heritage Survey

Heaven's Door Ranch

Eagle Valley Trail

Peaks to Plains Trail

Mt. Tom Conservation Corridor

Collard Ranch SWA

CENTENNIAL PROGRAM



**CLIMATE-RESILIENT
CONSERVATION AND
RESTORATION**



**EXCEPTIONAL AND SUSTAINABLE
OUTDOOR RECREATION**

GOALS

Colorado's Outdoors Strategy advances three interrelated 'North Star' goals for our outdoors. Each goal is essential to achieve a future where our people, outdoors, community character, and ways of life endure for generations to come.



COORDINATED PLANNING AND FUNDING

Online Data, Mapping Tools, and Resources

Colorado's Outdoors Strategy Resource Hub

Home Climate-Resilient Conservation ▾ Outdoor Recreation ▾ Data & Mapping Tools ▾ Inclusive Planning ▾

Colorado's Outdoors Strategy Resource Hub





THANK YOU.



Mt Tom Conservation Corridor by Bergreen Photography

Closing Remarks

David Anderson, Director

Colorado Natural Heritage Program



Ms. Colorado Senior America

Terrilynn Moore Smith

2026 Ms. Colorado Senior America

Introduced by René Green, Ms. Colorado Senior America Pageant
and Jessica Smith, CNHP




Lunch

Please enjoy the taco bar lunch

We will start with speakers at 1:00 PM

mins: secs:

type:

 Breaktime for PowerPoint by Flow Simulation Ltd.



CNHP

Team Updates



Speakers

Jessica Smith, Botany and Vegetation Ecology, CNHP

Amy Greenwell & Micheal Menefee, Conservation Data Sciences, CNHP

Lee Grunau & Vinamra Mathur, Conservation Planning, CNHP

Joanna Lemly, Wetland Ecology, CNHP

Jeremey Siemers, Zoology, CNHP





Botany & Vegetation Ecology Team

2026 Partners' Meeting

March 31, 2026 | CSU Campus, Fort Collins, CO

Jessica Smith, Team Leader, jp.smith@colostate.edu



Team Members



Susan Spackman
Panjabi
Botanist



Georgia Doyle
Botanist/Database
Specialist



Tom Baldvins
Ecologist



Brenda Wichmann
Botanist/Ecologist



Jill Handwerk
Botanist



Rob Monahan
Botanist



Becca Harris
Botanist/Ecologist



Grant Musgrave
Botanist/Ecologist



Curtis Drake
Botanist



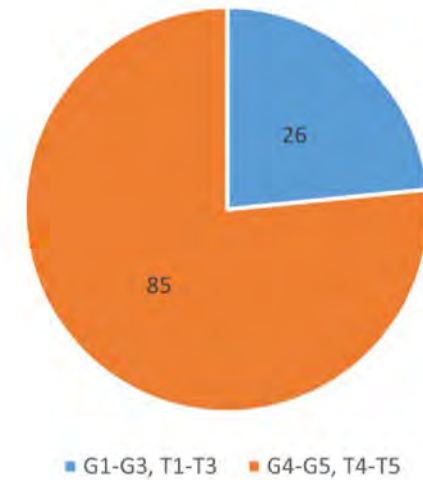
Brittany
Morrow-Nordentoft
Botanist/Ecologist

Team Activities

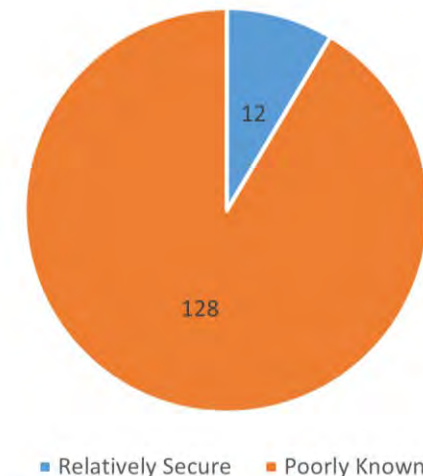
- Database Curation: Rare Plants & Plant Communities
 - Added 111 plant taxa to tracking list (678 total)
 - Added 140 plant taxa to watchlist (205 total)
 - Ranked 983 G4 or G5 plant taxa S3 – S5
 - Added 53 non-vascular species to the tracking list (177 total)
 - Reconciling natural plant communities tracking list to USNVC 3.0

<https://cnhp.colostate.edu/ourdata/trackinglist/>

Tracking List Additions



Watchlist Additions



Team Activities

- Survey & Inventory: Rare Plants & Upland Plant Communities
 - Statewide Natural Heritage Survey
 - Colorado Natural Areas Program
 - CPW/USFWS (Section 6)
 - White River National Forest



Moffat County



Routt County



Summit County



Clear Creek County

Team Activities

- Vegetation Mapping, Assessment, and Inventory
 - Amache National Historic Site (NPS)
 - Plains Conservation Center
 - Comanche & Cimarron National Grasslands
 - CPW Resource Stewardship
 - Eagle Valley Land Trust



West Avon Preserve, Eagle County



Comanche National Grassland



North Sandhills, Jackson County



Amache National Historic Site, Prowers County

Team Activities

- Rare Plant Monitoring
 - Focus on federally listed and SWAP Tier 1 species
 - Working with RPTC to coordinate monitoring effort
 - CPW, CNAP, USFWS, White River NF, Pike San Isabel NF, BLM, MRHI, UNC, DBG



Mosquito Range mustard (*Eutrema penlandii*)



Cushion bladderpod (*Physaria pulvinata*)



Parachute penstemon (*Penstemon debilis*)



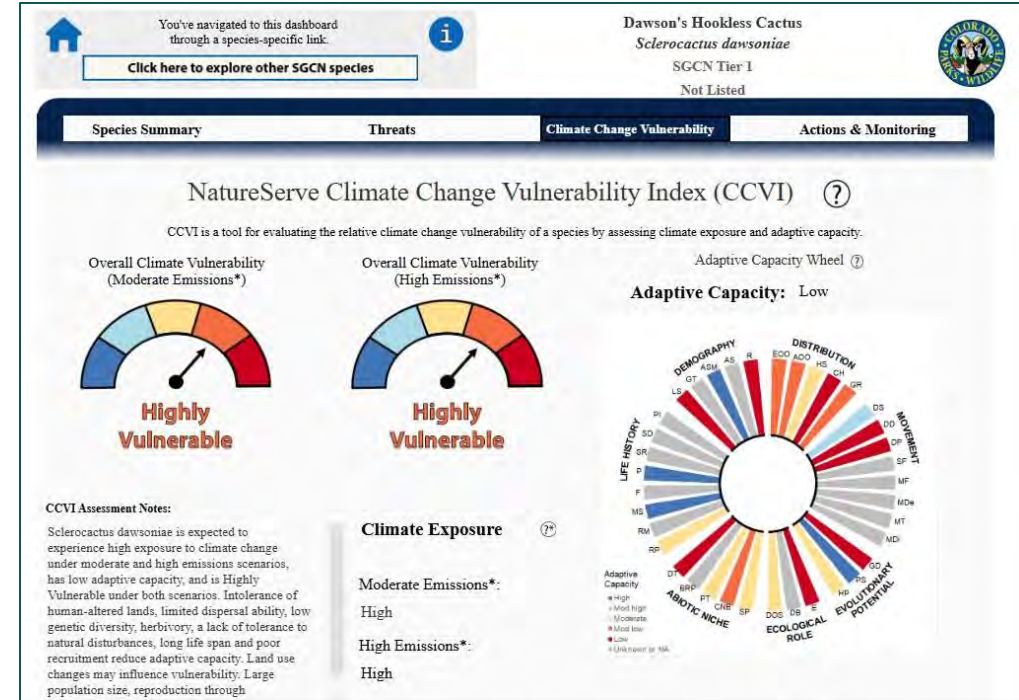
Pagosa skyrocket (*Ipomopsis polyantha*)

Team Activities

- Electronic Data Collection Apps
 - USFS Region 3 T&E Species S123 data collection app
- Species Distribution Modeling
 - CPW, BLM
- Climate Change Vulnerability Assessments
 - CPW's 2025 State Wildlife Action Plan

<https://codex.cnhp.colostate.edu>

<https://cpw.state.co.us/state-wildlife-action-plan>



Team Activities

- Seed Collection
 - USFS Region 2 Native Plant Materials Program, CoNPS
- Weed Monitoring and Mapping
 - U.S. Air Force Academy
 - White River & Arapaho Roosevelt NFs

<https://cnhp.colostate.edu/library/reports/>



White River National Forest



Air Force Academy



Shoshone National Forest



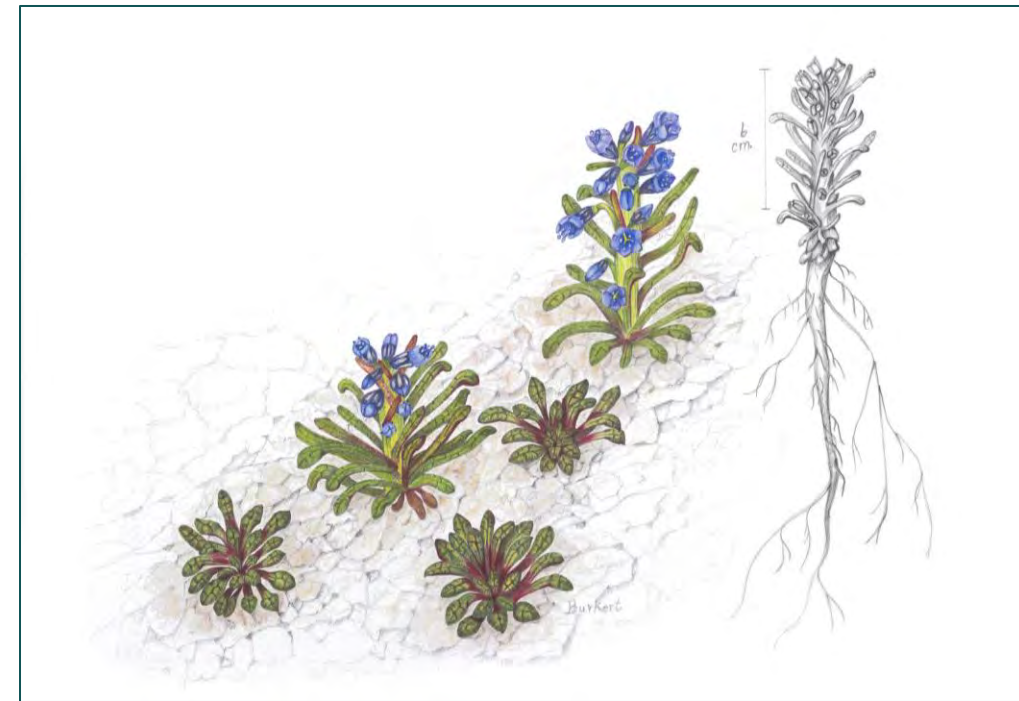
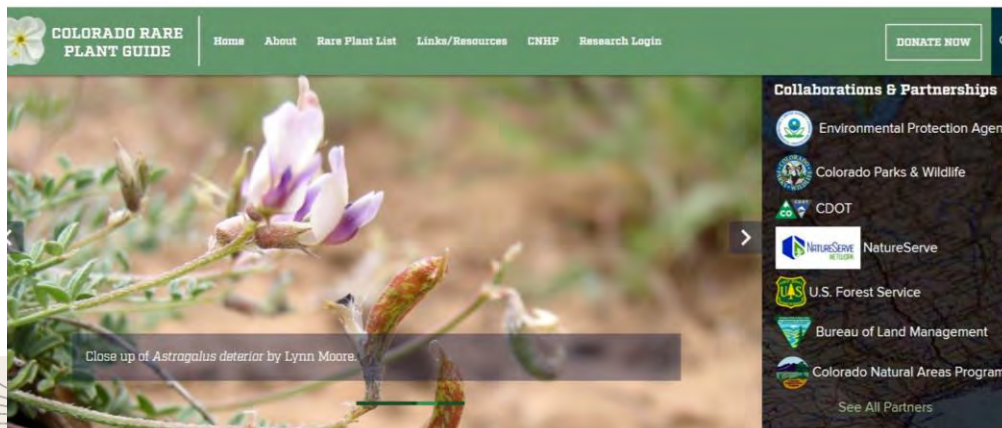
Comanche National Grasslands

Team Activities

- Outreach & Education
 - Rare Plant Guide Online
 - CPW support
 - USFS Region 2 Species Assessments
 - Rare Plant Symposia & Technical Committee

<https://cnhp.colostate.edu/rareplant/>

<https://cnhp.colostate.edu/projects/colorado-rare-plant-symposia/>



Aliciella sedifolia by Teresa Burkert

Colorado Rare Plant Symposia

2025 Rare Plant Symposium

- Twenty-second Annual Rare Plant Symposium Recap
- Species Discussion List

The complex block contains a header "Colorado Rare Plant Symposia" and three photographs of different rare plants. Below the photos is a section titled "2025 Rare Plant Symposium" with two bullet points: "Twenty-second Annual Rare Plant Symposium Recap" and "Species Discussion List".



Thank you!

2026 Partners' Meeting

March 31, 2026 | CSU Campus, Fort Collins, CO

Jessica Smith, Team Leader, jp.smith@colostate.edu





Conservation Data Services Team

2026 Partners' Meeting

March 31, 2026 | CSU Campus, Fort Collins, CO



Team Members

We are Database Managers, Database Administrators, Web Programmers, GIS Professionals & IT Specialists



Amy Lavender
Greenwell

**Co-Team Leader and
GIS Manager**

📞 (970) 491-2847

✉️ Amy.Lavender
@colostate.edu



Michael Menefee

**Co-Team Leader and
Data Distribution
Coordinator**

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✉️ Michael.Menefee
@colostate.edu



Yannick Edaye

**Database and Web
Developer**

📞 (970) 491-4628

✉️ yannick.edaye
@colostate.edu



Bridget Knerr

**Assistant Database
Manager**

✉️ bridget.knerr
@colostate.edu

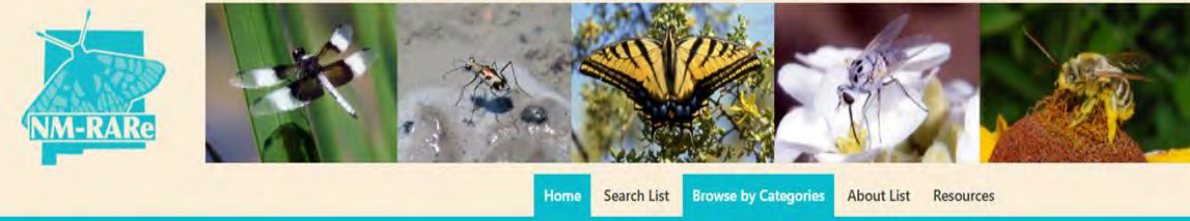
Conservation Data Services

Web Coding Support ↓



Web Development ↓

The New Mexico Rare Arthropod Resource



Heritage



Colorado's Conservation Data Explorer



WARNER COLLEGE OF
NATURAL RESOURCES
COLORADO STATE UNIVERSITY



COLORADO RARE
PLANT GUIDE



Colorado Wetland
Information Center



Colorado Bat
Working Group



COMaP

COMaP

Land Status

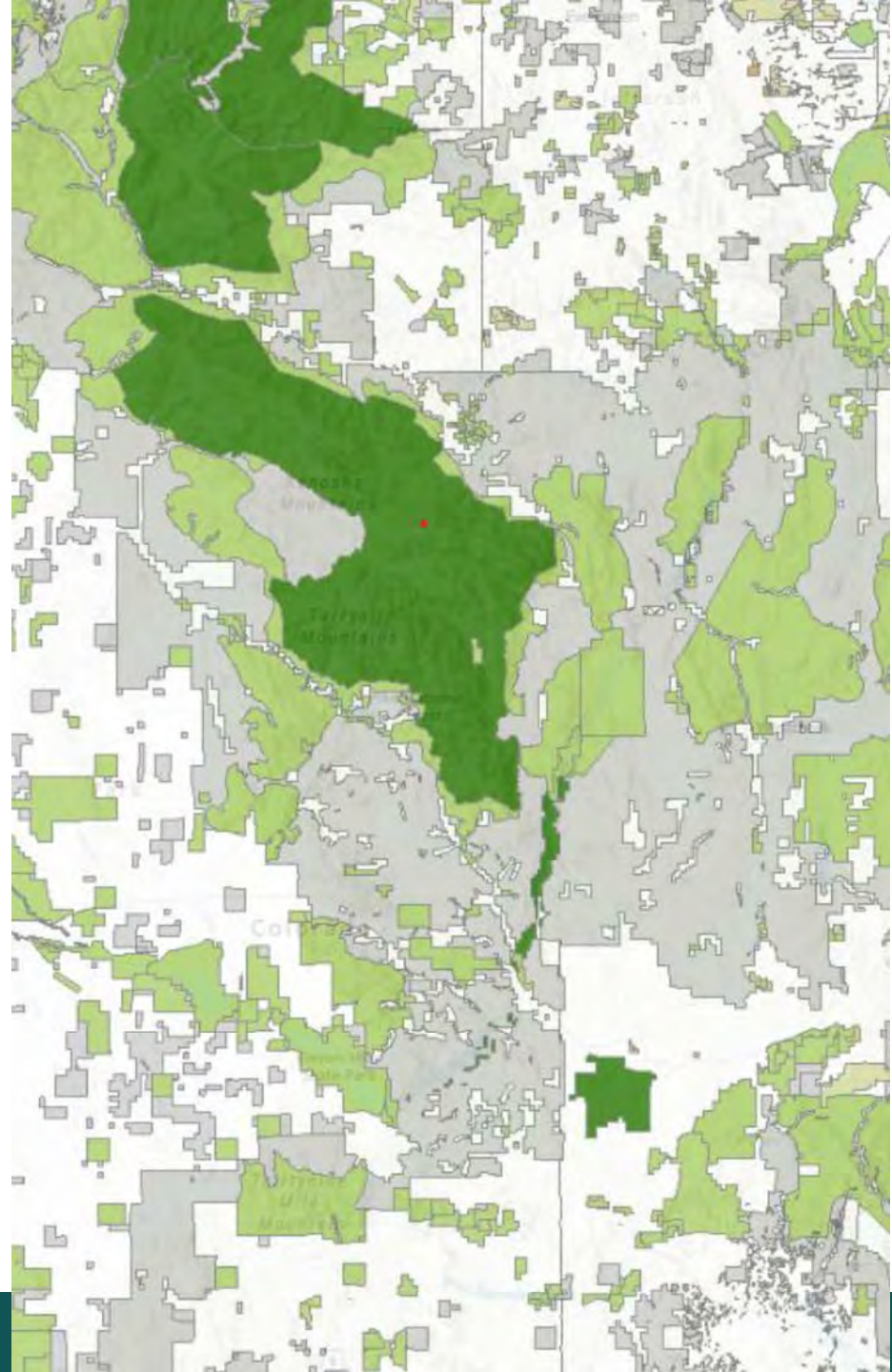
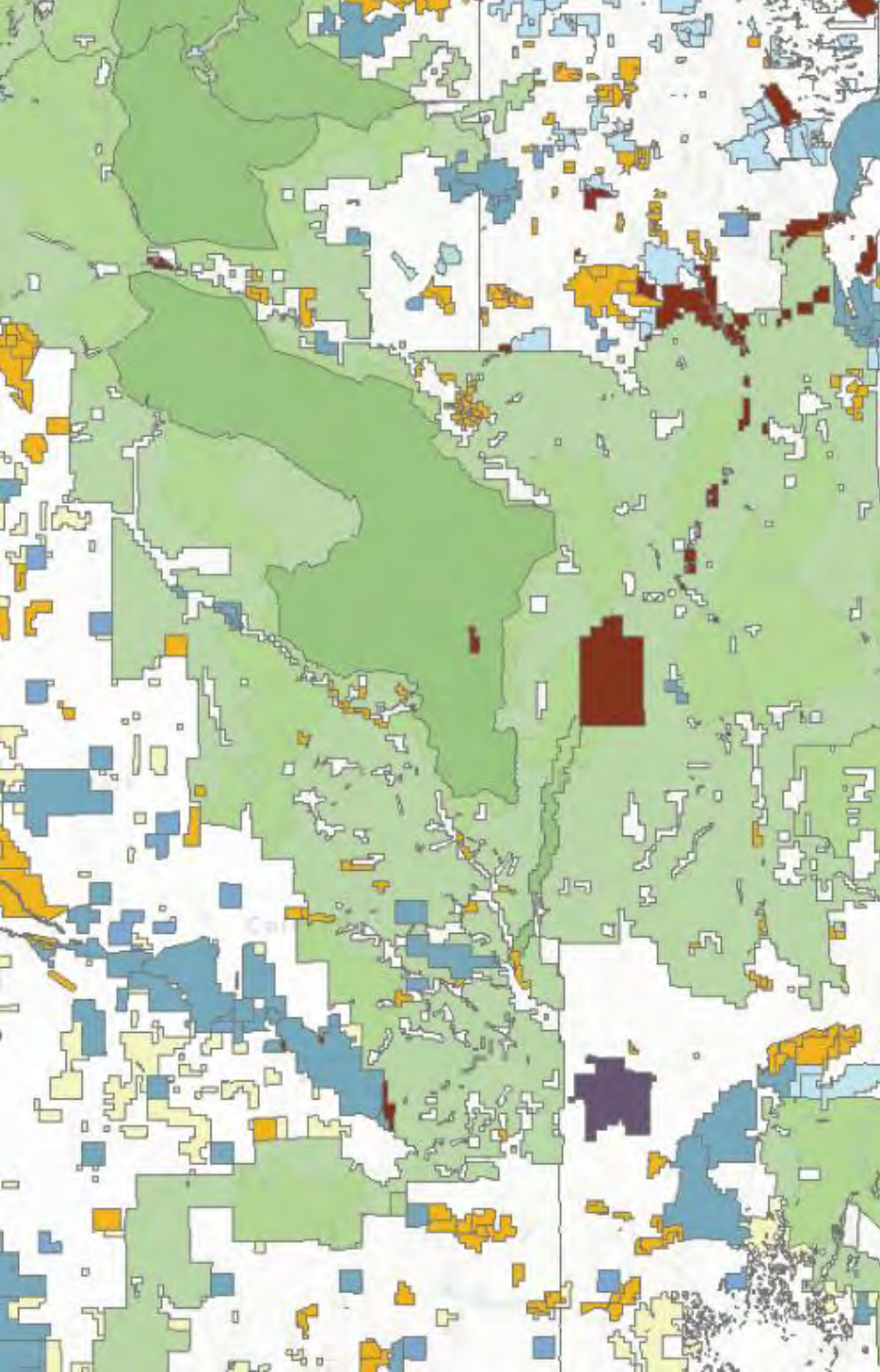


- Misc Federal
- BLM
- NPS
- USFS
- USFWS
- Tribal
- State
- Local
- NGO/LandTrust
- Private Conservation
- Private

Protection Level



- Very Good
- Good
- Fair
- Poor
- Unknown
- Private/Unmapped



PUBLIC RETURNS TO PRIVATE LAND CONSERVATION



2.3 MILLION acres of Colorado land conserved with an easement and received tax credits since 2009

\$35-57 BILLION

cumulative public benefits of conservation easement credits to Colorado taxpayers



\$31-\$49

in benefits for every \$1 invested in the tax credit program

- Carbon sequestration and storage
- Food and grazing
- Habitat biodiversity
- Water quality
- Soil erosion control

PUBLIC BENEFITS



WETLANDS

generate the greatest public value per acre

IF RECREATION AND TOURISM BENEFITS ARE INCLUDED...

\$43-\$74 BILLION

cumulative public benefits of credits to Colorado taxpayers

\$37-\$64

in benefits for every \$1 invested



COMaP

Return on Investment 2024

Public returns to private lands conservation in Colorado: The Conservation Easement Tax Credit Program

Andrew Seidl, Cole Crossett, Amy Greenwell, Drew Bennett, and Michael Menefee

The CODEX Partnership



Development team for building and maintaining CODEX



COLORADO NATURAL
HERITAGE PROGRAM
COLORADO STATE UNIVERSITY

Home of CODEX, provide data, manage data layers and queries in the tool, develop new features, conduct trainings and provide support



Lead partner in providing critical data and key funding for CODEX



COLORADO'S
Outdoors Strategy

CODEX is the home for the legacy of data and tools supporting the COS and Regional Partnerships



Thought leaders and data partners supporting the land trust community



Agency, Industry, and NGO partners using and supporting CODEX



COLORADO
State Land Board

How are the Data Used and What is their Impact?

- CODEX is a game-changer for conservation data use
- CODEX requests doubled year over year after launch
- Total data requests in 2025 were 20X greater than prior to CODEX launch in October, 2021



	Page views	Visitors	Reports	Registered Users
CODEX Since Launch Oct 2021	146,751	14,608	7,482	3,375 (700+ Organizations)
CODEX 2025-Current Date	58,534	6,294	2,463	919

Upcoming CODEX Features and Recent Data Layers

- New Regional Partnership Initiative Layers (RPIs)
- Habitat and Connectivity Study Layers (HCCP)
- 2025 CO State Wildlife Action Plan (SWAP) Data Layers
- COS CODEX Conservation Planning Report
- Will integrate COS, SWAP, Habitat and Connectivity Study layers and more to help provide another resource for planners and decision-makers
- Launching on CODEX this year (2026)
- CODEX New Map Core Likely in 2026-2027
- Newer Version of ESRI Map Server
- Mobile Phone Support
- Enhanced Security





COLORADO'S Outdoors Strategy

2025

*A collaborative vision for conservation,
outdoor recreation, and climate resilience*



CONSULTING TEAM



FACILITATION &
CONSENSUS BUILDING
TRIBAL & INDIGENOUS
ENGAGEMENT

STAKEHOLDER, TECHNICAL, &
PUBLIC ENGAGEMENT

COMPLEX TEAM & PROJECT
MANAGEMENT



OUTDOOR RECREATION
PLANNING & DESIGN

ENVIRONMENTAL SCIENTISTS
& PERMITTING SPECIALISTS

COMMUNITY ENGAGEMENT,
GRAPHIC DESIGN

EQUITABLE ACCESS IN
OUTDOOR RECREATION

CONSERVATION &
BIODIVERSITY PLANNING,
SCIENCE & DATA

CODEX & COMAP DATA
PREPARATION, MANAGEMENT,
AND APPLICATIONS

FIELD & GIS-BASED
ECOLOGICAL CONDITION
ASSESSMENT;
SPATIAL ANALYSIS
& MODELING



TEACHING &
FACILITATION

PROFESSIONAL DEVELOPMENT
& CAPACITY BUILDING

BIODIVERSITY &
CONSERVATION PLANNING

SUSTAINABLE OUTDOOR
RECREATION AND TOURISM

CLIMATE CHANGE
ADAPTATION



**CLIMATE-RESILIENT
CONSERVATION AND
RESTORATION**



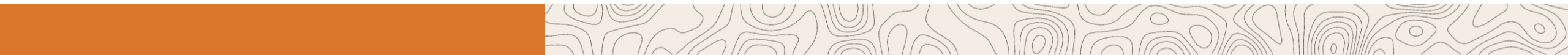
**EXCEPTIONAL AND SUSTAINABLE
OUTDOOR RECREATION**

GOALS

Colorado's Outdoors Strategy advances three interrelated 'North Star' goals for our outdoors. Each goal is essential to achieve a future where our people, outdoors, community character, and ways of life endure for generations to come.



COORDINATED PLANNING AND FUNDING



CNHP & CODEX: Supporting Colorado's Outdoors Strategy

Built a legacy of tools for Climate-Resilient Conservation and Restoration, Exceptional and Sustainable Outdoor Recreation and Coordinated Planning and Funding hosted on CODEX at CNHP

- Created a statewide Conservation Summary representing the array of biodiversity values known statewide
- Integrated land protection status into COMaP including private lands conservation
- Brought several existing partner tools and layers into CODEX for broad use and accessibility



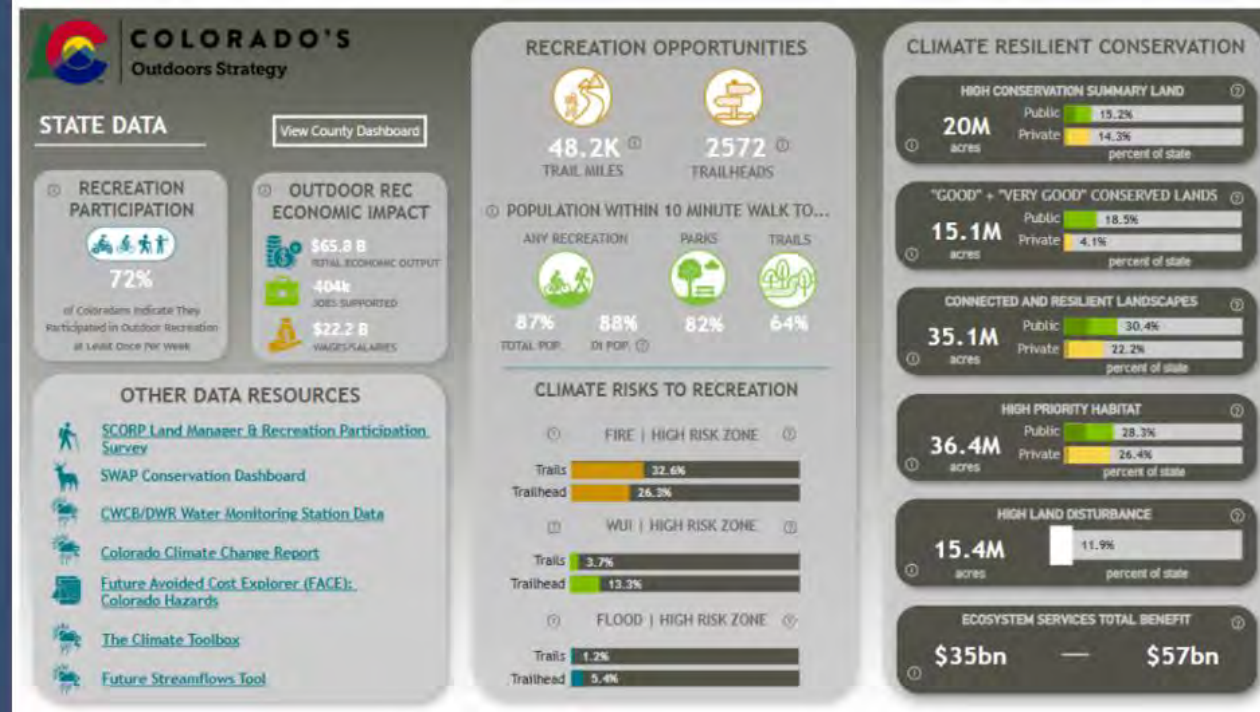
CODEX



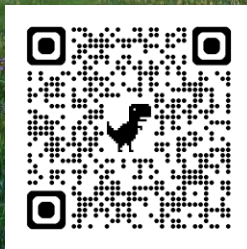
Resource Hub

Discover a variety of data, mapping tools and resources housed in the Resource Hub for Colorado's Outdoors Strategy. These tools and resources are designed to support interdisciplinary and inclusive planning processes at all scales.

[Explore the Resource Hub](#) →



Colorado's Outdoors Strategy
Resource Hub Link:



Colorado's Outdoors Strategy
CODEX Supporting Layers Story Map
(currently being updated):





Valuing Private Land Conservation in Colorado Using CODEX

A Partnership with the Colorado Natural Heritage Program at CSU, Keep It Colorado, and the Colorado Cattlemen's Agricultural Land Trust





Thank you!

2026 Partners' Meeting

March 31, 2026 | CSU Campus, Fort Collins, CO

Amy Greenwell, Co-Team Leader, Amy.Lavender@ColoState.EDU

Michael Menefee, Co-Team Leader, Michael.Menefee@ColoState.edu





Biodiversity Indicators Program

Vinamra Mathur



About us:



- Track and report on conservation targets by identifying key trends and issues, establishing baselines, informing sub-national planning, and evaluating policy impacts
- Apply Global Biodiversity Framework to indicator workflows and interactive platforms to assist with **conservation planning & decision-making** at the national & regional levels
- Build indicator workflows & platform for long-term management by partners who have **various levels of technical capacity**
 - Utilize Esri's ArcGIS Online (AGOL) software for platform development
- Past & present project geographies:
 - *National:* Ghana, Namibia, South Korea, The Bahamas, Uganda
 - *Regional:* Arctic, Southeast Asia (ASEAN)
 - *Global:* International Big Cat Alliance, NBSAP Accelerator



Kunming-Montreal

GLOBAL BIODIVERSITY FRAMEWORK





NBSAP Accelerator Partnership

3,420 followers

1mo · 🌐

🌟 We are pleased to welcome [Warner College of Natural Resources](#) to our growing community working to accelerate the implementation of [#NBSAPs](#) in line with the [#KMGBF](#).

We look forward to working together to strengthen science-based biodiversity action for nature and people 🌱🌍



COP17
YEREVAN ARMENIA

**TAKING ACTION
FOR NATURE**

WELCOME



**WARNER
COLLEGE OF
NATURAL
RESOURCES**



MEMBERSHIP



Warner College of Natural Resources

+ Follow ...

2,860 followers

2w · 🌐

We're proud to share that [Vinamra Mathur](#), Director of the Biodiversity Indicators Program at [Colorado Natural Heritage Program](#), is now a focal point supporting the implementation of National Biodiversity Strategies and Action Plans aligned with the Kunming-Montreal Global Biodiversity Framework.

This positions WCNR at the center of country-level indicator development and NBSAP implementation — advancing rigorous, science-based approaches that translate global biodiversity commitments into measurable national action. This membership to the NBSAP Accelerator strengthens both biodiversity outcomes and our global partnerships, reinforcing Warner College's role at the science-policy interface.

We look forward to working with partners to serve nature and people. 🌍

ACCELERATING ACTION FOR NATURE

The National Biodiversity Strategic Action Plan (NBSAP) Accelerator Partnership supports countries in accelerating the implementation of National Biodiversity Strategies and Action Plans aligned with the Kunming–Montreal Global Biodiversity Framework.

105 members:

59 countries + European Commission



13 Institutions



32 non-state actors



International Big Cat Alliance MoU

- IBCA is a multi-country, treaty-based intergovernmental organization launched by India in April 2023 to conserve seven major big cat species—tiger, lion, leopard, snow leopard, puma, jaguar and cheetah.
- Headquartered in New Delhi, India, the IBCA aims to strengthen international collaboration and facilitate knowledge sharing among 95+ range and non-range countries.
- Warner College of Natural Resources and IBCA are signing a five-year MoU to develop the global big cat dashboard and leverage CSU's interdisciplinary research expertise to generate high-quality scientific outputs that inform global big cat conservation policy and practice.





Big Cat Dashboard



Home

Dashboards ▾

Interactive Map

User Story Map

Partners



Text here explaining the platform.

Dashboards

Visualize data through charts and maps.

Interactive Map

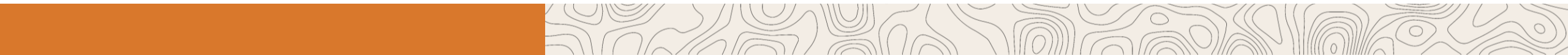
Explore spatial data with advanced functionality.

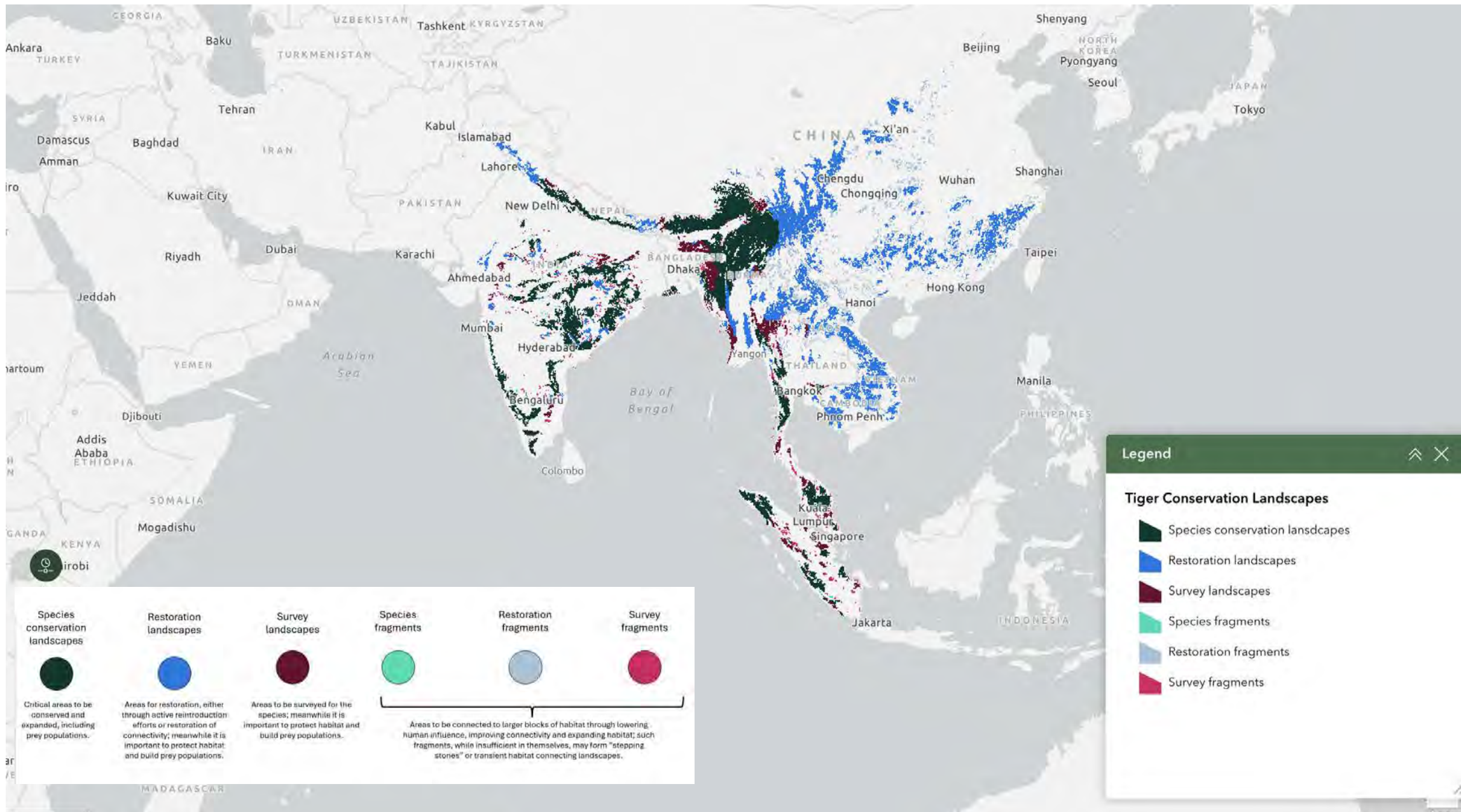
User StoryMap

Learn how to interact with this platform.

Partners

Learn about the partners involved in this project.







THE DEPARTMENT OF
ENVIRONMENTAL
PLANNING &
PROTECTION

Spatial Biodiversity Information System of The Bahamas

Home

Dashboards

Interactive Map

Data Library

Additional Resources

Partners

The Spatial Biodiversity Information System (SBIS) of The Bahamas is an interactive, digital platform designed to facilitate effective management of protected areas and adjacent land and seascapes. The SBIS was initially funded by the Global Environment Facility through the project Meeting the Challenge of 2020 in The Bahamas, in partnership with the United Nations Environment Programme and The Bahamas Department of Environmental Planning and Protection within the Ministry of the Environment & Housing. Technical support was provided by the Colorado Natural Heritage Program at Colorado State University.

Dashboards

Visualize data through charts and maps for The Bahamas and protected areas.

Interactive Map

Explore all spatial data on the SBIS using advanced functionality.

Data Library

Learn more information about all data included on the SBIS.

Additional Resources

Learn about the SBIS and additional related online platforms.

Partners

Learn what partners contributed to the SBIS.

Protection Across The Bahamas

Marine

10.9 %

Nearshore Environment

17.3 %

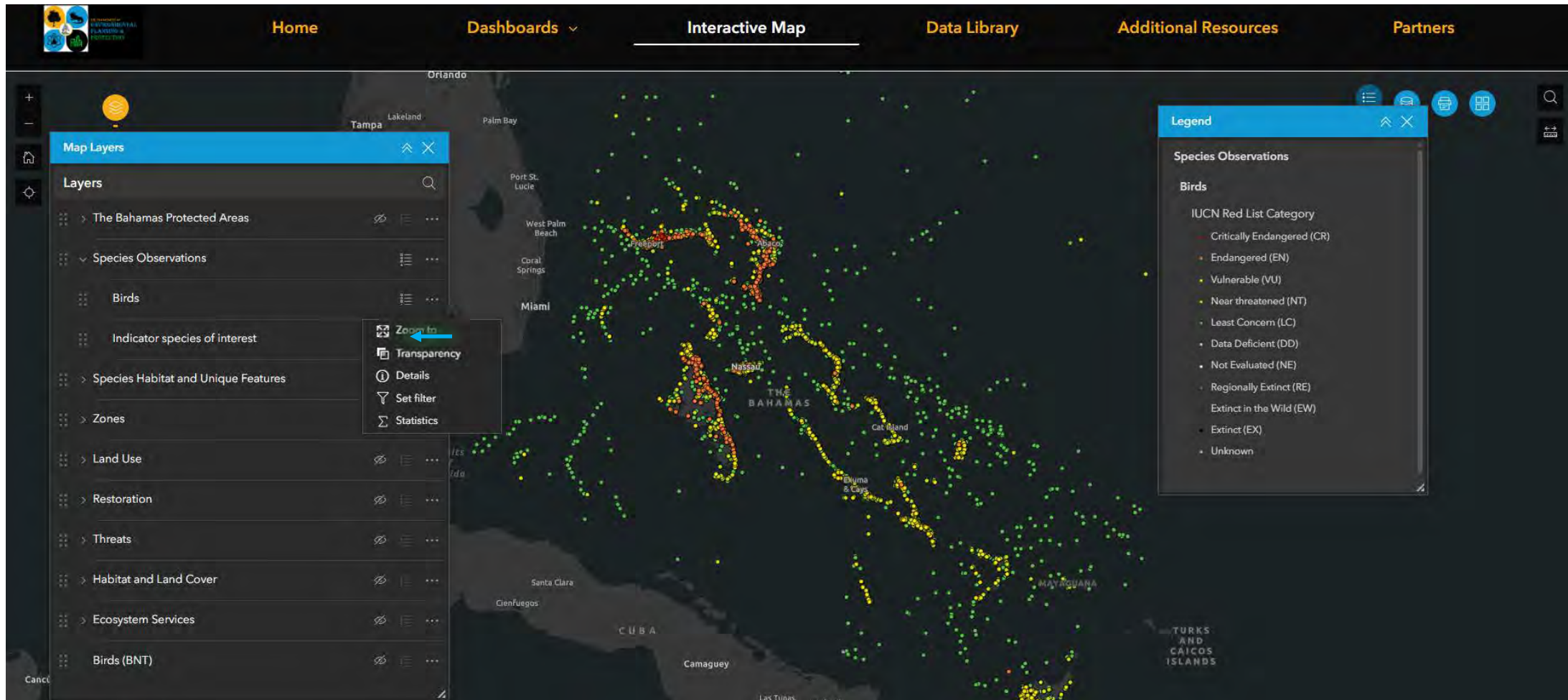
Terrestrial

37.7 %

The Nature Conservancy

- **Platform:** Spatial Biodiversity Information System (“SBIS”)
- **Funder:** Global Environment Facility (GEF)
- **Key collaborating partner:** Department of Environmental Planning & Protection (DEPP)
- **Timeline:** 2020–2025 (ended in September 2025)
- **Goal:** Facilitate effective management of protected areas and adjacent land and seascapes in The Bahamas

Bird Occurrences Symbolized by IUCN Threat Status:



Available functionality & interaction within ArcGIS Online Experience Builder application's map widget:

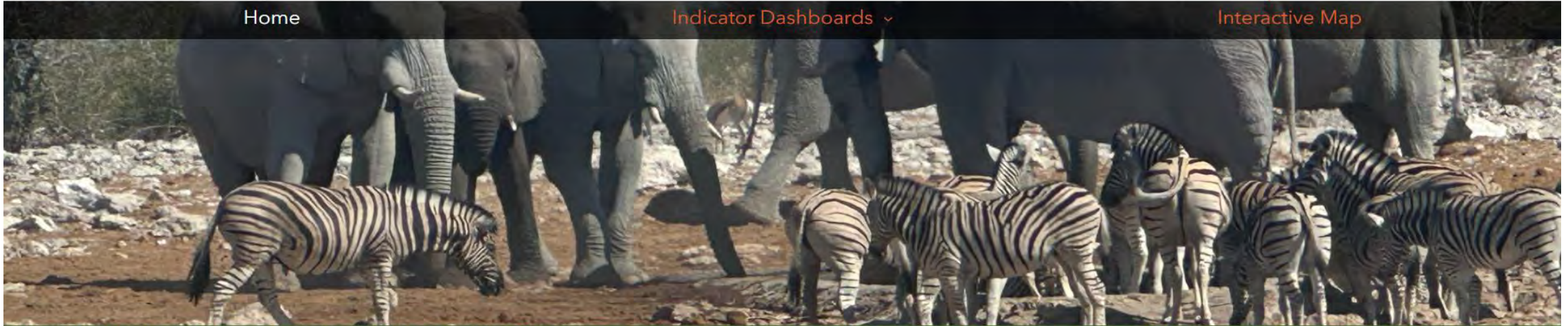
- Overlaid with other spatial layers
- Filter
- Calculate statistics (e.g. count)
- Pop-ups (species attributes & citations)
- Access dataset details
- Export formatted maps
- Measure
- Add new datasets
- Change underlying basemap



Home

Indicator Dashboards ▾

Interactive Map



The Multilateral Environmental Agreement (MEA) Tracking Platform of Namibia facilitates national environmental target guidance and tracking related to global and national policy conventions.

Indicator Dashboards

Understand how indicators relate to policy frameworks and visualize through charts and maps.

Interactive Map

Explore spatial data relating to Namibia indicators with advanced functionality.







Wetland Team

2026 Partners' Meeting

March 31, 2026 | CSU Campus, Fort Collins, CO

Joanna Lemly Team Leader, joanna.lemly@colostate.edu



Team Members



Alexa Bondus
Wetland Ecologist



Katrina Castro
Aquatic Ecologist



Jess Cheadle
Volunteer &
Program
Coordinator



Clark Hollenberg
Wetland Ecologist



Thom Jukes
Aquatic Ecologist



Mitch Kleimeyer
Aquatic Ecologist



Luke Knaggs
Wetland Ecologist



Lauren Laughlin
Wetland Ecologist



Hanna Mohr
Wetland Ecologist



Gabrielle Smith
Wetland Mapping Specialist



Greg Smith
Aquatic Ecologist



Sarah Smith
Wetland Ecologist



Bodie Spinner
Wetland
Technician



Barrett Sullivan
Wetland Ecologist



Tess Webb
Aquatic Ecologist
and Data Analyst



Ruth Whittington
Wetland Data Analyst



Importance of Wetlands

- Wetlands cover less than 2% of Colorado but host disproportionate biodiversity.
- Driest and warmest winter on record.
- Dramatic shift in wetlands regulation from federal government to state agencies.
- Significant Colorado legislation and policy:
 - SB23-270: Stream restoration bill
 - HB24-1379: Dredge and fill program
 - Beaver Conservation and Management Strategy
- More important than ever to keep wetlands at the forefront of conservation and natural resource management.



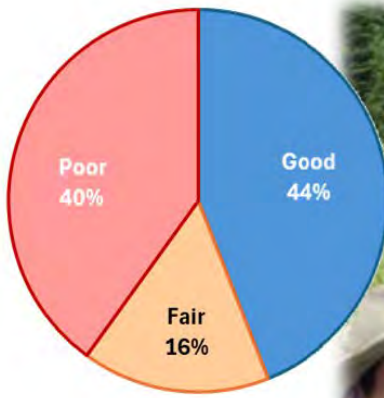
SNHS Field Work

- Documenting rare and significant wetlands across the state.
- Refining the classification of Colorado's wetlands at multiple levels.
- Clarifying which species and communities are most rare.



Statewide Wetland Assessment Data

Vegetation Condition



National Wetland Condition Assessment (NWCA)

- In 2026, we will sample 16 site including revisits.
- In 2021, we sampled 50 sites across Colorado
- Wetland condition was good or fair in just over half of sites; condition varied by elevation and land use; all wetlands experience some alteration

Wetland Plots Database

- Adding ~1,000 new records with vegetation and soil data from wetlands across the state (~4,000 in total)
- Data reveal trends in wetland condition and can inform classification, conservation, restoration planning



Access Plots Database -->



Science to Support Wetland Regulation and Planning

Model of federal vs. state jurisdiction

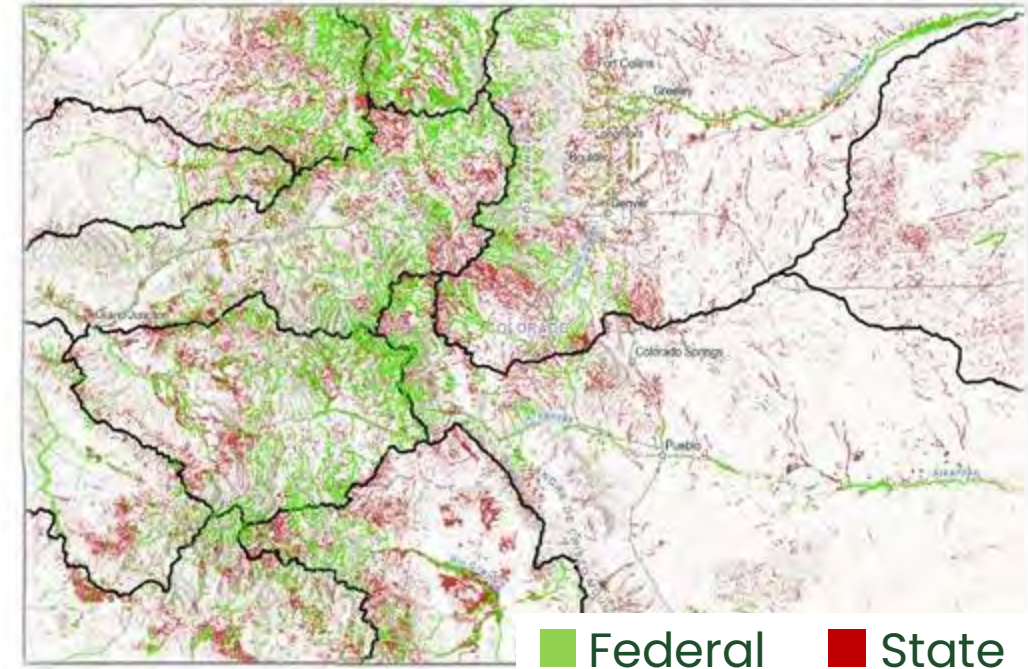
- Multiple scenarios based on interpretation
- In most restrictive scenario, state could be responsible for regulating a large share of the wetlands

Soil carbon sampling

- Collecting soil samples from wetlands across the state
- Calculating carbon stores by wetland type

Functional assessment methods

- Seeking funds to support the new state wetland regulatory program develop a functional assessment method to track the impacts and success of mitigation



Resilient Wetlands of the Front Range and Plains

Groundwater-Dependent Ecosystems (GDEs) on the Plains

- Map of priority GDE complexes across the Front Range and plains
- Field surveys in over 50 GDE sites
- Vegetation, soils, amphibians, macro-inverts



Resilient Front Range Wetlands

- Updated wetland mapping for 20 quads
- Field surveys in over 40 Front Range wetlands
- Vegetation, soils, condition, social values



Mapping Significant Wetland Types

Mapping fens on U.S. Forest Service lands

- White River National Forest
- Grand Mesa, Uncompahgre, and Gunnison National Forest
- Medicine Bow – Routt National Forest



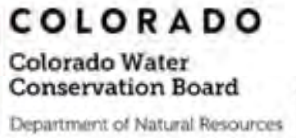
Modeling beaver ponds and associated wetlands

- Colorado Beaver Activity Mapper (COBAM)
- Supports the CPW Beaver Strategy
- Multi-state model for the Colorado River Basin

Statewide playa map

- Playa Lakes Joint Venture data
- Isolating playas from National Wetland Inventory
- Playa fill data from Wetland Plots Database and outside partners
- Seeking funding for in-depth research on San Luis Valley playas

Access Beaver Mapper -->



BLM Assessment Inventory and Monitoring (AIM)



Riparian & Wetland AIM

- Lead science partner for the national R&W AIM program
 - Protocol development and training
 - Survey123 electronic data collection
 - Data management and analysis
- Field data collection in CO, UT, WY, NV
 - 1,994 sites in dataset, 220+ sites in CO
 - Vegetation, soils, water quality, eDNA

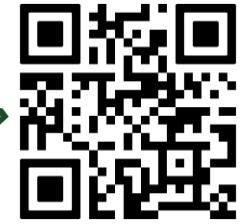


Lotic AIM

- Field data collection is CO, UT, WY, NV
 - 916 sites surveyed by CNHP, 800+ total CO sites
 - Physical habitat, macro-inverts, water quality
 - Pre and post restoration monitoring



Access AIM Data-->





Thank you!

2026 Partners' Meeting

March 31, 2026 | CSU Campus, Fort Collins, CO

Joanna Lemly, Team Leader, joanna.lemly@colostate.edu





Zoology Team

2026 Partners' Meeting

March 31, 2026 | CSU Campus, Fort Collins, CO

Jeremy Siemers, Team Leader, jsiemers@colostate.edu



Team Members



Nathan Comai
Entomologist



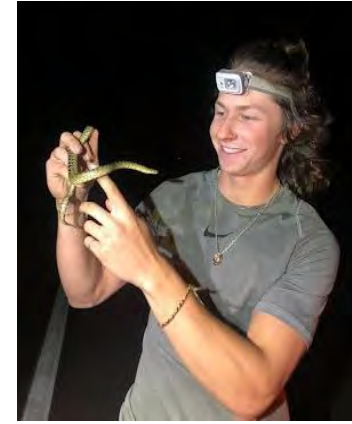
Terutaka Funabashi
Zoologist



Tristan Kubick
Entomologist



Brad Lambert
Zoologist



Tyler Lovato
Zoologist



Kyle Nelson
Bat Ecologist



Scott Schneider
Field Zoologist



Rob Schorr
Zoologist



John Sovell
Ecologist



Beth Stevenson
Zoologist



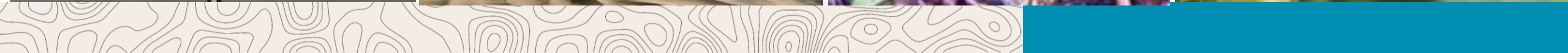
Justin Unrein
Field Zoologist



Sian Vienneau
Bat Data Analyst

Invertebrate Zoology

- Invertebrate Databasing and Specimen Preparation with Gillette Museum of Arthropod Diversity and other experts
- Tracking List Review – 100+ additions to list, 1000s of new mapped locations
- Birds and Pollinators with Bird Conservancy of the Rockies
- Pawnee Montane Skipper Conservation Partnership
- North Sand Hills Inventory with CPW
- Caribou Ranch, Boulder OSMP



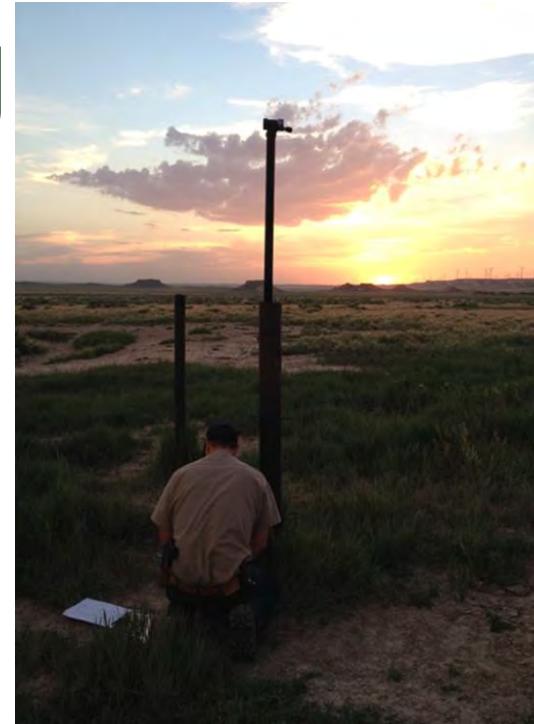
Rare Species Projects

- Preble's Meadow Jumping Mouse on USAFA
- PMJM Beaver Dam Analog Project
- Boreal Toad and Wood Frog Monitoring
- USFS Plant & Animal Species Evaluation



Bat Survey & Monitoring

- Little Brown Bat Long-term monitoring
 - Steamboat, Gateway Natural Area, and WY
- White-nose Syndrome Vaccine Trials
 - Steamboat, WY, and Rocky Mountain NP
- Fort Carson/Pinon Canyon Maneuver Site
- Arapaho-Roosevelt National Forest and Pawnee National Grassland
- Pike-San Isabel National Forest
- North American Bat Monitoring Program (NABat)



State Partners' Panel

David Klute, Outdoor Regional Partnerships Initiative and Colorado Outdoors Strategy, CPW

Kacie Miller, State Wildlife Action Plan, CPW

Eric Bergman, Species Conservation Vertebrate Program, CPW

Savanna Smith, Species Conservation Invertebrate and Rare Plants Program, CPW

Brian Sullivan, Beaver Conservation and Management Strategy, CPW

Lindsey Brandt, Colorado State Land Board

Moderated by David Klute, CPW



Who are state partners involved in biodiversity conservation?



COLORADO
Department of
Natural Resources



COLORADO
Department of Agriculture



**Colorado Parks
& Wildlife**



COLORADO
Energy & Carbon Management
Commission
Department of Natural Resources



Phil Weiser
COLORADO ATTORNEY GENERAL



COLORADO
State Land Board



COLORADO
Division of Water Resources
Department of Natural Resources



COLORADO
Colorado Water
Conservation Board
Department of Natural Resources



Today's Presenters

David Klute, CPW – Deputy Asst. Dir., Terrestrial Species Conservation

Kacie Miller, CPW – State Wildlife Action Plan Coordinator

Eric Bergman, CPW – Terrestrial Vertebrate Program Supervisor

Savanna Smith, CPW – Invertebrate and Rare Plant Program Supervisor

Brian Sullivan, CPW – Wetlands for Wildlife Program Coordinator

Lindsey Brandt, SLB – Biodiversity Program Manager



COLORADO'S
Outdoors Strategy

CNHP Partners' Meeting

March 31, 2026

David Klute

Deputy Assistant Director - Terrestrial Branch
Colorado Parks and Wildlife



North Star Goals



CLIMATE-RESILIENT CONSERVATION AND RESTORATION

Conservation and restoration of lands and waters help wildlife and biodiversity thrive; habitats are resilient and connected; communities benefit from healthy ecosystems and agricultural lands.



EXCEPTIONAL AND SUSTAINABLE OUTDOOR RECREATION

A diversity of high-quality outdoor experiences are accessible, equitable, and inclusive; management and stewardship enhance benefits for and minimize impacts to people, landscapes, and communities.



COORDINATED PLANNING AND FUNDING

Planning and implementation are interdisciplinary; supported by robust funding and capacity; inclusive of diverse perspectives and communities; and drive meaningful action for the outdoors.

Colorado's Outdoors Strategy Resource Hub

Climate-Resilient Conservation ▾ Outdoor Recreation ▾ Data & Mapping Tools ▾ Inclusive Planning ▾

Conservation, Outdoor Recreation, and Climate Resilience Resources:

- **Data Dashboard** - state and county data summarizing key indicators
- **Plan Library** - searchable database of 500+ federal, state, Tribal, and county plans
- **Guidance Framework for Tribal Collaboration** - first of its kind resource, co-developed with the two sovereign tribes in Colorado
- **Equity, Diversity, and Inclusion Resource and Action Guide** - searchable database provides resources to ensure inclusive planning
- **Colorado's Conservation Data Explorer (CODEX)** and StoryMap



Instructional Videos Available





Regional Partnerships Initiative

- **Convene voices from different outdoor interests and sectors** to develop a strategic regional vision that will inform future investments.
- **Advance Colorado's Outdoors Strategy north star goals**, with funding supporting conservation and outdoor recreation outcomes equally.
- **Application of the Resource Hub** to integrate data, mapping, and decision support tools into regional planning and future investments.

	Awarded
FY 21	\$610,000
FY 22	\$674,500
FY 23	\$1,755,481
FY 24	\$1,862,146
FY 25	\$1,316,825
FY 26	\$9,790,240
TOTAL	\$16,009,192

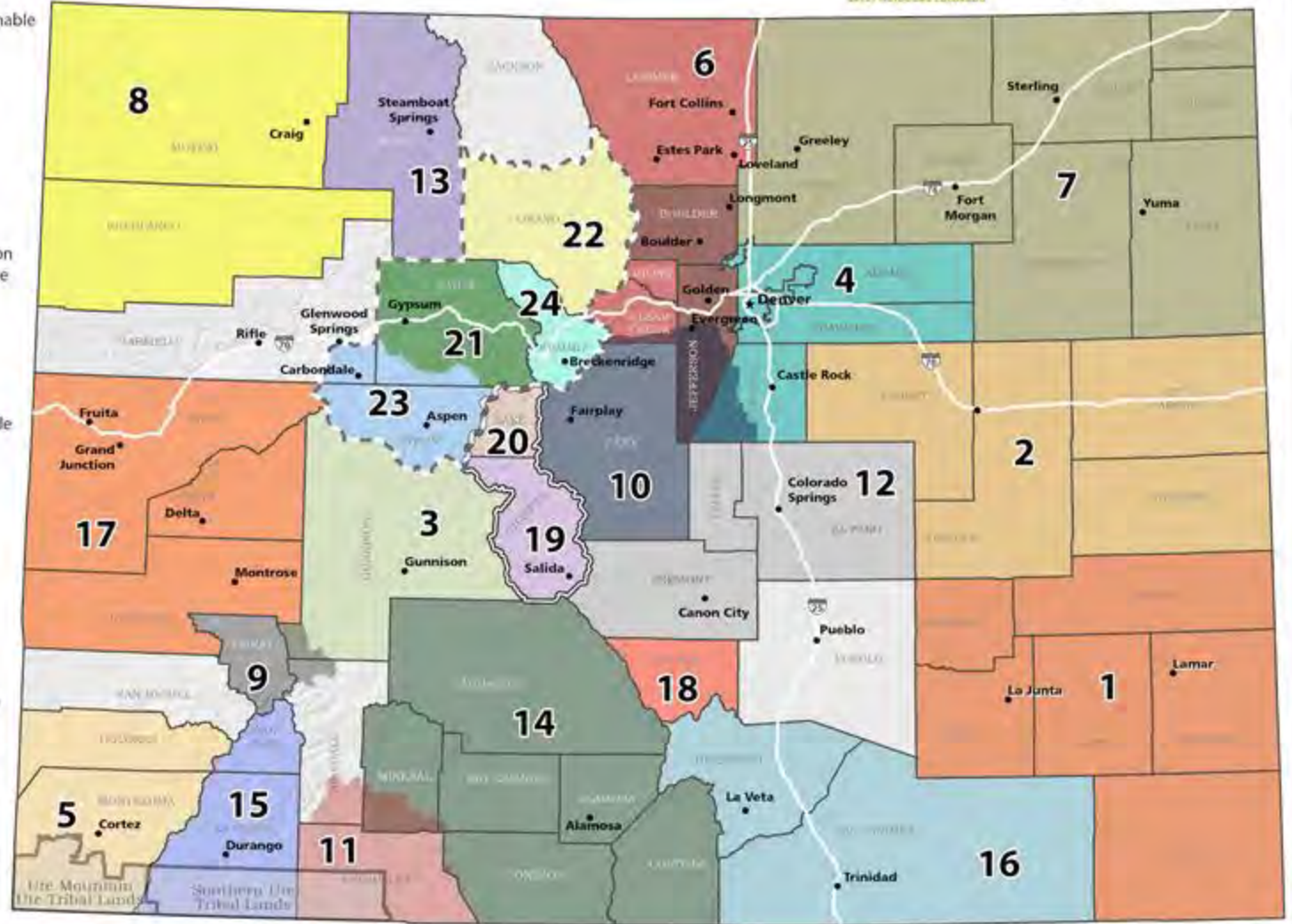


“RPI”

Colorado Outdoor Regional Partnerships March 2026



1. Canyons & Plains Outdoor Partnership
2. Eastern Colorado Grasslands Coalition
3. Gunnison County Sustainable Tourism & Outdoor Recreation Committee
4. Metro Denver Nature Alliance
5. Montelores Coalition
6. NoCo Places
7. Northeast Colorado Regional Partnership
8. Northwest Colorado Outdoors
9. Ouray Regional Recreation and Conservation Alliance
10. Outside 285
11. Pagosa Area Recreation Coalition
12. Pikes Peak Outdoor Recreation Alliance
13. Routt Recreation and Conservation Roundtable
14. San Luis Valley Great Outdoors!
15. Southwest Colorado Conservation & Outdoor Recreation Roundtable
16. Spanish Peaks Outdoor Coalition
17. West Slope Outdoors Alliance
18. Wet Mountain Valley Outdoors
19. Central Colorado Recreation Partnership
20. Envision Recreation in Balance Partnership
21. Lake County Outdoor Alliance
22. Mountain Communities Outdoor Collective
23. Eagle County Regional Partnership Initiative
24. Grand Places 2050
25. Roaring Fork Outdoor Coalition
26. Summit County Outdoor Coalition





State Wildlife Action Plan

Kacie Miller, SWAP Coordinator

State and Tribal Wildlife Grants



Office of
**CONSERVATION
INVESTMENT**

*Partnering to fund conservation
and connect people with nature*

Began 25 years ago

For broad array of fish & wildlife

Congress appropriates funds annually

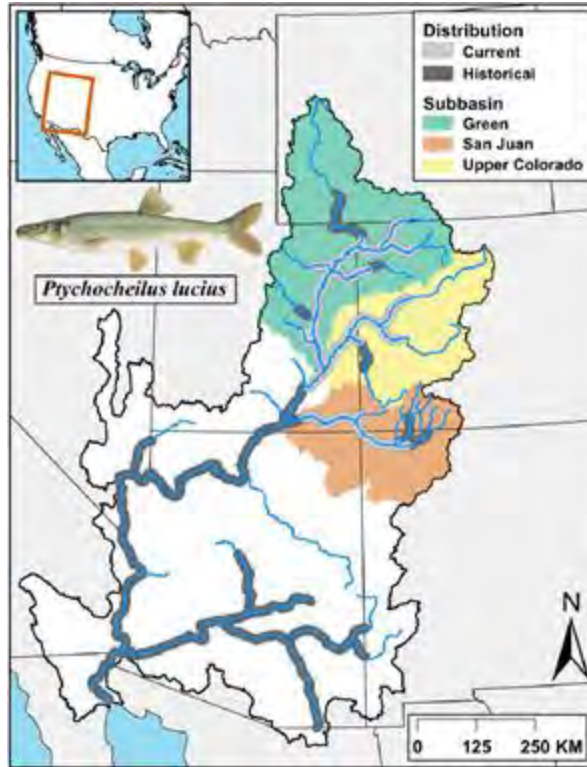
Grants based on state size and population

Required to update SWAP every 10 years

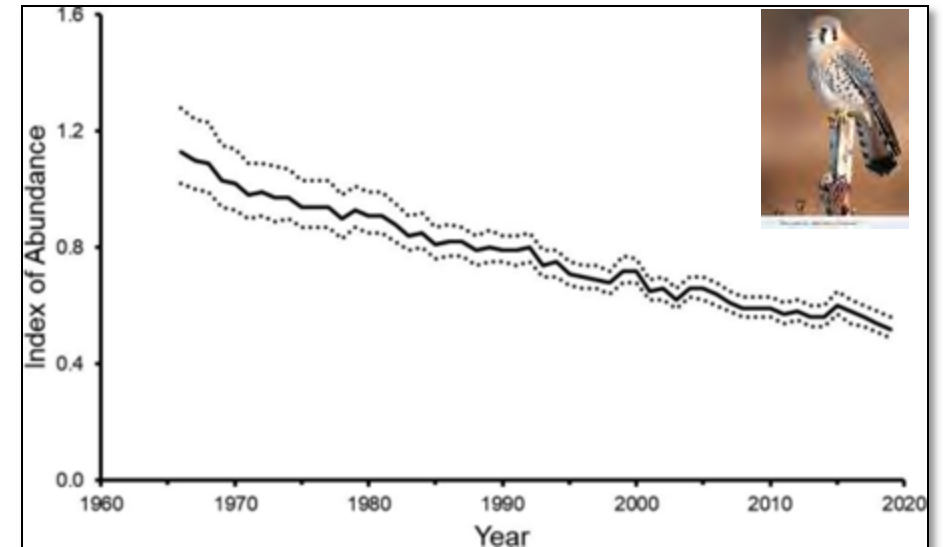
Colorado's Species of Greatest Conservation Need (SGCN)



Abundance



Distribution



Trend



State Wildlife Action Plan

The State Wildlife Action Plan (SWAP) is an expansive resource on the status of some wildlife populations in Colorado, with an emphasis on individual species and their habitats. The insights found in the SWAP will help CPW forge new partnerships, strengthen old ones and inform policy, keeping Colorado a hotbed of biodiversity.

About the Plan

The State Wildlife Action Plan (SWAP) was developed by experts at Colorado Parks and Wildlife (CPW) and Colorado Natural Heritage Program (CNHP), with input from many other partners. All U.S. states and territories update and publish a SWAP every 10 years. Regular revision allows states to revisit the priorities from the previous decade. SWAP revisions are



Species of Greatest Conservation Need Rankings Dashboard



Species of Greatest Conservation Need & Habitats Data Hub

Colorado's 2025 State Wildlife Action Plan All Taxonomic Groups - Rankings Dashboard

Species

Taxonomic grouping

Final Ranking

The State of Colorado is committed to providing equitable access to our services. Please contact accessdnr@state.co.us or 303-297-1192 for accessibility assistance.

State Wildlife Action Plan (SWAP) Rankings - All Species

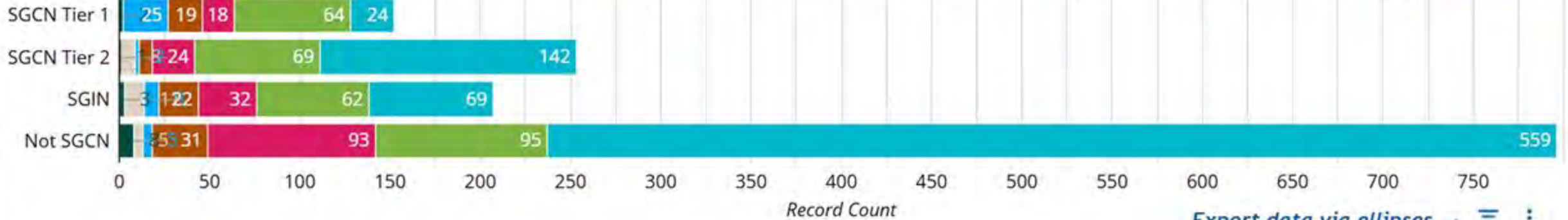
Species in filter
1,408

View the plant and vertebrate rankings dashboards for additional information from the ranking process



Amphibians Reptiles Fish Mammals Birds Plants Invertebrates

Reset filters



Export data via ellipses → ☰ ⋮



Colorado's 2025 State Wildlife Action Plan

Species of Greatest Conservation Need (SGCN) & Habitats Data Hub



Welcome to Colorado's 2025 State Wildlife Action Plan (SWAP) Data Hub!

To learn how to effectively navigate and utilize this dashboard, please review our [Data Hub Walk-through Video](#).

As the central part of our "digital SWAP", the Data Hub contains information about Species of Greatest Conservation Need (SGCN) and their habitats.

You can explore species and habitat profiles, threats affecting these resources, and existing plans and monitoring efforts. You will also find prospective short and long-term conservation actions that may be implemented during the 10-year timeframe of the SWAP.

Please note that invertebrate SGCN species are not yet incorporated into Colorado's 2025 SWAP Data Hub. These species as well as the vertebrate and plant Species of Greatest Information Need (SGIN) subset of SGCN are listed in the "All Species Ranking Dashboard".

This Hub was created through a collaborative planning process. Visit the [CPW Website](#) to learn more about the process as well as find additional information on broader threats and actions not specific to an individual SGCN or habitat.

This site is for anyone - biologists, researchers, educators, conservation planners, organizations, individuals - who want to better understand and support the conservation of SGCN and their habitats.

The State of Colorado is committed to providing equitable access to our services. Please contact access@state.co.us or 303-297-1192 for accessibility assistance.

Explore SGCN Species

Explore Habitats

Investigate Threats/Actions

Threats/Actions
Quick Summary

Download 2025 SWAP
Data Export (MS-Excel)

All Species SWAP Rankings



Full screen mode

Last dashboard update: September 15th, 2025

View Photo Credits

Distribution, Threats, Existing and Prospective Actions

Explore Species

Taxonomic Group: Birds | Species: Lark Bunting (*Calamospiza melanocorys*)

Lark Bunting
Calamospiza melanocorys
 SGCN Tier 2
 Not Listed

Species Summary
Threats
Climate Change Vulnerability
Actions & Monitoring

Photo credit: org.: Kathleen Stimpson / iNaturalist

+ Enlarge photo

Maps depict where the species could occur.
 Interactive maps with metadata area available via [CODEX](#).

Lark Bunting
Calamospiza melanocorys

Range
 The geographic distribution of Lark Bunting is shown in the map. The range is color-coded by season: dark red for the northern part of the range, orange for the middle, and yellow for the southern part.

- Spring season: 7 Jun - 1 Jul
- Summer season: 1 Aug - 1 Sep
- Fall season: 1 Oct - 31 Oct
- Post-breeding dispersal season: 1 Nov - 31 Dec

+ Enlarge species range map

All Habitat Usage Type(s) Habitat Usage Type: (All)

Click a habitat to open its summary page in a new window

- Conservation Reserve Program
- Crop Agriculture
- Mixed & Tallgrass Prairies
- Savanna

+ Enlarge Associated Habitats

Explore Habitats

Major Habitat: (All) | Habitat Subtype: Shortgrass Prairie

Shortgrass Prairie
 Grassland Habitats

Habitat Summary
Threats
Actions & Monitoring

Photo credit: org.: Rapand Abella / CFW

+ Enlarge photo

Interactive maps with metadata are available via [CODEX](#). [LANDFIRE](#) was used to categorize and map terrestrial habitats. This [summary](#) depicts which LANDFIRE vegetation cover categories were rolled up into SWAP Habitats and other sources of mapping data. Vegetation cover types are [downloaded](#) by NatureServe.

+ Enlarge range map

Supported SGCN Species (as primary habitat) Habitat Usage Type: Primary | Species count: 31

Click a species to open its summary page in a new window

American Kestrel (<i>Falco sparverius</i>)	SGCN Tier 2
Andean Prairie-clover (<i>Dalea cylindriceps</i>)	SGCN Tier 2
Arkansas Valley Evening Primrose (<i>Oenothera harringtonii</i>)	SGCN Tier 2
Barney's Fescue (<i>Parthenium tetraenarium</i>)	SGCN Tier 2
Black-footed Ferret (<i>Mustela nigripes</i>)	SGCN Tier 1

+ Enlarge SGCN Supported Species

Resources



SWAP Planning Process & Major Findings

This document provides detailed information on the development of the 2025 draft State Wildlife Action Plan.

[Find out more](#)



StoryMap

Check out our StoryMap to learn more about success stories and what has changed since 2015!

[Find out more](#)



How to Use the Data Hub

The State Wildlife Action Plan Data Hub lists the active, prospective and recommended conservation strategies for each species. Watch a video to learn how to use the hub.

[Watch the Video](#)



Data Hub Download

Interested in the data? Download a copy of the Data Hub for yourself!

[Download](#)



CODEX

Want to see where SGCN & Habitats are? Or see what SGCN and Habitats are in your area?

[Find out more](#)



Request Digital Accessibility Assistance

The State of Colorado is committed to providing equitable access to our services to all. Please contact our Colorado Parks and Wildlife Accessibility Specialist (accessdnr@state.co.us or 303-297-1192) for personalized accessibility assistance with the SWAP. We will contact you directly within two business days. Visit our accessibility webpage for more information and services, including AIRA, our free service for blind and low-vision users.

[Find out more](#)

[Switch Basemap](#) [Add Resources](#) [Create Project](#) [ROI Report](#)

Layers | **Make a Map** | **Feature Search**

Reference Layers

- Parcels by County (CIM)
- Cities and Counties (CDOT)
- Transportation (CDOT)
- Public Land Survey System (GCDB)

Species and Habitats

- CNHP Rare Species & Communities (Partner)
- CNHP Rare Species & Communities (Public)
- CNHP Rare Plant Models (Partner)
- CNHP Species Range Maps (Public)
- CPW (Private)
- CPW Species Activity Mapping (Public)
- SWAP 2025 Species Maps (Public)

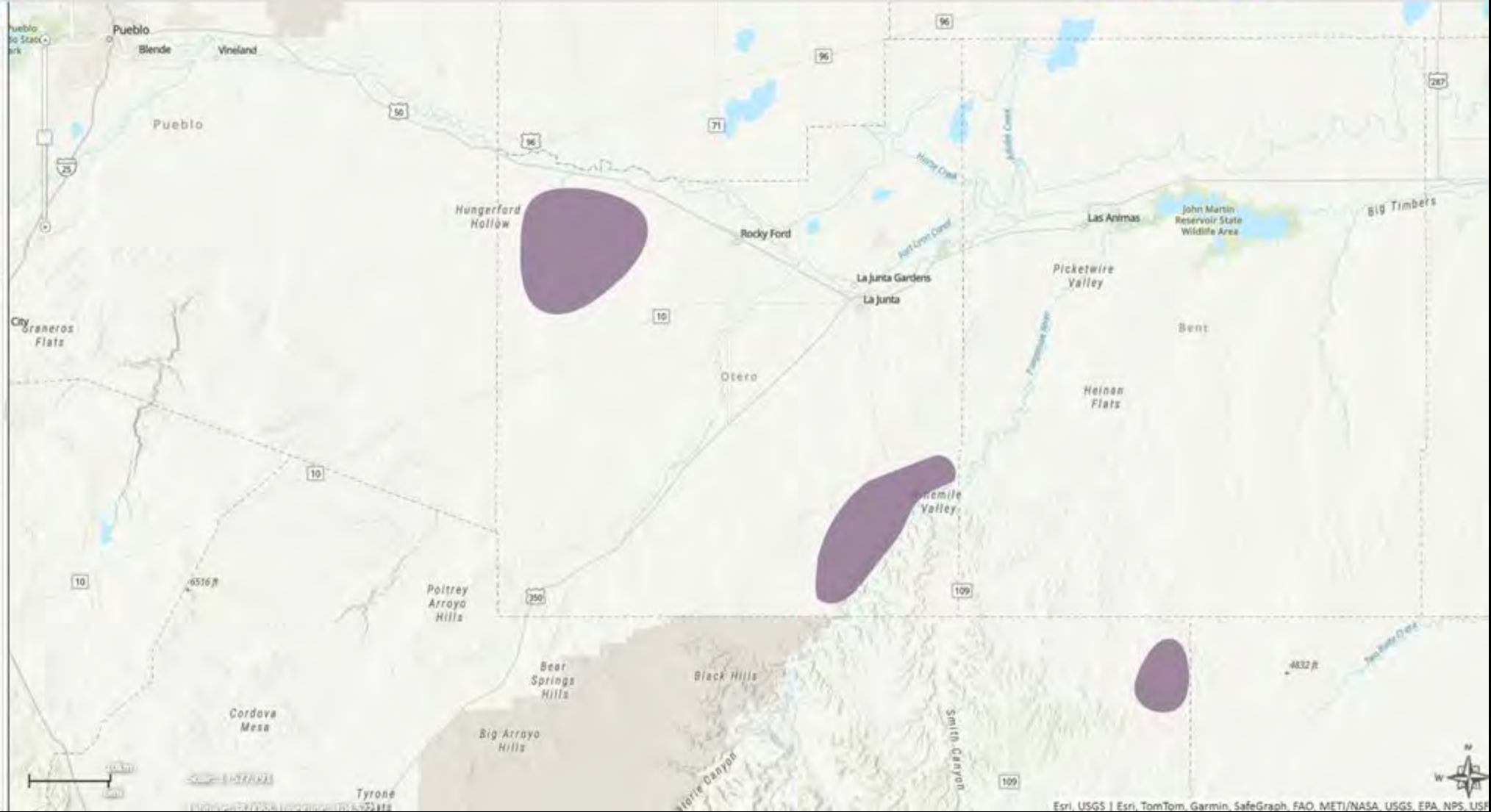
- Amphibians
- Birds
- Fish
- Mammals
- Plants
- Reptiles

- Colorado Checkered Whiptail (*Aspidoscelis*)
 - Introduced Range
 - Potential Distribution
- Desert Massasauga (*Sistrurus tergeminus*)
- Eastern Hog-nosed Snake (*Heterodon platirhinos*)
- Hernandez's Short-horned Lizard (*Phrynosoma hernandesi*)
- Long-nosed Leopard Lizard (*Gambelia wislizenii*)
- Ornate Box Turtle (*Terrapene ornata*)
- Plains Hog-nosed Snake (*Heterodon nasutus*)
- Round-tailed Horned Lizard (*Phrynosoma munitum*)

- SWAP 2025 Terrestrial Habitats (Public)
- SWAP 2025 Aquatic Habitats (Public)

Special Areas

- CNHP Potential Conservation Areas (Partner)



2026 Work Plan

- Continue to raise awareness and involve more people
- Build community - share stories, tools, results to support everyone's work
- Implementation tracking
- Species of Greatest Information Need assessment
- Strategic Communications Plan
- Additional planning to prioritize CPW's actions



Sign- up for Updates



SWAP Website



Learn more at:
<https://cpw.state.co.us/state-wildlife-action-plan>

Terrestrial Vertebrate Species Conservation Program

Eric Bergman



Terrestrial Vertebrate Species Conservation Program



Liza Rossi
Amy Seglund
Kathy Griffin
Dan Neubaum
Bob Inman
Christina Leopold

Terrestrial Vertebrate Species Conservation Program



Coordination of species conservation work crosses many organizational boundaries:

- Within CPW**
- Other State Agencies**
- USFWS, USFS, BLM, etc.**
- NGOs**

Terrestrial Vertebrate Species Conservation Program



How our work and priorities get identified:

- Colorado's SWAP**
- Federal Petitions**
- Our partners share with us, information & opportunities**

Terrestrial Vertebrate Species Conservation Program



The role & importance of partnerships cannot be overstated.

Our program depends on these relationships.

CPW's Invertebrate and Rare Plant Program

Savanna Smith
Rare Plant Program Manager



Pawnee montane
skipper, photo by
Christian Nunes

HB24-1117

Gave CPW statutory authority to study and conserve invertebrates and rare plants. No regulatory authority, but CPW can undertake all other conservation actions for their benefit.



HOUSE BILL 24-1117

BY REPRESENTATIVE(S) McCormick and Soper, Amabile, Bird, Boesenecker, Brown, Clifford, Jodeh, Kipp, Lindsay, Lindstedt, Marvin, Mauro, Parenti, Rutinel, Sirota, Titone, Velasco;
also SENATOR(S) Marchman and Bridges, Buckner, Cutter, Danielson, Jaquez Lewis, Priola, Winter F., Zenzinger, Fenberg.

CONCERNING INCLUDING CERTAIN SPECIES UNDER THE AUTHORITY OF THE STATE AGENCIES THAT REGULATE PARKS AND WILDLIFE, AND, IN CONNECTION THEREWITH, MAKING AN APPROPRIATION.

Species Conservation of Invertebrates & Rare Plants (SCIP) Team

Hayley
Schroeder

Invertebrate and Rare
Plant Program Supervisor



Savanna
Smith

Rare Plant Program
Manager



Adrian
Carper

Pollinator Conservation
Program Manager



Megan
Blanchard

Eastern Invertebrate and
Rare Plant Field Biologist



Jake
Gottschalk

Western Invertebrate and
Rare Plant Field Biologist



Invertebrates and Rare Plants in the 2025 SWAP



Tier 1
88 species



Tier 2
211 species



SGIN
131 species

Program Priorities

Conservation
Planning &
Partnerships



Research &
Monitoring



Conservation
Action



Education &
Outreach





CPW Beaver Conservation and Management Strategy

*Colorado Natural Heritage Program
Partners' Meeting
March 31, 2026*

Brian Sullivan
Wetlands for Wildlife
Program Coordinator

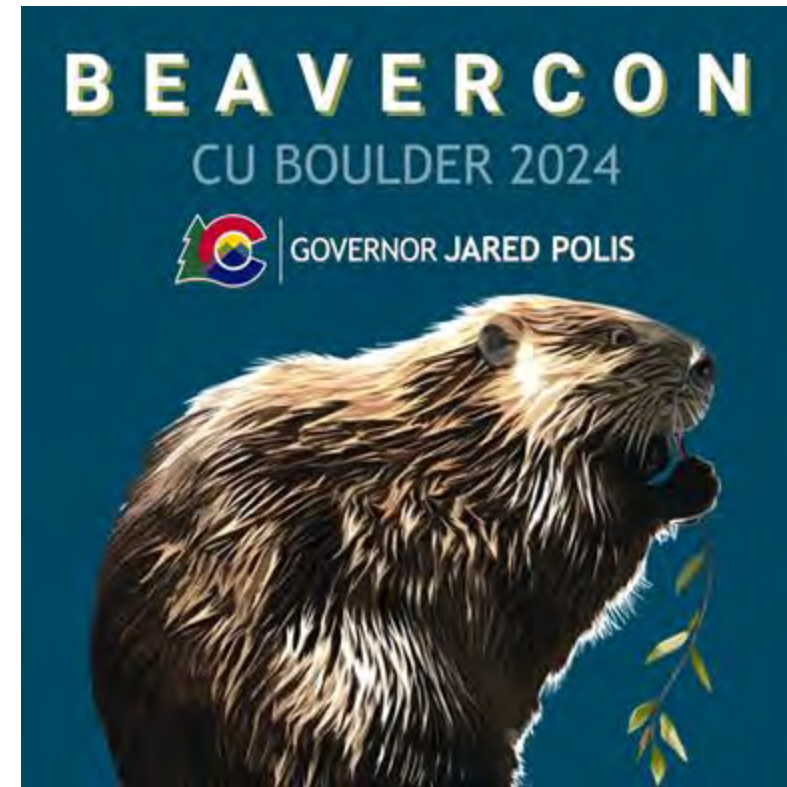
Mark Vieira
Carnivore & Furbearer
Program Manager

Boyd Wright
Native Aquatic
Species Coordinator

Background & Development Process

Why a beaver management strategy, and why now?

- Beaver management touches many diverse sectors in society
- The reduction of beavers and beaver wetlands on the landscape, particularly in headwaters
- Beavers also represent a source of human-wildlife conflict
- Increasing agency and stakeholder interest
- Need to account for diverse perspectives and coordinate partners interested in beaver conservation



Background & Development Process

Beaver Strategy development process

Phase 1

CPW Internal Engagement

- November 2024 – June 2025
- CPW Beaver Working Group

Phase 2

Public Scoping, External Engagement, & Drafting

- July 2025 – Feb 2026
- CNHP, Keystone Policy Center, Corday Natural Resources
- Final Beaver Strategy

Phase 3

Implementation

- March 2026 and beyond
- Restoration Decision Support Tool (CNHP): June 20th



Purpose

“...increase and sustain the prevalence of beaver and beaver-influenced wetlands in suitable habitats for the benefit of Colorado’s stream and wetland ecosystems and the array of wildlife species that utilize them.”

Goal

“Increase beaver populations and beaver-occupied wetland habitats in Colorado until social or ecological carrying capacity is reached.”

Beaver Restoration & Translocation Opportunities

Targeted restoration example: Rough and Tumbling Creek

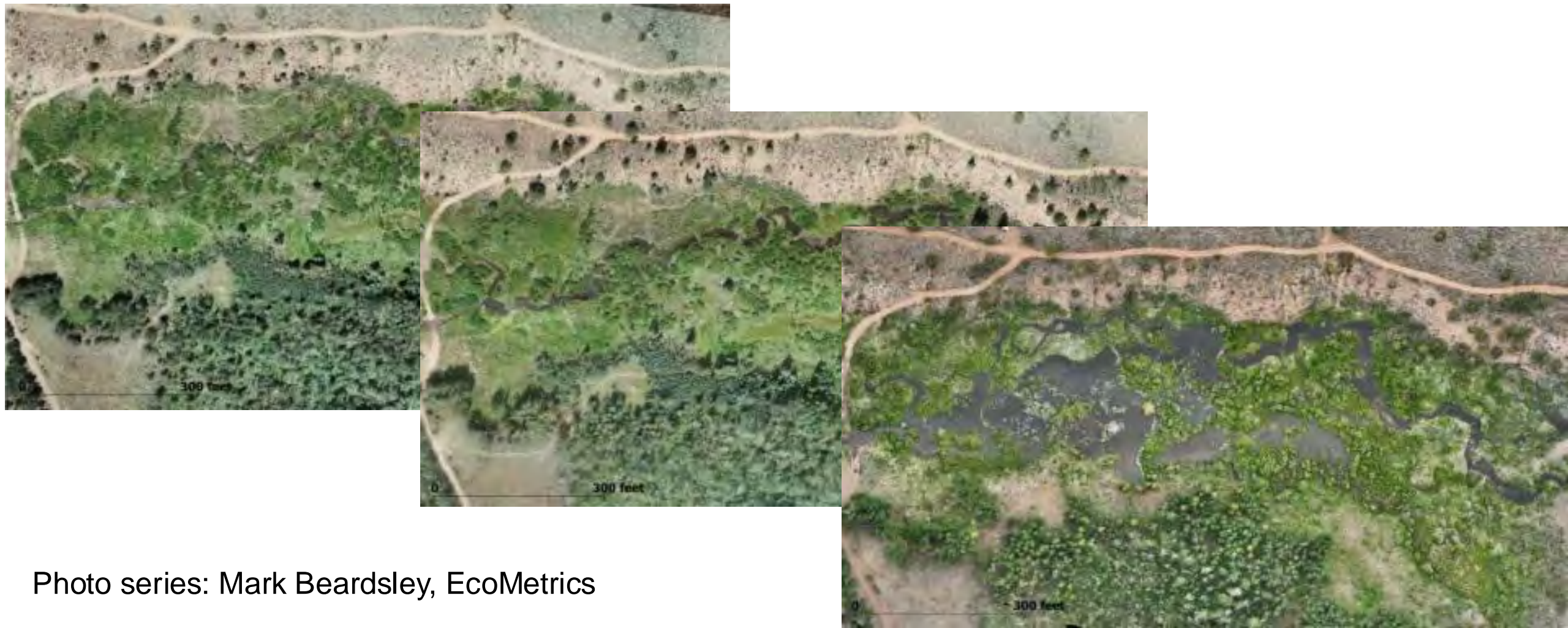
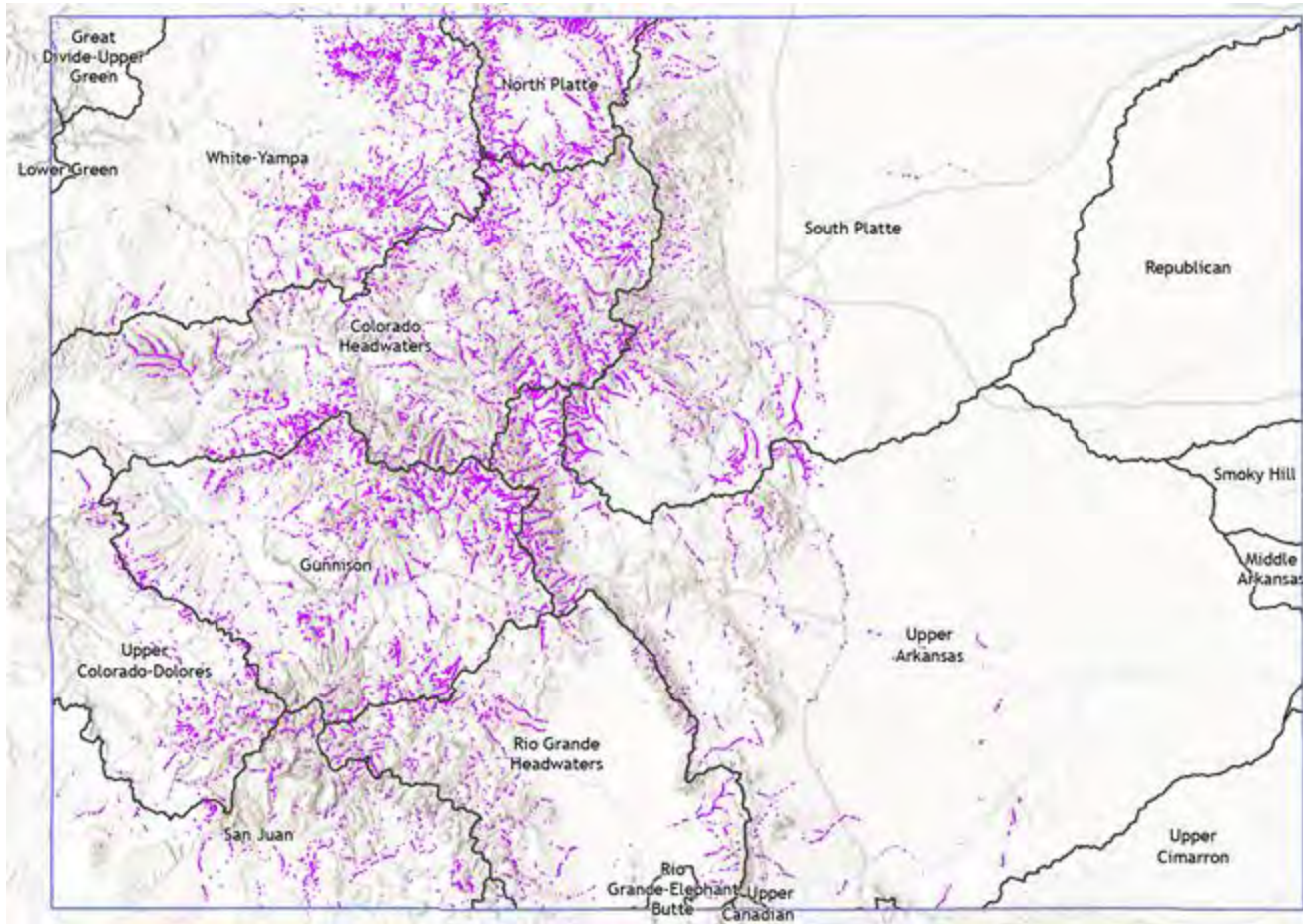


Photo series: Mark Beardsley, EcoMetrics

Colorado Beaver Activity Mapper (COBAM): A foundational resource for the beaver strategy



Next Steps and Collaborations

- CNHP:
 - Beaver Decision Support System (BDSS) for restoration/translocation (due 6/30/26)
 - Continue/refine Colorado Beaver Activity Mapper (COBAM)
 - Leading/hosting citizen science initiatives (e.g., iNaturalist)
 - Beaver distribution and ecology in the Eastern Plains
- Other Partners:
 - 80+ Action Items in Beaver Strategy
 - Many possibilities!
 - <https://engagecpw.org/beaver-conservation-and-management-strategy>



Colorado State Land Board CNHP Partners Updates

March 31, 2026

An innovative land trust funding Colorado schools since 1876.



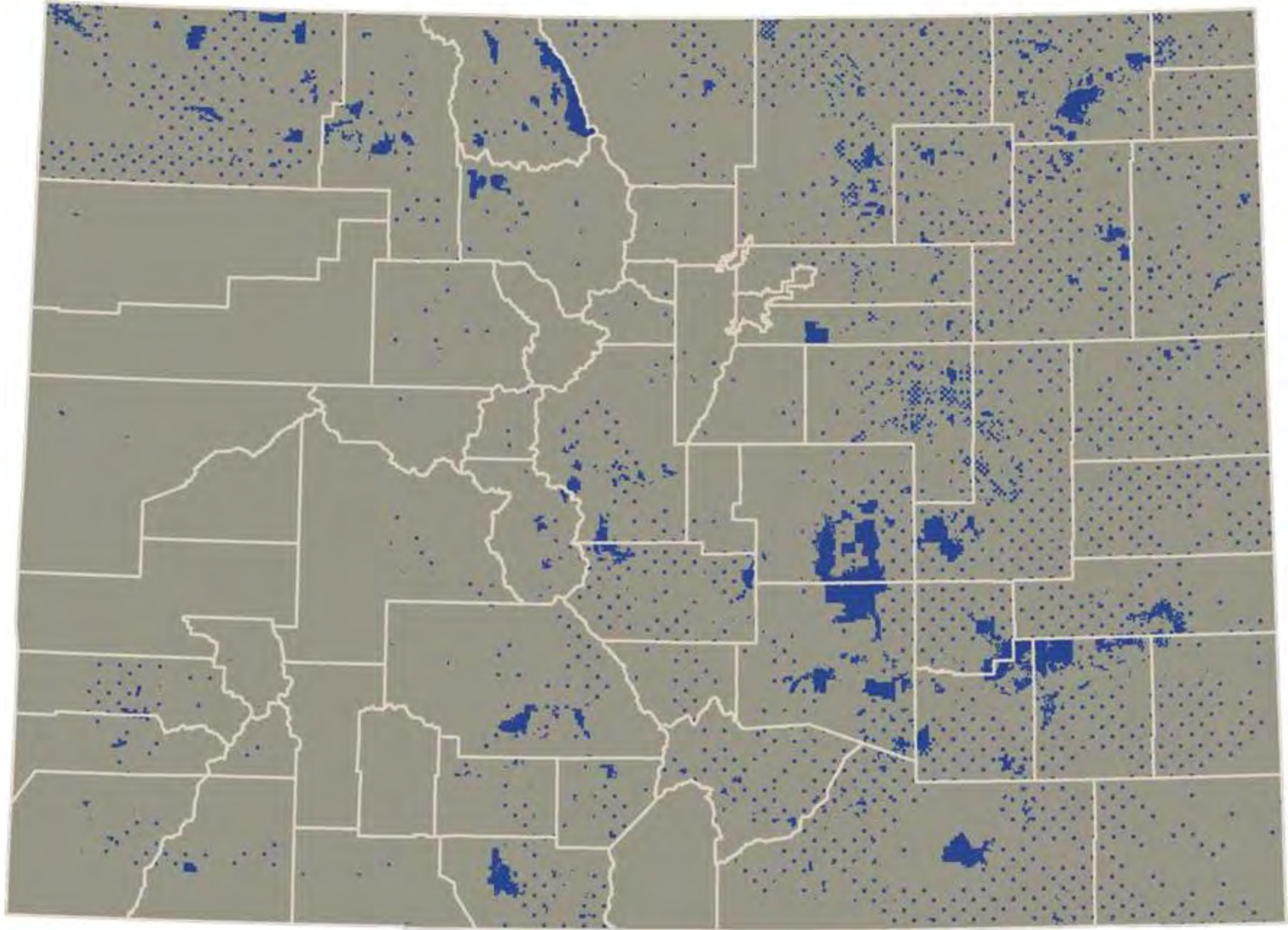
COLORADO
State Land Board

The Colorado Enabling Act (1875):

“...hereby granted to said state for the support of common schools.”



*~1900 schoolhouse
Gilpin, CO*



LIVE LIFE
OUTSIDE

Sound stewardship Sustainable revenue





LEASING PROGRAMS

Mindy Gottsegen, Stewardship and Ecosystem Services Program Manager



Lindsey Brandt, Biodiversity Program Manager



Carla DeMasters, Stewardship Trust Manager



Erika Carlson, Stewardship Technician



New Position, Stewardship Associate



SLB Stewardship Team



Stewardship Review Process

1. CNHP Data (EOs / PCAs)
2. Wildlife Habitat (SWAP / HPH / Etc.) - CPW Comments
3. Wetlands & Riparian Areas
4. Cultural / Paleo Resources
5. Stewardship Trust / Colorado Natural Areas Program
6. SLB Stewardship Action Plans or Asset Management Plans
7. Ecosystem Services or Other Opportunities

Biodiversity Program

Nipple Rim, Moffat Co



Mission:
Protect and Enhance Biodiversity on
State Trust Lands

Initial Program Goals:

- Partner Engagement
- Enhancement Projects
- Identify, Protect, and Enhance Species and Ecosystems

Stewardship Action Plans (SAPs)

1. Fens - Updated February 2026
2. Lesser Prairie Chicken - April 2026
3. Greater Sage Grouse SAP - Fall 2026
4. Biodiversity SAP - NEW - Summer 2026

Stewardship Action Plans



COLORADO
State Land Board

Regenerative Agriculture Program:



Managing agriculture lands
with a focus on healthy soils
and healthier ecosystems

Stewarding Colorado Trust Lands for Generations

20
24

A Report from the Colorado State Land Board
on Stewardship Programs and Activities



COLORADO
State Land Board

*An innovative land trust funding
Colorado schools since 1876.*

Panel Discussion

How do planning initiatives and conservation programs in CPW and SLB complement one another to advance biodiversity conservation?



Break

Start Stop Reset mins: 10 secs:
0 type: None
Breaktime for PowerPoint by Flow Simulation Ltd.
Show Settings

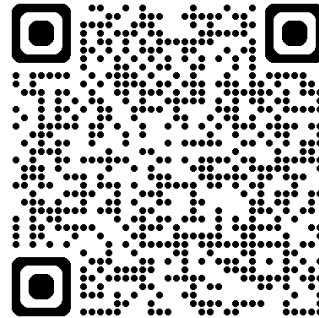
CNHP's Crowdfunding Campaign to develop data supporting ECMC's New Rule Changes.

CNHP works with state agencies to help protect rare plants and invertebrates where oil and gas development is occurring.

The Energy and Carbon Management Commission has rules for oil and gas development, and those rules will be amended to include rare plants and invertebrates.

CNHP seeks to develop new models and curate data to support decisions about sites for oil and gas development with these new rules.

Support CNHP's Mission



Donate!



NGO & Science Partners' Panel



Panelists

Emily Chavez, Bird Conservancy of the Rockies

Michelle DePrenger-Levin, Denver Botanic Gardens

Erik Glenn, Colorado Cattleman's Agricultural Land Trust

Nanette Kuich, Betty Ford Alpine Gardens

Drew Rayburn, The Nature Conservancy

Moderated by Michael Menefee, CNHP



Bird Conservancy
of the Rockies

POLLINATORS, PARTNERS, AND PUSHING BIRD CONSERVATION FORWARD

Emily Chavez

Stewardship Director

Emily.Chavez@birdconservancy.org





About Us

Our mission is to conserve birds and their habitats through an integrated approach of science, education and land stewardship. We envision a future where birds are forever abundant, contributing to healthy landscapes and inspiring human curiosity and love of nature.

Science: Advancing Knowledge

Stewardship: Collaborative Conservation Delivery

Education: Inspiring the Next Generation

Our work radiates across the breeding, wintering and migratory ranges of birds—from the Rockies to the Great Plains, Mexico and beyond.





Building a Conservation Workforce Pipeline



Building a Conservation Workforce Pipeline



Building a Conservation Workforce Pipeline

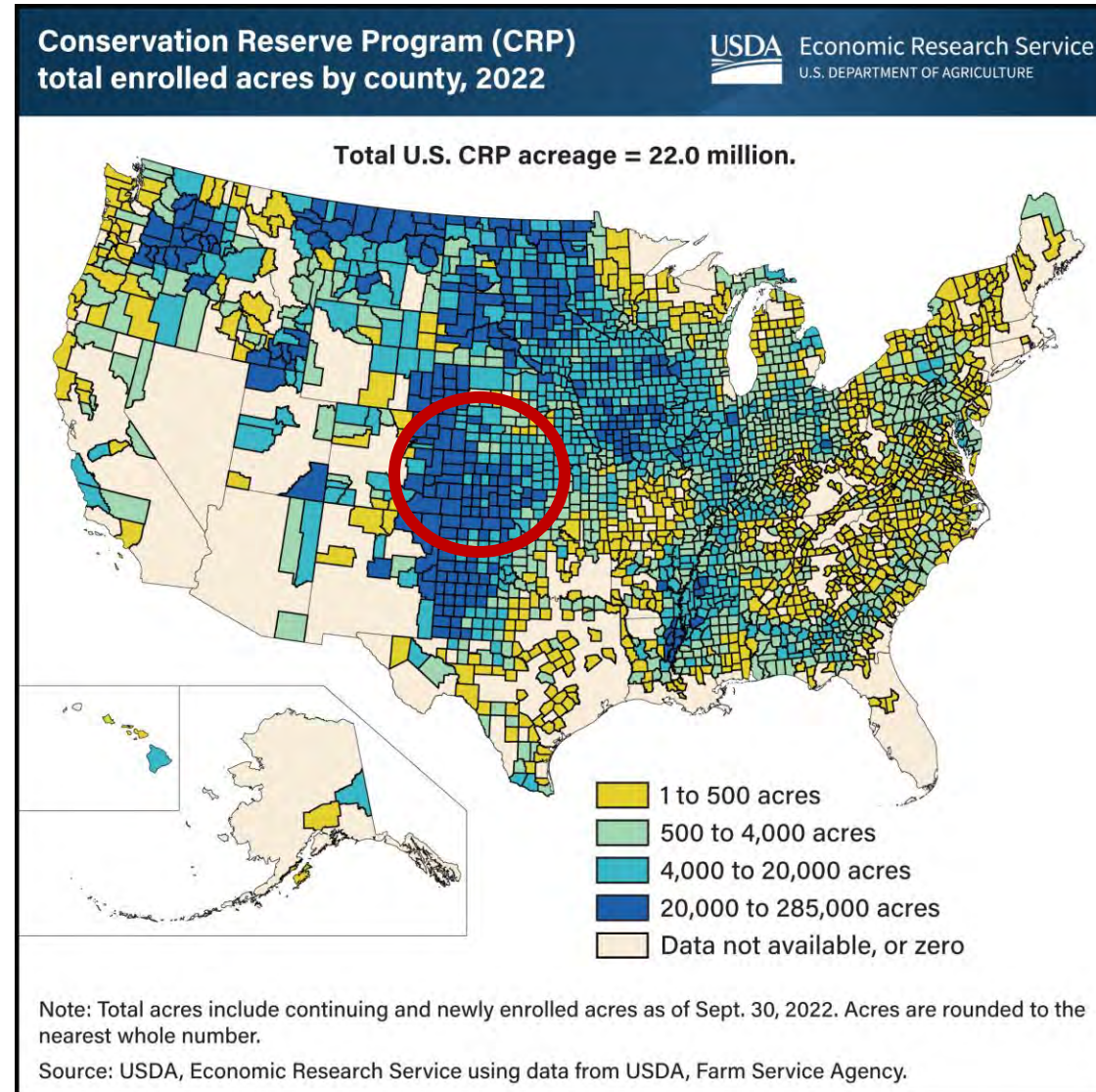
Mattie - *“This internship has influenced me to look into jobs with plants and ornithology which I was previously not interested in. It also gave me a lot of great connections to people in the field and experience with field work. Overall, it was an invaluable part of my professional development.”*

Bailey - *“...I have become more certain that this is the path I would like to pursue. I also have grown more confident in myself as an aspiring conservation biologist. I feel confident that I will thrive in this career path.”*

Management, Pollinators, and Birds



Management, Pollinators, and Birds



Management, Pollinators, and Birds

Field effort (2024 – 2025)

- 208 point-count plots with plant, pollinator, arthropod and bird data
- Pollinator study included early-season (June – mid July) and late-season (mid July – August) visits
- Collaborator, USGS, range specialist, Mark Vandever



Management, Pollinators, and Birds

Grass and flowering plant cover and diversity (2024 – 2025)

Modified Grassland Evaluation Monitoring protocol (Daubenmire and inventory)

- 43 families
- 171 genera
- 287 species



Management, Pollinators, and Birds

Butterfly abundance and diversity (2024 – 2025)

Pollard Walk surveys (three 50m-
transects/point)

- 5 Families
- 36 genera
- 42 Species



Most abundant butterfly species, 2024



Clouded Sulphur



Small White



Orange Sulphur



Variegated Fritillary



Common
Checkered-skipper



Reakirt's Blue



Common Sootywing



Regal Fritillary

Management, Pollinators, and Birds

Bee abundance and diversity (2024)

Blue Vane Traps

Bee Taxonomy, CHNP entomologist

- 6 Families
- 23 genera
- 53 Species
 - Endangered species, Southern Plains Bumble Bee, native grasses and forbs (CP2), mixed-grass, Kansas



Management, Pollinators, and Birds

Arthropod biomass and diversity (2024)

Passive sweep-netting

DNA Metabarcoding, USGS, Molecular Ecology Lab, Sara Oyler-McCance

- 51% of Taxa ID
- 320 Species
 - Pollinators
 - 15 Bee sp
 - 23 Fly sp
 - 3 sp.
 - 53 Species



For more information reach out to David Pavlacky at david.pavlacky@birdconservancy.org

IMBCR, Data, and CODEX



Integrated Monitoring in
Bird Conservation Regions



Partnerships



Thank You



Biodiversity & Natural History Collections



Applied Conservation

Patterns and Process

Connecting people with plants

2026 Partners' Meeting
March 31, 2026 | CSU Campus, Fort Collins, CO

Michelle DePrenger-Levin
Manager of Conservation Programs

DENVER BOTANIC GARDENS



Population Monitoring

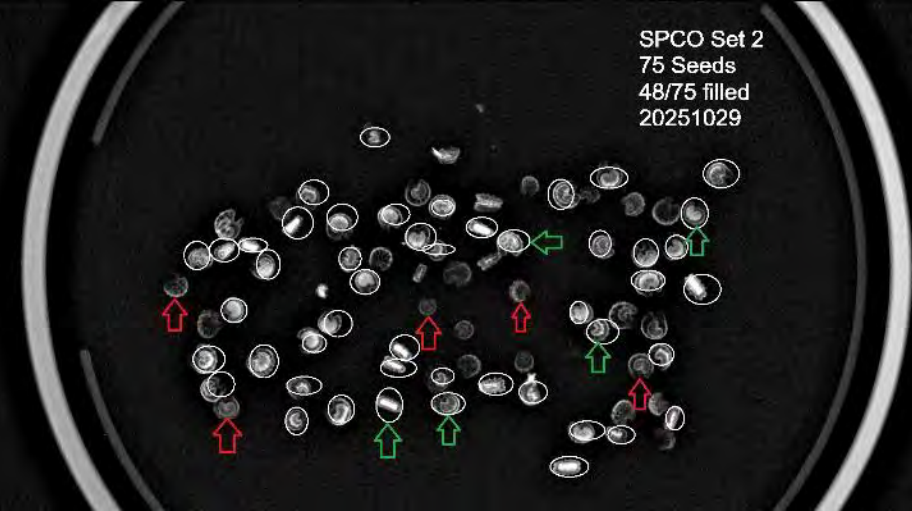


Alpine Plant Conservation



Urban floras





Ecological Restoration



COLORADO NATURAL
HERITAGE PROGRAM
COLORADO STATE UNIVERSITY



NATURESERVE
NETWORK



GSPC

GLOBAL STRATEGY FOR PLANT CONSERVATION

DENVER BOTANIC
GARDENS

Colorado Cattlemen's Agricultural Land Trust

Erik Glenn, CEO



BETTY FORD
ALPINE
GARDENS
VAIL, COLORADO



ALPINE PLANTS – FROM NORTH AMERICA TO THE WORLD

IUCN SSC Alpine Plant Specialist Group



The Alpine Strategy

- Blueprint for the protection of alpine plants and ecosystems in the US, Canada, Mexico, and Greenland
- Based on the Global Strategy for Plant Conservation and the North American Botanic Garden Strategy for Plant Conservation

2020

North American Botanic Garden
Strategy for Alpine Plant
Conservation



Institute of Museum and Library Services Grant for the Alpine Strategy

- Build a web portal that assembles and provides access to information about NA alpine plant species
- Coordinate and increase seed collections of alpine species
- Manage and curate seed collections through QC and viability assessment



Rocky Mountain Lousewort
(*Pedicularis scopulorum*)



North American Alpine Plant Conservation Atlas

Welcome to the North American Alpine Plant Conservation Atlas. This resource organizes information on taxonomy, ecology, and conservation for alpine plant taxa found in North America. As part of the [North American Botanic Gardens Strategy for Alpine Plant Conservation](#), this site is a joint effort by Denver Botanic Gardens and Betty Ford Alpine Gardens, made possible by funding from the Institute of Museum and Library Services ([MA-255890-OMS-24](#)).

Search for Alpine Plant Taxa

Query Parameters

Search by: Scientific Name or Genus Family

Scientific Name

e.g. *Aquilegia scopulorum*

IUCN

Focus or start typing

G-Rank

Focus or start

Country

Choose a Country to Selc

x

State / Province

Choose a State to Selec

x

Reset Query Parameters

▼ Include Map Search

Draw a polygon on the map to discover alpine taxa within a defined area

Display Boundaries for

Alpine Regions

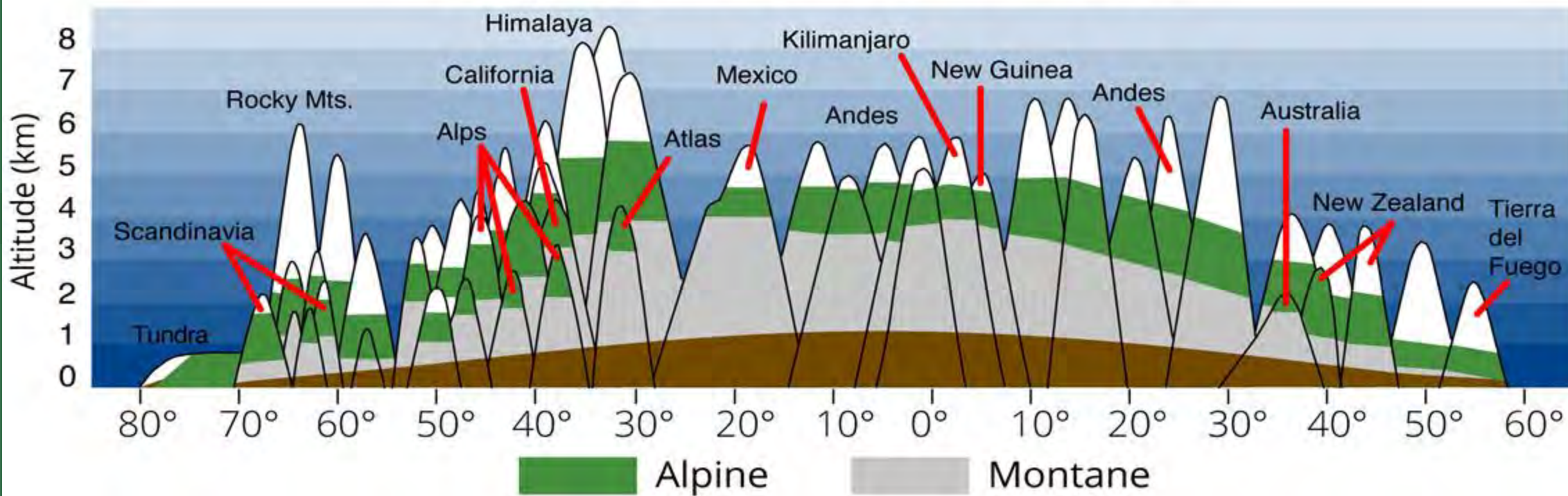
Arctic Regions

Alpine & Arctic Regions

No Boundaries



Alpine life zones by altitude and latitude



IUCN – over 17,000 experts, over 180 specialist groups, 32 plant specialist groups



Part of





NatureServe Rank	IUCN Red List Category
GX Presumed Extinct	Extinct EX
GXC Presumed Extinct in the Wild	Extinct in the Wild EW
GH Possibly Extinct	Critically Endangered (possibly extinct) CR
GHC Possibly Extinct in the Wild	Critically Endangered (possibly extinct) CR
G1 Critically Imperiled	Critically Endangered CR
G1 Critically Imperiled	Endangered EN
G2 Imperiled	Vulnerable VU
G3 Vulnerable	Near Threatened NT
G4 Apparently Secure	Least Concern LC
G5 Secure	Least Concern LC
GU Unrankable	Data Deficient DD

A bracket on the left groups the top six rows (GX to G1) under the label "At Risk".
 A bracket on the right groups the top six rows (GX to G2) under the label "Threatened".
 A blue vertical arrow on the far right points upwards and is labeled "Increasing Extinction Risk".

	NatureServe Rank	IUCN Red List Category	
	GX Presumed Extinct	Extinct	EX
	GXC Presumed Extinct in the Wild	Extinct in the Wild	EW
	GH Possibly Extinct	Critically Endangered (possibly extinct)	CR
	GHC Possibly Extinct in the Wild	Critically Endangered (possibly extinct)	CR
	G1 Critically Imperiled	Critically Endangered	CR
42	G1 Critically Imperiled	Endangered	EN 9
76	G2 Imperiled	Vulnerable	VU 15
277	G3 Vulnerable	Near Threatened	NT 8
659	G4 Apparently Secure	Least Concern	LC
2041	G5 Secure	Least Concern	LC 613
	GU Unrankable	Data Deficient	DD 3
3,095	TOTAL		648



**COLORADO NATURAL
HERITAGE PROGRAM
COLORADO STATE UNIVERSITY**



CLARK HOLLENBERG



North America

Arctic Gentian – *Gentiana algida*



EMILY GRIFFOUL



Europe

Edelweiss – *Leontopodium nivale*



CHRISTAN RIXEN



Iceland

Tunguskollakambur – *Struthiopteris fallax*



MAGNUS GÖRANSSON



Patagonia

Guanaco Fire-bush – *Anarthrophyllum desideratum*



MATIS BARANZELLI



Indian Himalayas

Kutki – *Picrorhiza kurroa*



VIJAY LAXMI TREVEDI



Australia

Candle Heath – *Richea continentis*



SUSANNA VENN



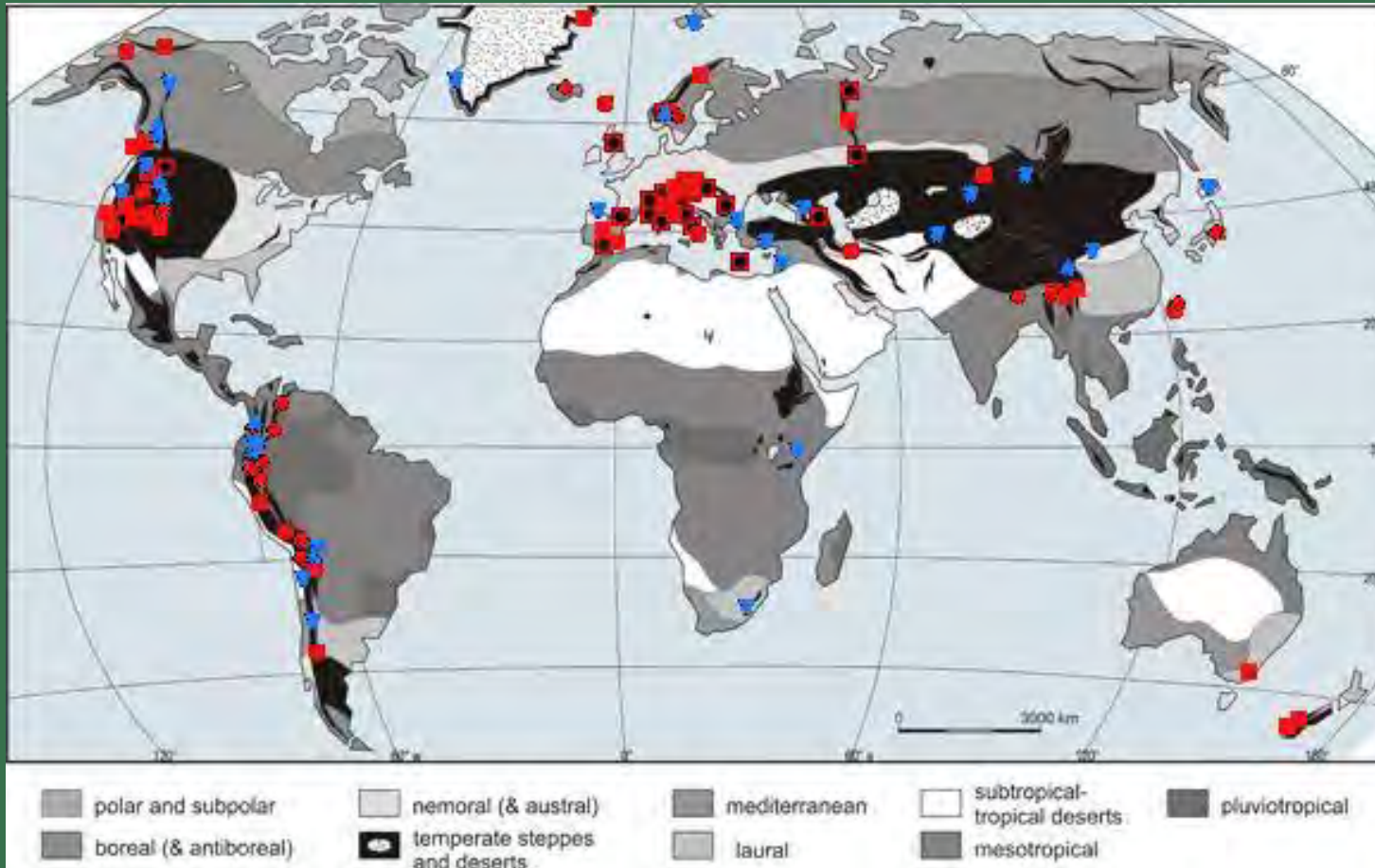
TIMOTHY UTTERIDGE

Papua New Guinea

Alpine Grasslands

GLORIA

GLOBAL OBSERVATION RESEARCH INITIATIVE IN ALPINE ENVIRONMENTS



HARALD PAULI



BETTY FORD
ALPINE
GARDENS
VAIL, COLORADO



THANK
YOU!

QUESTIONS? INTERESTED IN GETTING
INVOLVED? EMAIL US!



nanette@bettyfordalpinegardens.org



The Nature Conservancy

Drew Rayburn, Director of Conservation Planning



The Nature Conservancy in Colorado

Organizational Updates and Highlights of TNC–CNHP Collaboration

CNHP Partners' Meeting

3/31/26





The Nature
Conservancy



Colorado

TNC Updates

- Protection of resilient and connected land (SECO/NWCO)
- Forest and watershed conservation
- Climate and renewable energy
- Other policy engagement (2026 Legislative Session)



TNC Updates

- Tribal engagement
- Urban conservation
- Climate-resilient stewardship of protected lands



TNC-CNHP Collaboration

Support of Statewide Natural Heritage Survey

- TNC was supportive of original funding award; also committed match
- We continue to leverage landowner relationships to seek access by CNHP to private protected land
- Potential overlap with new large TNC land protection projects in southeastern Colorado



TNC-CNHP Collaboration

Statewide and regional conservation planning

- Colorado's Outdoors Strategy (COS) implementation
- CPW State Wildlife Action Plan (SWAP) implementation
- CPW Habitat Conservation and Connectivity Plan (HCCP) implementation
- Regional Partnership Initiative (esp. Metro DNA and Routt Roundtable)



TNC-CNHP Collaboration

Other areas of partnership and collaboration

- TNC advocates for CODEX and COMaP as key resources for collaborative conservation planning
- TNC working with CNHP on wetland policy and conservation
- TNC contracts with CNHP for baseline ecological assessments on priority lands





Questions & Final Words

All the materials from the 2026 Partners' meeting will be posted online, on CNHP's website, under the events tab.

- You will get an email when they are posted.

We will send you a survey to collect feedback on how we did today and your suggestions on how we can do this better.

Photo by Jessica Smith, CNHP

Thank you!

CSU Conference Services:

Jessica Veal

Ashleigh Martin

Andrew Cundiff

Nate Henderson

Pete Andrews

All the wonderful folks in the booth and serving food!

CNHP Implementation:

Julie Kallenberger

Aria Paul

Jelena Vusurovic

Jess Cheadle

Rob Schorr

Brittany Morrow-Nordentoft

Lauren Laughlin

Our Wonderful Speakers:

Rich Conant

Tristan Kubik

Liam Bauer

Rebecca Fries

Dan Merewether

Robyn Paulekas

Katelyn Toigo

Clark Hollenberg

Gemara Gifford

Stacy Coleman

Jeanie Sumrall-Ajero

Maggie Gaddis

Roy Gilb

Tyler Lovato

Ellie Linden

Amy Greenwell

Grant Musgrave

Dan Zimmerer

Terrilynn Moore Smith

Jessica Smith

Michael Menefee

Lee Grunau

Vinamra Mathur

Joanna Lemly

Jeremy Siemers

David Klute

Kacie Miller

Eric Bergman

Savanna Smith

Brian Sullivan

Lindsey Brandt

Emily Chavez

Michelle DePrenger-Levin

Erik Glenn

Nanette Kuich

Drew Rayburn

Thank You for Attending

Please join us downstairs for Happy Hour
Ramskeller, Lory Student Center, 100 Level

