

Bats in Boulder County Research Updates

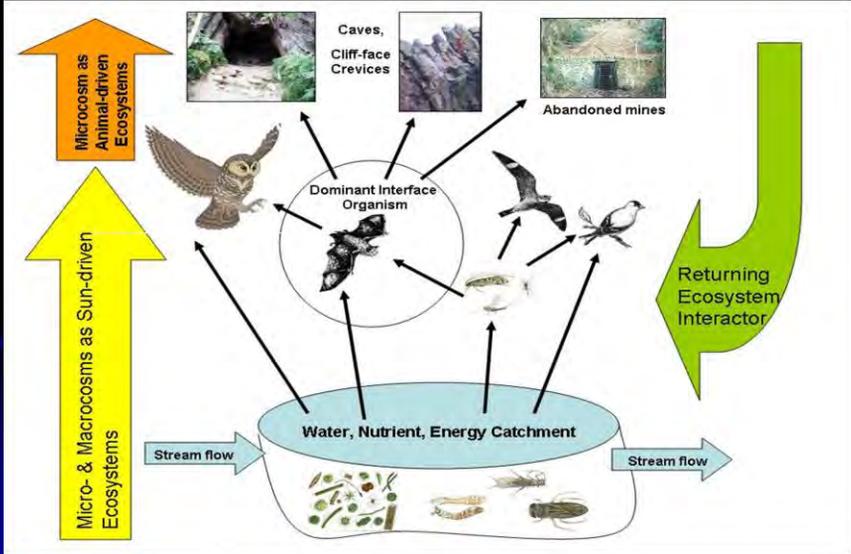


Rick A. Adams

School of Biological Sciences, UNC, Greeley, CO

rick.adams@unco.edu

Ecological Services



Common BOCO Bats



Little brown myotis
Myotis lucifugus

- Most common species of bat in the world
- Generalist feeder and rooster
- Commonly lives in human buildings
- Eats lots of mosquitoes
- Can form colonies of thousands of individuals



Small-footed myotis
Myotis ciliolabrum

- One of the smallest bats in Colorado
- Adults weigh less than a dime
- Tends to roost under rocks in scree-slopes or rock crevices



Long-eared myotis
Myotis evotis

- Specialist forest dweller
- Gleans insects from vegetation
- Uses its long ears to detect resting insects
- Tends to roost under rocks on the ground

Little brown bat: The most common species of bat in the world. Is a generalist that commonly lives in human buildings. Of all the myotis the largest portion of the little brown bat's diet is mosquitoes. Can form colonies in the thousands of individuals.

Small-footed myotis: One of the smallest bats in Colorado. Adults weigh less than a dime. Tends to roost under rocks in scree-slopes or rock crevices.

Long-eared myotis: Specialist that is a forest dweller and tends to glean insects from vegetation which it uses its long ears to detect. This species tends to roost under rocks on the ground.

Common BOCO Bats



Fringed myotis
Myotis thysanodes

- Forages mostly in forested habitat
- Aerial pursues insects
- Forms colonies in rock crevices with about two dozen individuals
- Very susceptible to human disturbance



Long-legged myotis
Myotis volans

- Largest myotis bat in CO
- Prefers cooler temperatures
- Moves to higher elevations as the summer progresses



Big brown bat
Eptesicus fuscus

- Large bodied, very strong flier
- Eats mostly beetles
- Cohabitates with humans
- Commonly lives in occupied buildings

Fringed myotis forages in cluttered forested habitats, but unlike *M. evotis*, uses aerial pursuit of flying insects. Long-legged myotis: This species is the largest of the myotis bats in Colorado. It prefers cooler temperatures, thus moving to higher elevations as the summer progresses.

Big brown bat: Big brown bats are large bodied, very strong fliers. Unlike most other Colorado bats, they eat mostly beetles. This bat also will cohabitate with humans and live in occupied buildings.

Common BOCO Bats



Hoary bat
Lasiurus cinereus

- Largest bat in the Front Range
- 16 inch wingspan
- Open aerial forager
- Flies at speeds reaching 35 mph
- Migrates to Arizona to over-winter
- Does not hibernate



Silver-haired bat
Lasionycteris noctivagans

- Closely related to hoary bat
- Migrator, not a hibernator
- Roosts in cracks in the bark of trees



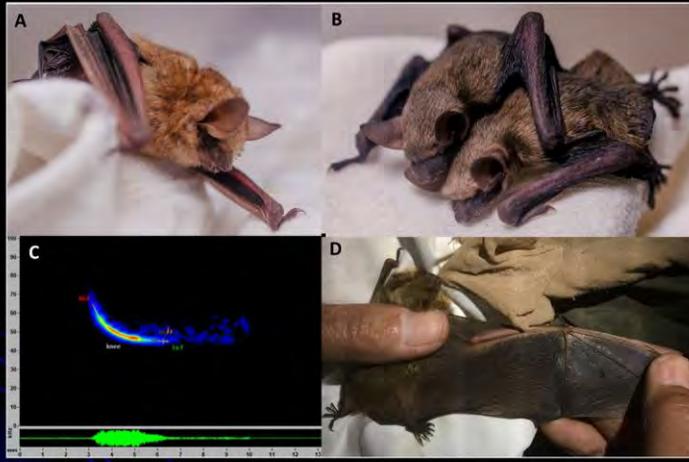
Townsend's big-eared bat
Corynorhinis townsendii

- Considered imperiled and of special concern
- Requires open, cool caverns
- Often uses abandoned mines and caves
- Gleans insects from vegetation

Hoary bat: This bat is the largest in the front range, having a 16 inch wingspan. It is an open aerial forager and flies at speeds reaching 35 mph. This species migrates to Arizona in winter, and does not hibernate. **Silver-haired bats:** Silver-haired bats are closely related to hoary bats. They are also migrators, not hibernators. Like hoary bats, they roost in trees, but usually in the cracks of bark.

Townsend's big-eared bats: This species is considered imperiled and of special concern. They require open, cool caverns for roosting and often uses abandoned mines and caves. Their large ears are used to listen for insects to glean from vegetation

New Comers



Adams et al. 2018. New records of tricolored (*Perimyotis subflavus*) bats in Colorado with first evidence of reproduction. WNAN. In press

New Comers

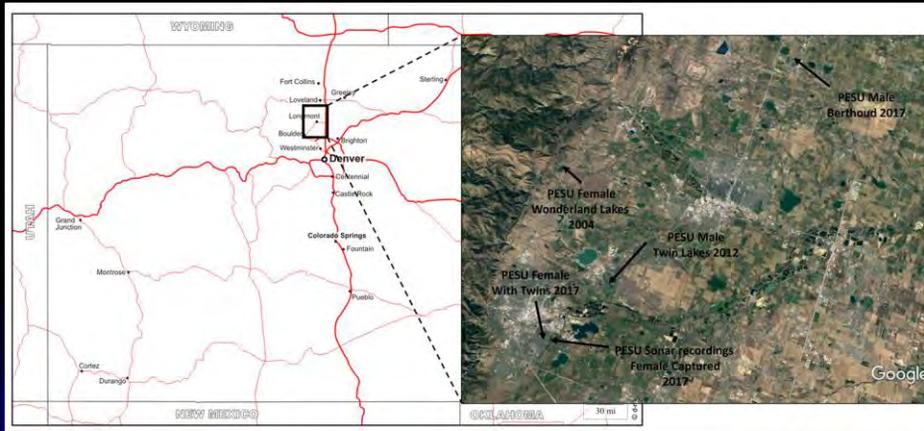


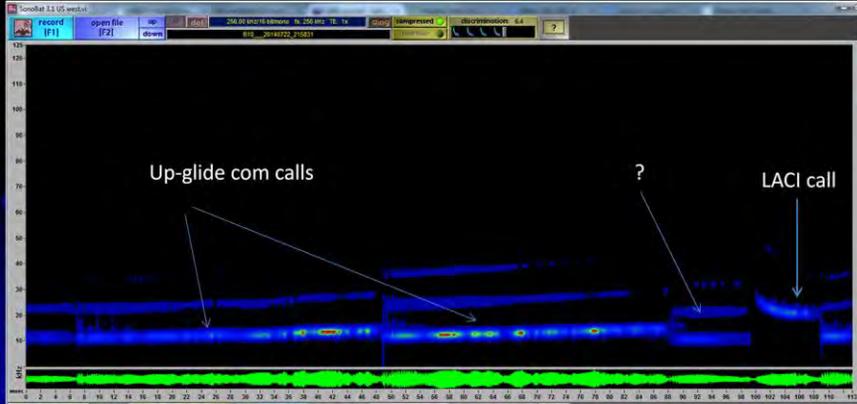
Fig. 2. Map showing area where individuals of *P. subflavus* were found along the Front Range in Colorado in 2012 and 2017. Inset shows specific localities including a 2004 record from Armstrong DM, Adams RA, Taylor M. 2006. WNAN

New Comers

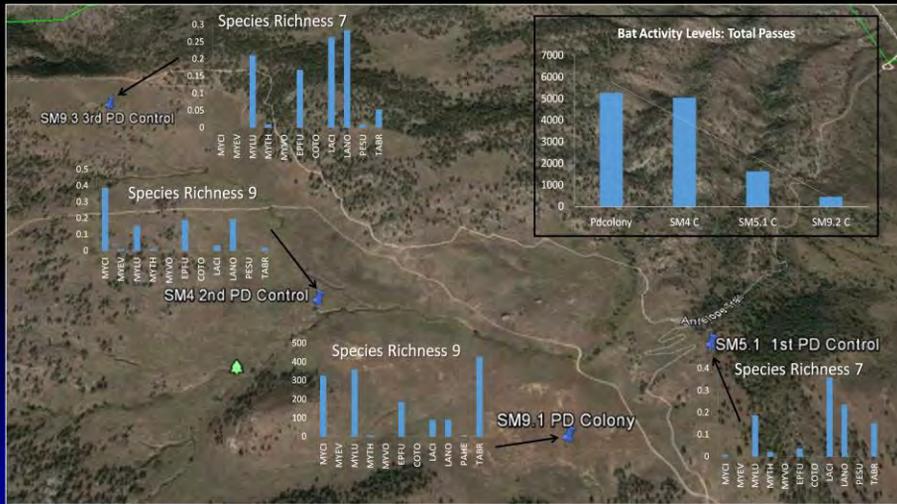
Mexican free-tailed bat social calls recorded at Hall II, Hall Ranch, and Heil Valley Ranch



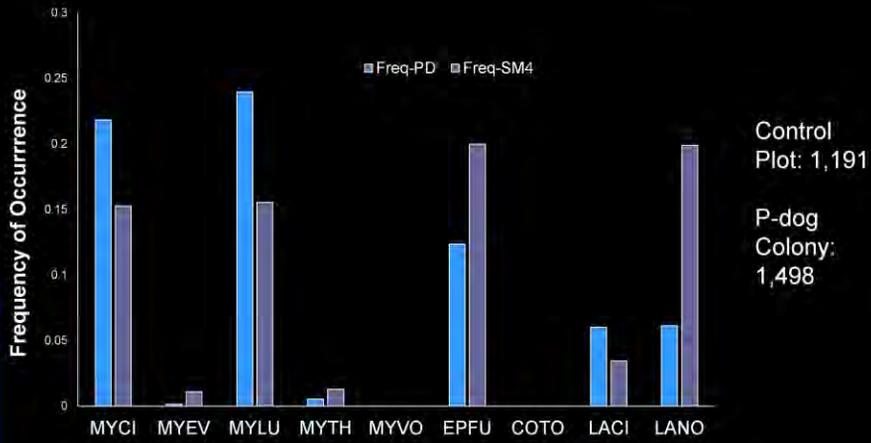
Tadarida brasiliensis



Bats and Prairie Dogs

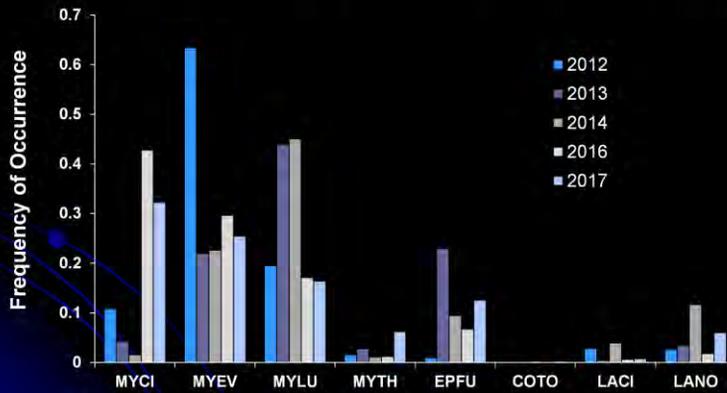


Bats and Prairie Dogs



Research at Heil Valley Ranch

Forest Thinning Dramatically Changes Bat Assemblage Structure



Water Acquisition & Lactation

Do juveniles drive their mothers to drink?



Water proof data recording station with car battery and solar panel.



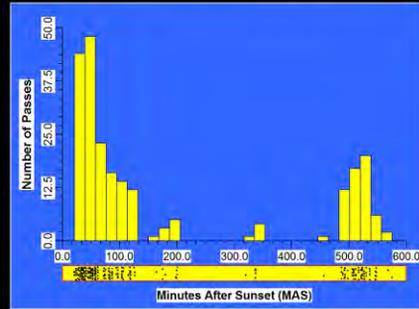
Plate Antennae positioned in artificial water hole at a depth of 1.5 cm below surface. Test on range of detection at this depth was 10- 15 cm dependent upon flight speed.

Recording Drinking Patterns



Results

Date	Lactating (n)	NonRepro (n)
7/19-7/20	19 (2)	4 (3)
7/28-7/29	42 (6)	
7/29-7/30	32 (4)	1 (2)
7/30-7/31	18 (3)	8 (3)
7/31-8/1	13 (3)	
8/1-8/2	24 (6)	
8/2-8/3	18 (4)	
8/3-8/4	14 (3)	
8/4-8/5	18 (3)	
8/16-8/17	22 (6)	3 (2)
8/17-8/18	16 (4)	4 (2)
8/22-8/23	19 (4)	2 (1)
SUM	255	22*
MEAN	21.20	3.71
SD	8.59	2.71



Activity Histogram Lactating Females

Lactating female visited **13x** more often than did nonreproductive females. The extreme need for water makes bats indicator species or 'canaries in global coal mine'

Adams R.A , Hayes MA. J. Animal Ecology. 2008.

nn

Heil Valley Ranch

Water Availability Alters Bat Activity Patterns



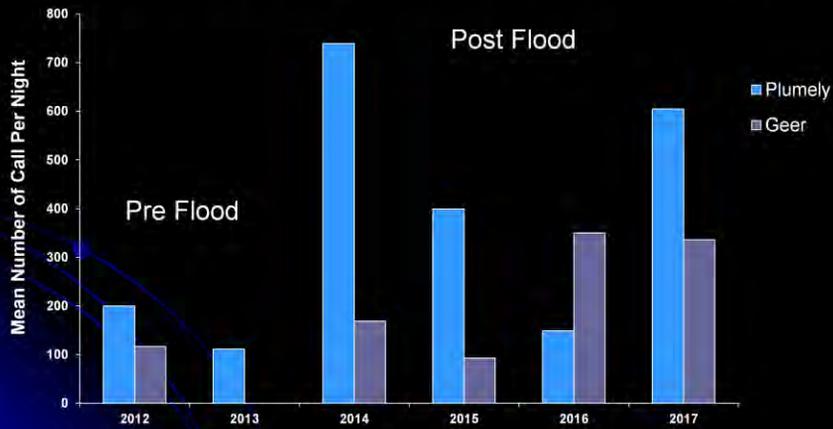
Geer Canyon



Plumely Canyon

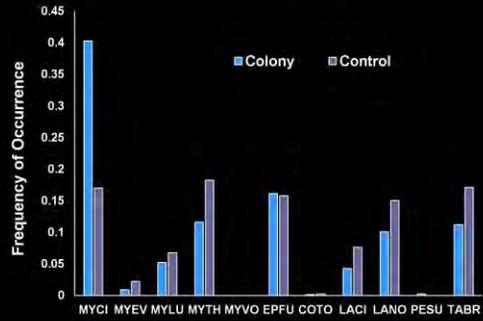
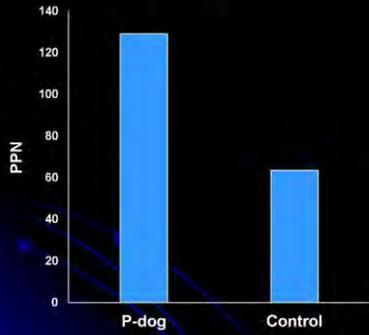
Heil Valley Ranch

Water Availability Alters Bat Activity Patterns



Prairie Dogs and Bats

Heil Valley Ranch Colony showed similar trends as Hall Ranch

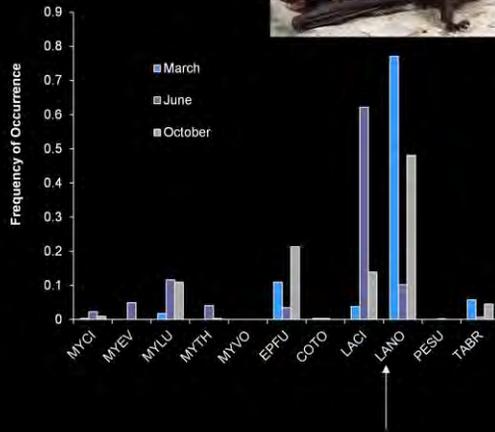
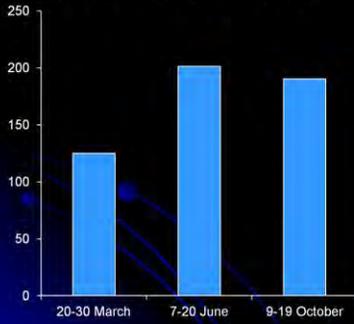


Hall II

St. Vrain appears to be a Migration Corridor for Silver-haired Bats



Mean Activity Per Night



Larger Trends

Climate Change and Bats

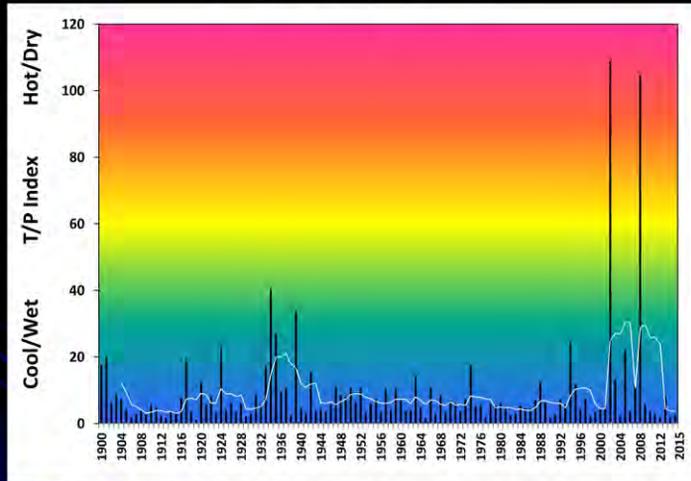
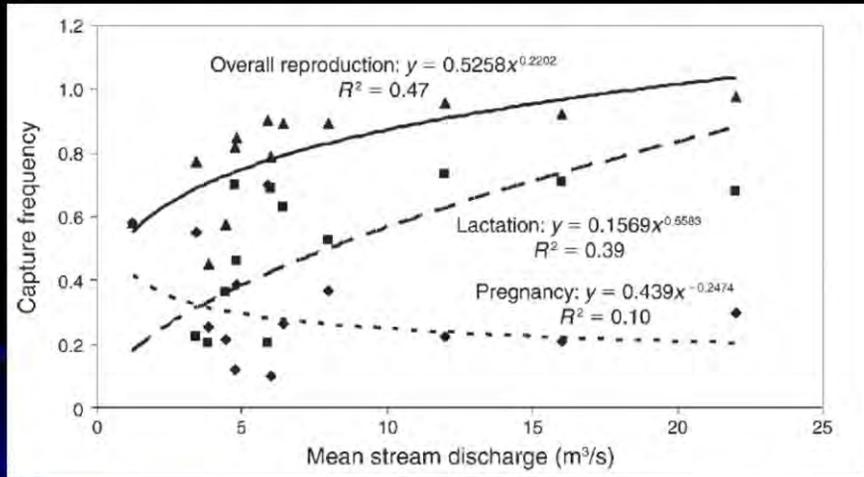


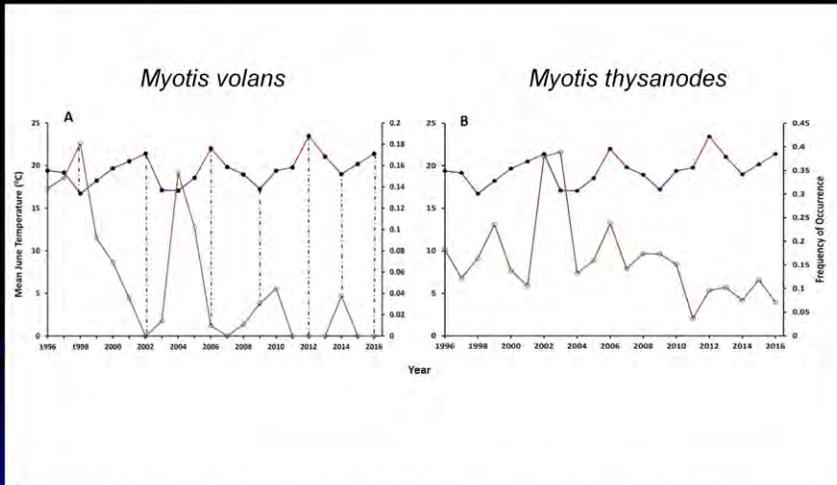
Figure 7. Plot of mean annual temperature divided by precipitation for the reproductive months of June, July, and August (T/P index, black bars) against years from 1900-1915. Adams RA, Hayes MA (2018) Global Ecology and Conservation. In press

Reproductive Disruption



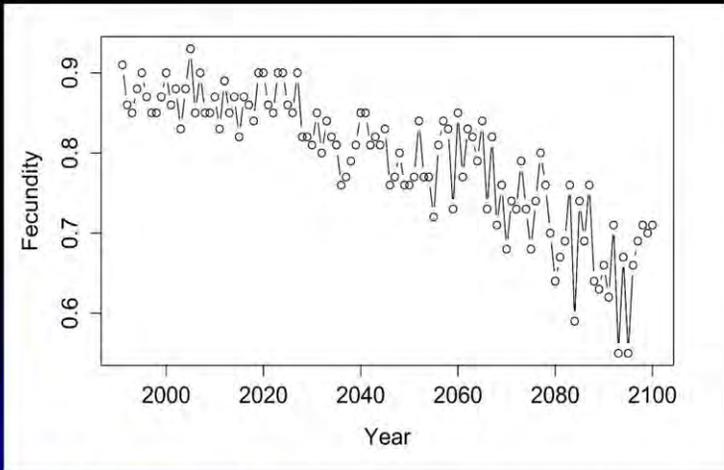
Adams RA. 2010. Bat reproduction declines when conditions mimic climate change projections for western North America. *Ecology* 91: 2437-2445

Drops in Population Numbers



Adams, RA. 2018. Dark side of climate change: species-specific responses and first indications of disruption in spring altitudinal migration in myotis bats. *J Zoology*, London. In press

Predicting the Future



Hayes MA,
Adams RA.
2017. PLoS
ONE, 7

Fig. 3. Plot of estimated adult female reproductive rates for fringed myotis (*Myotis thysanodes*) from years 1991 to 2100

Summary

Bats are one of the most unique animals on Earth and support some of the most unique ecosystems

Bats provide for ecosystem and human health in ways that no other species can

Without bats, major food webs would be irreparably affected

Bats are under sever threat of extinction globally

Bats in Boulder County are under threat of increasing summer temperatures, drops in precipitation, and loss of drinking water sources that will likely result in species extirpations



Thank You for Listening



The End

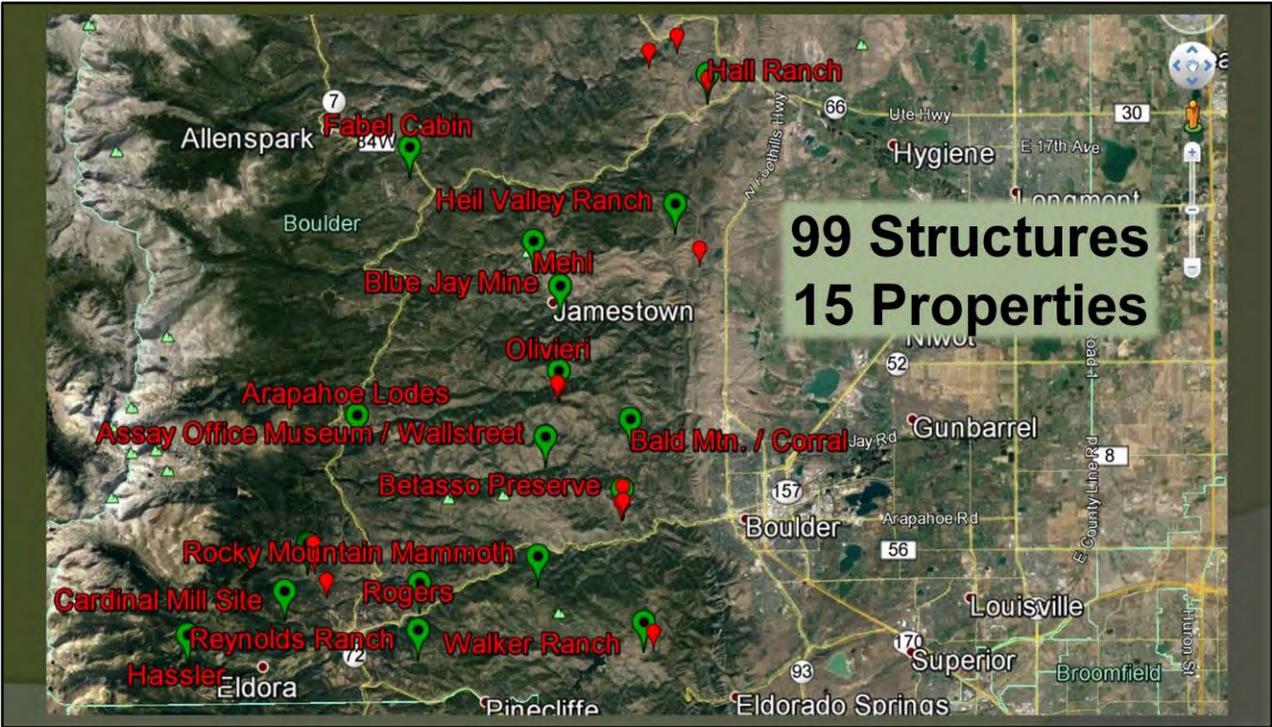
Questions?

HMGP-WRRG PUBLIC INFRASTRUCTURE DEFENSIBLE SPACE PROJECT



**Parks &
Open Space**







Defensible Space



HMGP	\$306,212.50
WRRG	\$345,000.00
County Match	\$ 29,212.50

Project Total **\$680,425.00**

Professional Services **\$175,425.00**

Landscape Treatments **\$505,000.00**



Assessments



WILDFIRE DEFENSIBLE SPACE AUDIT COUNTY HISTORIC STRUCTURES



Boulder County, Colorado
August 2016

Prepared by:



BLUE MOUNTAIN ENVIRONMENTAL CONSULTING
817 MALLARD DRIVE, FT. COLLINS, CO 80521 • (970) 224-8851

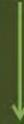
Prepared for:



BOULDER COUNTY OPEN SPACE
3201 SAKET VADAY ROAD LONGMONT, CO 80501 (303) 678-4200

Wildfire Defensible Space Audit on
County Historical Structures

Treatments



<http://www.paysonroundup.com/news/2013/jul/23/forest-contract-bombehell/>

Assessments



WILDFIRE DEFENSIBLE SPACE AUDIT COUNTY HISTORIC STRUCTURES



Boulder County, Colorado
August 2016

Prepared by:



BLUE MOUNTAIN ENVIRONMENTAL CONSULTING
877 MAGLARD DRIVE, FT. COLLINS, CO 80521 • (970) 224-6861

Prepared for:



BOULDER COUNTY OPEN SPACE
2201 SAINT VALENTINE ROAD LONGMONT, CO 80501 (303) 678-4200

Wildfire Defensible Space Audit on
County Historical Structures



 **iAuditor**



Structure Protection Plan

Betasso

Historical Context and Current Use
 Beginning in 1907, the pioneer Betasso family consolidated various land holdings into a 2,000-acre cattle ranch in the shadow of Sugar Loaf Mountain west of Boulder. Ernie Betasso sold the ranch to Boulder County during the 70's and 80's. Open Range became open space. Today, their only ranch leg remains along the hillside along the road leading to the City of Boulder's many treatment plant. The entire Betasso Preserve is a monument to Boulder County's 20th Century mining and agricultural history. (The Monument of Boulder County's Mining and Agricultural Past)

Site Overview: Betasso Preserve is comprised of 14 structures in two separate locations all of which are on the National Register of Historical Places. Access to the 13 of the structures is from a paved road while the final structure can be accessed by trail followed by a short hike. There are two occupied residences which can be well equipped. All other structures can be dismantled for crown and surface fire while ember showers will remain a primary hazard that is difficult to mitigate without major modifications in most cases. The predominant cover types are grassland and open ponderosa pine woodlands.



Defensible by Hazard Type	Hazard Type													
	Structure	Roof	Open Eaves	Open Siding	Open Porches	Open Stairs	Open Balconies	Open Decks	Open Patios	Open Terraces	Open Walkways	Open Driveways	Open Garages	Open Sheds
Structure	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Roof	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Open Eaves	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Open Siding	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Open Porches	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Open Stairs	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Open Balconies	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Open Decks	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Open Patios	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Open Terraces	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Open Walkways	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Open Driveways	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Open Garages	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Open Sheds	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Wildfire Defensible Space Audit
 Boulder Environmental Consulting

WILDFIRE DEFENSIBLE SPACE AUDIT COUNTY HISTORIC STRUCTURES



Boulder County, Colorado
 August 2016

Prepared by:

BLUE MOUNTAIN ENVIRONMENTAL CONSULTING
 977 MALLARD DRIVE, FT. COLLINS, CO 80521 • (970) 224-0511

Prepared for:

BOULDER COUNTY OPEN SPACE
 3201 EAST 72nd ROAD LONGMONT, CO 80501 (950) 478-6200

Wildfire Defensible Space Audit
 Boulder Environmental Consulting

iAuditor Report

Structure 8: Lower Barn

Question	Response	Details
Asset Value	High	
Structure Photos		
ROOF:		
Is there a roof?	Yes	
Roof Type:	Metal	
Are there open eaves?	Yes	Open eaves are less of a hazard due to convection than is ember penetration throughout the structure. The entire structure has large and small gaps that will accommodate ember penetration without major modification. The structure also lacks doors in some places and has an open side. Mitigation of surface and crown fire is likely to yield the best investment of time and energy without changing historical character of the structure. Typical gaps along the roof line and walls are here pictured.
Are the roof, gutters, and eaves free of combustible debris and properly mitigated?	Yes	
SIDING:		
Is there siding?	Yes	

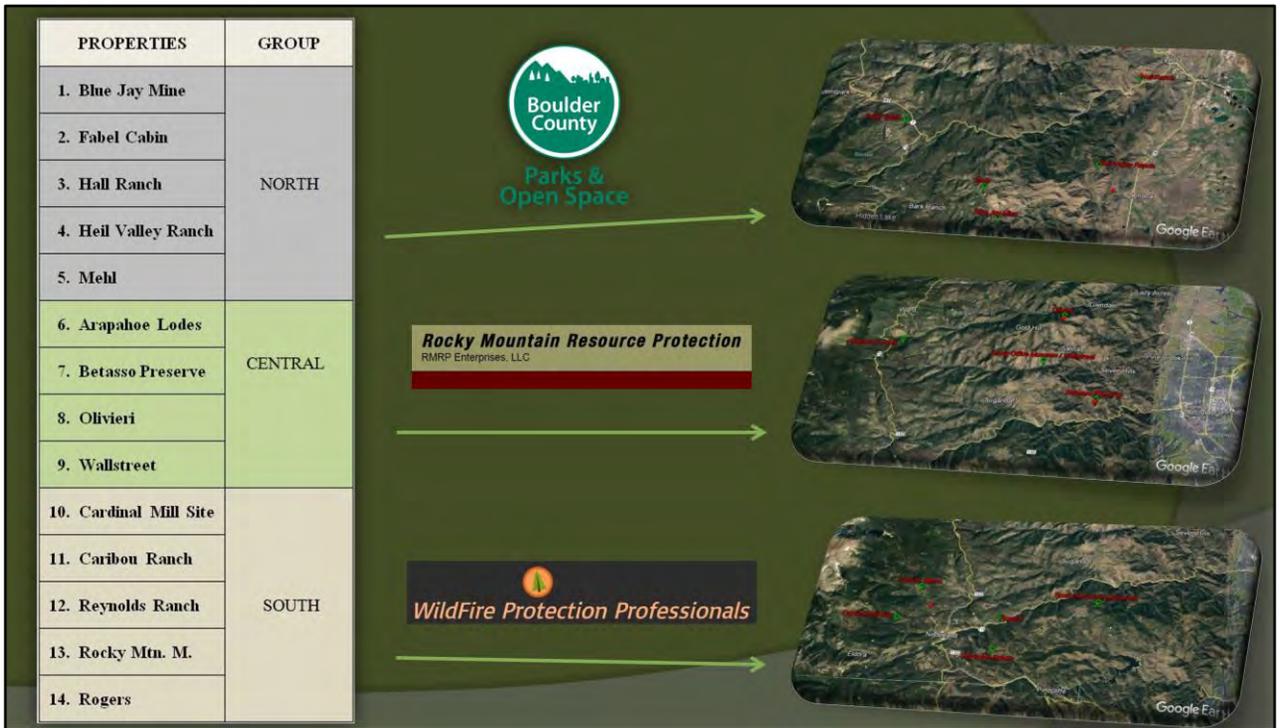
Betasso Preserve

Operations throughout the calendar year:

- Seasonal wildlife closures
- Plant / Wildlife Surveys
- Optimal surface conditions



- Seasonal Wildlife Closures:
 - **CARIBOU RANCH - ELK**
 - **ROCKY MOUNTAIN MAMMOTH - BATS**
- Plant Surveys:
 - **SPRING**
 - **LOWEST TO HIGHEST - ELEVATION**



- The **14 PROPERTIES** are split into **3 GROUPS**.
 - **NORTH**
 - **CENTRAL**
 - **SOUTH**
- **CONTRACTORS** can **BID** on **1 GROUP** or **MULTIPLE GROUPS**

Obligations of the Contractor

Bird Nest Identification Training

Archaeological Awareness Training















B. County Youth Corps	\$60,000.00
Blue Mtn. Env. Consulting	\$16,252.00
Rocky Mtn. Res. Protection	\$125,000.00
Wildfire Protection Pros	\$122,350.00
Golf & Sports Solutions	\$11,566.80
Total	\$343,168.80



QUESTIONS ?



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 ZONE 1-B 24
 ZONE 1-C 24

Structure 8: Lower Barn

Outstition	Response	Details
Asset Value	High	
Structure Photo(s)		
		
		
ROOF:		
Is there a roof?	Yes	
Roof Type:	Metal	
Are there open eaves?	Yes	Open eaves are less of a hazard due to convection than is ember penetration throughout the structure. The entire structure has large and small gaps that will accommodate ember penetration without major modification. The structure also lacks doors in some places and has an open side. Mitigation of surface and crown fire is likely to yield the best protection of time and energy without changing historical character of the structure. Typical gaps along the roof line and walls are here pictured.
		
Are the roof (gutters, and eaves free of combustible debris and properly mitigated)?	Yes	
SIDING:		
Is there siding?	Yes	

iAuditor Report



Appendix 5



Appendix 6



Appendix 7



Appendix 8

Structure Protection Plan

Historical Context and Current Use

"Beginning in 1907, the pioneer Betasso family consolidated various land holdings into a 2,000 acre cattle ranch in the shadow of Sugar Loaf Mountain west of Boulder. From Betasso sold the ranch to Boulder County during the 70's and 80's. Open Range became open space. Today, these rocky ranch buildings hug the hillside along the road leading to the City of Boulder's waste treatment plant. The entire Betasso Preserve is a gemstone to Boulder County's 20th Century mining and agricultural history." (The Museum of Boulder County's Mining and Agricultural Park)



Site Overview: Betasso Preserve is composed of 14 structures in two separate locations all of which are on the National Register of Historical Places. Access to the 13 of the structures is from a paved road while the final structure can be accessed by trail followed by a short hike. There are two occupied residences which can be well mitigated. All other structures can be mitigated for crown and surface fire while making them remain a primary hazard that is difficult to mitigate without major modifications in most cases. The predominant cover types are grassland and open ponderosa pine woodlands.

Defensible by Hazard Type	Mitigation Options													
	Structure	Roof	Walls	Windows	Doors	Decks	Porches	Stairs	Driveways	Garages	Sheds	Outbuildings	Other	Other
Structure	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Roof	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Walls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Windows	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Doors	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Decks	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Stairs	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Driveways	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Garages	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sheds	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Outbuildings	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Other	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Wildfire Mitigation System Analysis - County Historical Structures

Structure Protection Plan: Wildfires in Boulder County can be characterized as wind-driven events, often ahead of an advancing cold front. The prevailing winds are typically west to east or southwest to southeast. Encroaching a significant gully, a wildfire south of Middle Boulder Creek north aspect could reasonably be expected to be predominantly a crown fire, given the density, capability of producing significant radiant heat and ember flow as fast as of Cardinal Hill. Spilling across the canyon, however, could result in fire activity on the hillside above the County Tunnel. A wildfire above the tunnel, but not across the canyon, could reasonably be expected to be both a crown and surface fire given the arrangement of fuels in the area. Mitigation recommendations are designed to reduce radiant heat exposure and lessen the impact of a surface fire for both structures. The general systems of the area, however, will also facilitate effective use of retardant and/or water drops by aviation resources.

Given the size of the mill, the use of compressed steel for much of the siding and roofing, and the sparse vegetation surrounding the mill, utilizing a Ram Jet system of water delivery could be particularly effective. Such a system requires fire hose, operable heads elevated on steel posts and Mark III pumps, which are common to wildfire suppression efforts where water is readily available. This system can be set up easily, quickly and run for extended periods of time. Once installed, water can be delivered onto the structure itself as well as the surrounding vegetation. One important benefit of the Ram Jet system is that it raises the relative humidity of the area and thereby lessens the ignition potential of available fuels.

Water operations could be an effective option for the County Tunnel as well, though not utilizing water from the creek but from fire engines on scene. This is feasible due to the direct access to the structure from the trail. For water to be utilized effectively and efficiently, relocating the collapsed building materials on top of the rail system leading into the tunnel should be relocated inside or removed. Use of Class A foam and compressed-air foam systems (CAFS) is recommended as they basically make water work better. Foam does this by reducing surface tension of the water, allowing water to penetrate into the fuels better. By reducing water's contact with a structure (or fuels), it allows for more heat absorption and increases fuel moisture. Should the collapsed building materials not be relocated/removed, the application of foam is one way to lessen the impact of ember accumulation within the piles. If in-house resources are being utilized for the application of foam, training on the types of foam and foam systems should be undertaken.

For the County Tunnel, a structure wrap is potentially effective, though closing the back of the structure would be needed to preserve the integrity of the wrap in situations of high winds that often accompany a wildfire. Further, the collapsed materials along the rail system leading into the tunnel should be relocated inside or removed.

Required Mitigation	Roof	Walls	Windows	Doors	Decks	Porches	Stairs	Driveways	Garages	Sheds	Outbuildings	Other	Other
County Tunnel	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Wildfire Mitigation System Analysis - County Historical Structures

Site Map



Wildfire Mitigation System Analysis - County Historical Structures

Environmental/Wildlife Conservation Measures



Colorado Butterfly Plant



Preble's Meadow Jumping Mouse



Mexican Spotted Owl



Greenback Cutthroat Trout



Canada Lynx

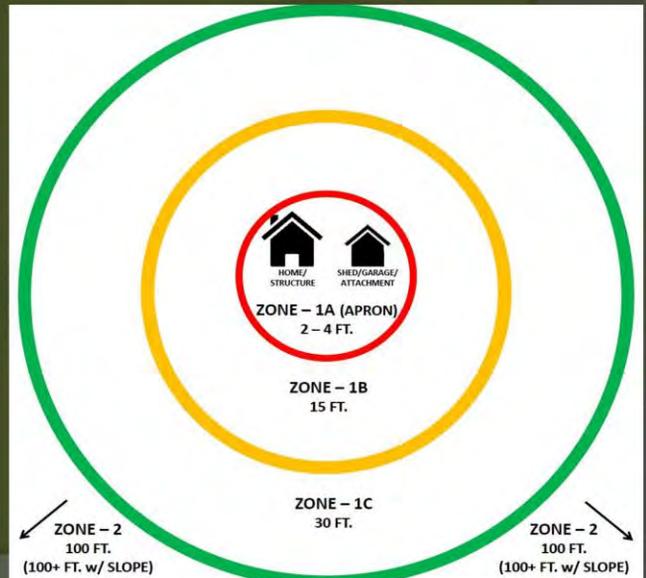


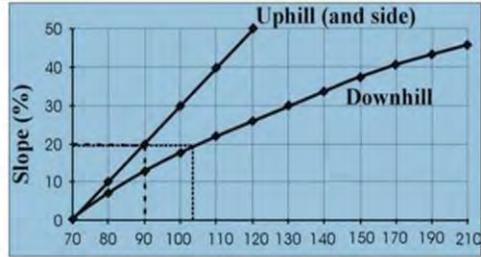
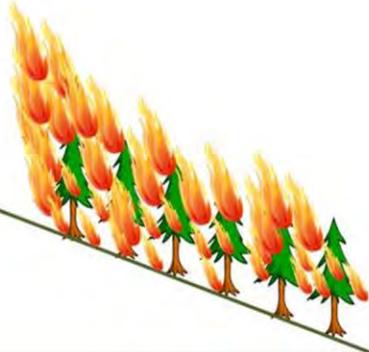
Ute Ladies'-Tresses Orchid

- The **US FISH & WILDLIFE SERVICE** and **FEMA** determined upon review that this project has the **POTENTIAL** to **AFFECT THESE LISTED SPECIEIES**.
 - **COLORADO BUTTERFLY PLANT**
 - **PREBLE'S MEADOW JUMPING MOUSE**
 - **MEXICAN SPOTTED OWL**
 - **GREENBACK CUTTHROAT TROUT**
 - **CANADA LYNX**
 - **UTE LADIES' TRESSES ORCHID**

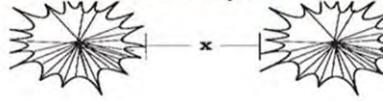
Defensible Space Zones

- **Zone -1A** 2-4 ft.
(apron)
- **Zone -1B** 15 ft.
- **Zone -1C** 30 ft.
- **Zone -2** 100 ft.
(100+ ft. w/ slope)



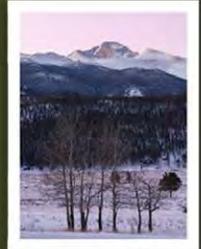
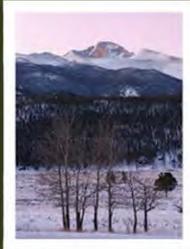


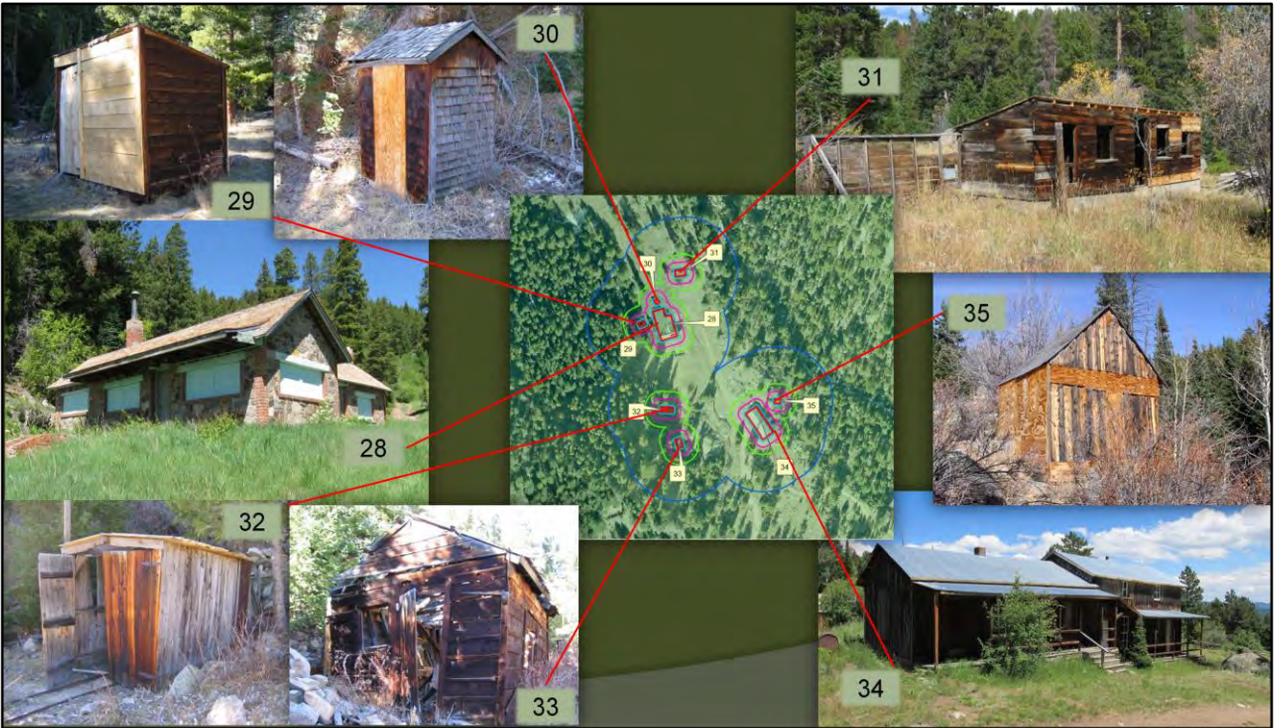
Distance to Home / Structures



% slope	Tree Crown Spacing	Brush and Shrub Clump Spacing
0 - 10 %	10'	2 1/2 x shrub height
11 - 20%	15'	3 x shrub height
21 - 40%	20'	4 x shrub height
> 40%	30'	6 x shrub height

Project Implementation





Boulder County Parks and Open Space Rules and Regulations Revision Discussion

Parks and Open Space Advisory Committee
December 21, 2017

Bevin Carithers,
Resource Protection Supervisor

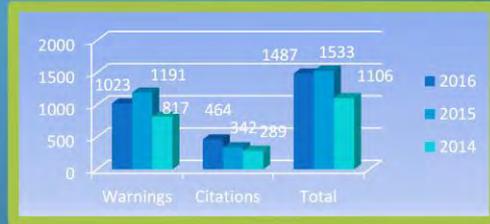




2016 Enforcement Data



Violations by type in 2016.



Violation totals for the past 3 years.

Rules and Regulations Revision Discussion

- State legislation allows for county commissioners to adopt ordinances specific to their county, and to commission officers to enforce these ordinances.
- These rules and regulations apply to BCPOS owned, leased or managed lands.
- Enforced by Boulder County Deputies or BCPOS Rangers Only.
- Regulations are reviewed by staff every 3 to 5 years. Last updated in 2015.
- Revisions are presented to POSAC for discussion and the BOCC for final approval.

Significant Additions & Changes to Existing Regulations

Reg.

4. Clarifies types of prohibited weapons.
8. Allows rangers to enforce day use and directional designations on multiple use trails.

Defines bicycles as exclusively human-powered vehicles and prohibits the use of e-bikes on all trails unless otherwise posted.

- 9 (a). Defines an e-bike as a vehicle.



Significant Additions & Changes to Existing Regulations Cont.



Reg.

14. Provides a definition of smoking.
17. Allows 24-hour trail use on the US 36 Bikeway, the Boulder Canyon Trail, and Open Sky Loop Trail adjacent to Pike Road.
- 23 (b). Allows the Director's designee to enact park and trail closures. Extends the closure period from 2 to 4 weeks. Requires POS staff to post notice on website and location of closure.

Changes to Lease Agreements

Reg.

16. Allows agricultural tenants to provide beverages greater than 3.2 percent alcohol at events if provided in their lease agreement.
19. Allows commercial uses noted within lease agreements.
29. Allows for exceptions to the rules and regulations noted in lease agreements.



Proposed New Regulations

Reg.

- 5(c). Any person who brings a dog into a Boulder County Parks and Open Space area shall pick up, carry out, and dispose of that dog's excrement.
- 7(c). It shall be unlawful to violate an order or special notice prohibiting fires on any Boulder County Open Space area.
- 24(d). It shall be unlawful to take-off, land, or operate any unmanned aircraft system (drone) on Boulder County Parks and Open Space areas unless permitted by the Department. No person shall operate an unmanned aircraft system so as to endanger, harass, harm, or injure any person, companion animal, livestock, or wildlife on Boulder County Parks and Open Space areas.
- 24(e). Public Assembly is not permitted on Boulder County Parks and Open Space areas without an approved permit issued by the Board or unless at the Boulder County Fairgrounds and in compliance with the Boulder County Personnel and Policy Manual.

Questions



Boulder County

Parks and Open Space Department



Resource Planning Schedule

To conserve natural, cultural and agricultural resources and provide public uses that reflect sound resource management and community values.



Flood Recovery Continues!

- **Implementation is critical to the community—incl. environmental and recreational resources**
- **2020 Vision supports this work!**
- **Leveraging term planning staff on flood work**

- 
- **Key/BIG Projects still have planning!**
 - **Lakes 3/4, A-Frame, West Lk**
 - **Lefthand Projects (B-S, Geer)**
 - **Irrigation Ditches**
 - **Others need Construction Oversight and Post-Implementation Monitoring**



Active Trail Planning

- Toll
- Eldo-Walker
- St. Vrain Greenway
- West Magnolia/USFS/Ned
- Rocky Mountain Greenway

Review Partner Trail Requests

- Projects with multiple objectives
- Address Partner needs
- Little or no added management planning
- Cost-sharing



Management Plans

- Focus on areas/regions needing planning
 - Mayhoffer Farm
 - Toll Approach/West Magnolia Area
 - St. Vrain Access Area (Lyons area)
- Sections of plans
 - South County
- Not yet ripe
 - North Foothills/Hall II
 - Kenosha



Management Policy Priorities

- Helping resolve on-going management conflicts
 - Facility Construction/Maintenance Guidelines
- Completion of plans already started
 - Wildlife
 - Grasslands and Shrublands
- New: Cultural Responsiveness and Inclusiveness
- Visitor Use—Phasing Approach

07.27.2012 15

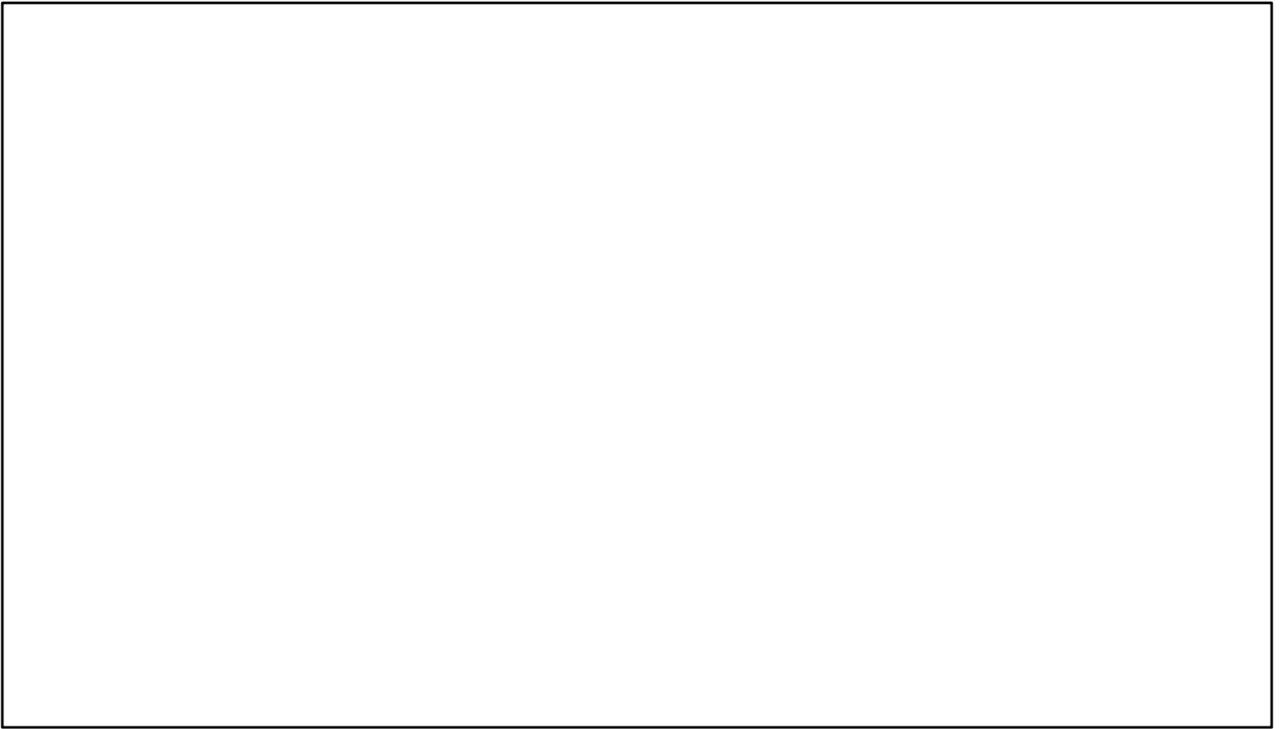
	Active 2018	2019	Long- Term (2020+)
Trail and Corridor Plans			
Eldorado - Walker Connector Trail Feasibility Plan	x		
West Magnolia Trail Planning with US Forest Service	x		
Regional Mountain Trails Plan			x
Rocky Mountain Greenway	x	x	x
St. Vrain Greenway Planning	x	x	x
Tolland Ranch Trail	x		
Trail Requests - Municipalities, Transportation, & Others	x	x	x
Update to Trails Element/Plan of BCCP	x		

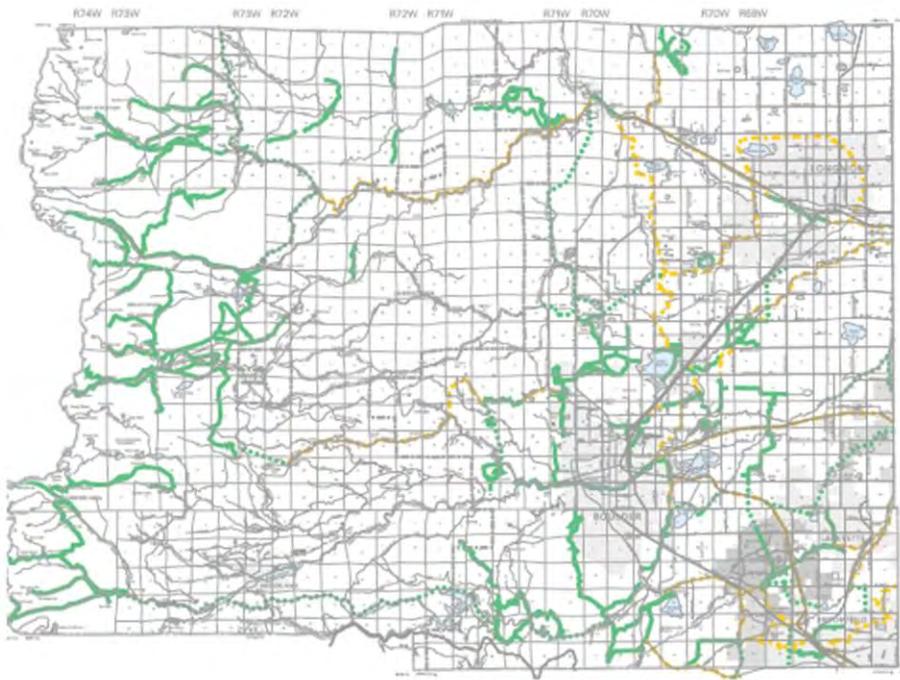
	Active 2018	2019	Long- Term (2020+)
Property Management Plans			
Kenosha Ponds (recreation plan)			x
Mayhoffer Farm Plan	x		
North Foothills Open Space			x
Platt Rogers/Reynolds Ranch			x
Rabbit Mountain			x
South County Grasslands			x

	Active 2018	2019	Long- Term (2020+)
Management Policies			
Cultural Resources			x
Cultural Responsiveness and Inclusion Plan	x	x	
Facility Construction and Maintenance Guidelines	x		
Grasslands and Shrublands	x		
Visitor Use		x	x
Wildlife	x	x	



Parks and Open Space





Legend

- Existing
- - - Alignment
- · · · · Corridor
- Incorporated Areas
(As of April 20, 1999)

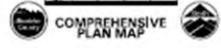
Notes

A Conceptual Trail Alignment is a route where the general location of a trail has been identified, but the specific location has not yet been determined. A Conceptual Trail Corridor is a general area that has been identified for a trail, but the specific location has not yet been determined. Corridors are identified on the map with a dotted green line to indicate the general location of a trail. A Conceptual Trail Alignment and Corridor are shown on the map with a dashed yellow line and a dotted green line, respectively. A Conceptual Trail Alignment and Corridor are shown on the map with a dashed yellow line and a dotted green line, respectively. The map has been prepared and this map is for open to public review.

The map is not intended to be used as a legal document. For more information, contact the local County Parks and Open Space Department at 202-447-2392.

Map prepared and revised by the County Parks and Open Space Department
Revisions

Adopted by County Commission - January 20, 1999
 Approved by County Council - December 3, 1999



County Trails Map

CIP • 2009 Projects

Subhead

Body Text

- Bullet Item
- Bullet Item
- Bullet Item

Boulder County
Parks and Open Space



CIP • 2009 Projects W/ Sidebar

1. TPI and Code Planners

2. General Operating Expenses

3. Building Code Materials

4. BuildSmart Training

5. Fund BuildSmart Programs

6. BuildSmart Incentives

7. Office Remodel

8. Digital Archiving (Scanning) of Historic Files

Subhead

Body Text

- Bullet Item
- Bullet Item
- Bullet Item

Boulder County
Parks and Open Space



“Easy” Partner Trail Requests—Locations?

- Davidson Mesa/Cohig- Louisville
- 104th Street – Louisville, Lafayette
- Joder-Heil - Boulder
- RMG South to Rocky Flats NWR
- Lyons to Hall
- Rock Creek Grassland-Broomfield
- Ned area
- Superior connections

