TOWN OF BRECKENRIDGE
OPEN SPACE & TRAILS

Breckenridge Open Space Advisory Commission
March 17, 2025
Council Chambers in Town Hall
150 Ski Hill Road, Breckenridge, CO 80424

THE TOWN OF BRECKENRIDGE IS HOLDING HYBRID MEETINGS. THIS MEETING WILL BE HELD IN PERSON AT BRECKENRIDGE TOWN HALL. ALL MEMBERS OF THE PUBLIC ARE INVITED TO ATTEND. IN PERSON ATTENDEES MUST NOT ACCESS THE VIRTUAL MEETING WHILE IN COUNCIL CHAMBERS.

This meeting will also be broadcast live over Zoom. Log-in information is available in the calendar section of our website: www.townofbreckenridge.com. Questions and comments can be submitted prior to the meeting to websiteopenspace@townofbreckenridge.com.

5:30 pm **Call to Order**

5:35 pm **Discussion/Approval of Minutes**
- February 17th, 2025 Draft BOSAC Meeting Minutes

5:40 pm **Discussion/Approval of Agenda**

5:45 pm **Public Comment (Non-Agenda Items; 3-Minute Limit Please)**

5:50 pm **Staff Summary**
- **Field Report**
- **Summit County Open Space Ambassador Program**
- **Great Outdoors Colorado Community Impact Grant**
- **Wellington Oro Water Treatment Plant**
- **McCain RFP**
- **Little Daisy Residential Lease**
- **Jackpot and Evening Star Claims**

6:00 pm **OST Discussion**
- **2024 Cucumber Gulch Preserve Wetland Monitoring Update**
- **Summit County Safe Passages**
- **2025 OST Field Projects**

7:30 pm **Other Matters Related to Open Space**

7:35 pm **Council Matters Related to Open Space**

7:40 pm **Adjournment**

***AI was used to summarize the meeting transcript**

I) CALL TO ORDER

Nikki LaRochelle called the February 17th, 2025, regular meeting of BOSAC to order at 5:32 pm. Other members of BOSAC present were Bobbie Zanca, Krysten Joyce, Chris Tennal, and Town Council liaison Jay Beckerman. Matt Powers was present virtually. David Rossi was absent. Staff members present were Mark Truckey, Alex Stach, Julia Puester, Tony Overlock, Joel Dukes, and Duke Barlow. Jordan Mead, Summit County Open Space Resource Specialist was also present. Members of the public: Greg Ruckman and Jeffery Bergeron.

II) APPROVAL OF MINUTES

A) BOSAC REGULAR MEETING – January 27th, 2025

The minutes were approved as presented.

III) PUBLIC COMMENTS

N/A

IV) STAFF SUMMARY

A. Field Report

B. Forest Health Update

C. Grant Request Update

D. USFS Referral – Breckenridge Stables Proposed Facility Upgrades

Mr. Beckerman had a question regarding the road to Breckenridge Stables from Beaver Run and if an alternate route had been planned or discussed with the Forest Service. Mr. Barlow replied that staff hadn't been involved in that conversation, but the plan is for the ski resort, USFS, and Beaver Run resort to limit roadside parking on the Peak 9 road near the Beaver Run parking lot in Summer 2025 to help reduce resource damage and parking congestion. Ms. Joyce asked a clarifying question about the overlap of users on shared trails, to which Mr. Barlow replied that the Flapjack trail is shared by the public and Breckenridge Stables and Wanderer is a ski resort maintained singletrack cross-country trail that crosses Breckenridge stables trails. User conflict has been a problem on both trails in the past. Mr. Barlow continued that the main goal of the Peak 10 Trails project, led by the U.S. Forest Service, is to inventory the trails in the area, analyze use, and propose a revised, sustainable trail network that minimizes user conflict. Ms. Zanca asked about the opportunity for public commenting for the Peak 10 Trails project, to which Mr. Barlow replied that yes, there will be multiple rounds of public comment periods and he envisions this process being very similar to the Frisco Backyard project.

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E. Breckenridge Grand Vacations Fee-in-Lieu

Mr. Truckey explained that the Town's subdivision standards require that 10 percent of a new subdivision must be dedicated for public open space, parks, or recreational purposes or a fee in lieu can be required where the property is not considered appropriate for those purposes. Breck Grand Vacations is undertaking a new subdivision in an area next to Timber Trail that is subject to the dedication/fee. The Town determined an "in lieu fee" is appropriate and the Town had an appraisal prepared. BGV provided another appraisal and for the last several months there have been ongoing discussions regarding the value of the land related to the fee in lieu. A settlement was reached last Tuesday between the council and BGV. The settlement results in $2 million coming to the Town for open space and park purposes, with a deadline of no later than January 1, 2028. The money will be used for acquisition purposes, and the Town has seven years to spend it.

F. Additional Staff Updates

Mr. Barlow added that an RFP for the Laurium Parking Lot Relocation Project has been issued and is viewable on the Summit County website.

Mr. Barlow also mentioned that the McCain Design RFP is in its final draft stage and staff hopes to issue this RFP later in the week.

V) OPEN SPACE DISCUSSION

<u>2024 State of the Open Space (13:07)</u>

Mr. Barlow presented the 2024 State of the Open Space report, highlighting the program's mission to preserve lands that define and enhance the unique mountain character of Breckenridge. Mr. Barlow began by summarizing the history of the program, which started in 1997 with a tax initiative dedicating half of 1% (.5%) of sales tax revenue to open space. Since then, the program has spent over $34 million on acquisitions, preserving over 5,200 acres and 70 miles of trails. Focusing on 2024, Mr. Barlow presented the 2024 budget, which was just over $8.5 million, highlighting acquisitions and noting that a majority of opportunities for preservation may lie outside the Town core going forward. Mr. Barlow discussed the focus on trail maintenance (90% of trail crew efforts), highlighting the work done on existing trails and the construction of new ones, such as Ellie's Features and the Keystone Drill. He also mentioned the rerouting of Toad Alley and the installation of several new "All-Persons Trails". Mr. Barlow emphasized the importance of data collection and covered the launch of the website, which provides an interactive calendar, trail conditions, and a map for users. He mentioned the successful season of the Friends of Breckenridge Trails (FOBT) program and the potential for companies or organizations to participate in the recently reestablished "Adopt-A-Trail" program after a question from Ms. Zanca. Mr. Barlow also discussed the annual monitoring report for Cucumber Gulch, noting a decrease in beaver observations. He also mentioned the addition of the Bioacoustics monitoring system and the

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continuation of wildlife camera and trail counter detection. Land management practices were also discussed, including both forest health projects and river restoration efforts.

Ms. LaRochelle wondered about the use of the All-Persons Trail at Reiling Dredge and how we can measure the effectiveness of our All-Persons Trails, while simultaneously encouraging further outreach and messaging about these trails. Ms. Joyce suggested surveying participants after they used an All-Persons Trail to ensure these trails were meeting their intended purpose. Mr. Beckerman asked about the Toad Alley trail reroute project and encouraged staff to keep a close eye on both visitor use on the new section of trail and to monitor the revegetation area, while suggesting the Town maintain consideration of the option to further limit public access to this trail. Ms. LaRochelle had a question regarding the Special Use Authorization (SUA) for the Golden Horseshoe trail system and wanted to know what level of commitment the OST program had made to the system's maintenance. Mr. Overlock and Mr. Jordan Mead, Summit County Open Space Resource Specialist, explained the SUA with the Forest Service, which they signed around 5 years ago, and the need to fulfill this agreement by planning volunteer and crew time on Baker's Tank in 2025.

Camp Hale Continental Divide National Monument (CHCDNM) Planning – OST Master Plan Exercise (54:41)

Mr. Overlock provided background on the Camp Hale Continental Divide National Monument, the working group tasked with managing this project, and the current scope of work, including the Access Plan and Management Framework. Mr. Overlock then explained how this exercise might work using the Town's OST Master Plan as a filter to see if each of these trailheads "checks all the boxes." Ms. Zanca and Mr. Tennal provided some feedback on their experience trying to conduct this exercise on their own and explained that they had some difficulties. OST staff and BOSAC agreed to refine the process and ensure it encompasses everything they want to do, focusing on the framework for decision-making, the need to merge different buckets, and the idea of a grading mechanism or go/no-go criteria for future decisions. The team also discussed streamlining the master plan structure and possibly creating a flow chart for better organization and analysis.

The team began the exercise, focusing on the Quandary trailhead first. There was discussion regarding the necessity of increasing parking at the trailhead, considering the shuttle system's usage and potential impact on the shuttle's popularity. There was agreement that adding more parking could be counterproductive if it leads to more cars and fewer people using the shuttle, while also recognizing the potential for more revenue from parking to subsidize the shuttle supporting the two stated goals of making the shuttle free to use and wholly subsidized by parking revenue.

Shifting to the Blue Lakes trailhead, Mr. Mead answered questions concerning the cost implications of managing and improving properties jointly owned with Summit County. Mr. Barlow suggested that these costs could be phased into the 5-year open space budget when necessary, and costs would be shared with Summit County. Mr. Mead also mentioned the need to consider the implications of different factors for different types of projects, highlighting the importance of considering partnership opportunities and community

connections, as well as the need for a more detailed conversation between the Forest Service and Colorado Springs Utilities (CSU) regarding land use agreements on CSU properties.

Ms. LaRochelle was curious about some of the impacts regarding prospective new trail alignments suggested in the Access Plan. A number of committee members questioned the necessity and usage of such a trail, considering the terrain and the specific user groups visiting these areas. Both OST staff and BOSAC agreed that this trail might not be a priority and could potentially disrupt wildlife habitats. BOSAC unanimously decided to include the trail in the NEPA analysis for further public engagement and feedback but expressed concerns about the potential impacts to the neighborhood and wildlife.

The exercise then moved onto the McCullough Gulch trailhead. The idea of connecting the Quandary Peak trailhead to the Mccullough Gulch trail via the defunct Wheeler trail was discussed, with concerns raised about the potential for underutilization. The team agreed that providing more options for trail connections could be beneficial, but also acknowledged the need to monitor usage to ensure demand exists for these connecting trails prior to any construction. The discussion also touched on improving access to the proposed new McCullough Gulch trailhead parking lot during the shoulder season, potentially considering the need for a free reservation system during the off-season to manage demand and avoid illegal parking along McCullough Gulch Road.

Lastly, BOSAC discussed plans for improving the Spruce Creek trailhead area, including consolidating parking into one new location, implementing a reservation system, and potentially closing the current parking area. The primary aim at Spruce Creek is to reduce traffic and improve the overall experience while considering concerns from local residents. The plan includes building new parking spaces, adding a shuttle turnaround, restrooms, and signage. The group also considered the impact on differently-abled visitors and discussed enforcement strategies for parking regulations along the road.

Mr. Beckerman felt he was comfortable recommending the access plan to Council but stressed the importance of stakeholder engagement throughout the remainder of this process. Ms. Joyce agreed and wanted to make sure that the Town Council has a full picture of the discussion and BOSAC's sentiments through detailed minutes and correspondence. Ms. LaRochelle also agreed and echoed Ms. Joyce's statements to characterize the conversation, most notably an emphasis on the need for continued public outreach and concern regarding the proposed connection trails from the Blue Lakes and McCullough Gulch trailheads to the Quandary trailhead. Mr. Tennal and Ms. Zanca agreed to recommend the plan, both stating this was a solid starting point with lots of great partners and research.

VI) COUNCIL MATTERS RELATED TO OPEN SPACE TOPICS

Mr. Beckerman shared Tim Casey's request to plat his 3-acre property on Cucumber Creek, which would allow him to sell it for development. Currently, the land is leased to the Breckenridge Nordic Center for winter use as temporary open space. Casey's vesting on the property expires in January 2026. The Town decided to grant Casey a 5-year extension on his vesting, even though he'd only requested three years. This extension gives him more time to

develop the property and doesn't force immediate action. The Council acknowledged the value of the land as open space. In addition, the Council directed staff to explore the possibility of securing a first right of offer on the land, while recognizing that purchasing the land might be difficult to justify financially.

Mr. Barlow added that he was scheduled to present the State of the Open Space Report to Council during their February 25th work session, as well as to discuss renewing the residential lease on the Little Daisy Lode property, with a proposed 5-year extension.

VII) OTHER MATTERS RELATED TO OPEN SPACE TOPICS

Mr. Truckey thanked Ms. Puester for her service in her role as Assistant Director of Community Development and congratulated her on her promotion to Assistant Town Manager.

VIII) ADJOURNMENT

A motion to adjourn the BOSAC meeting was made by Mrs. LaRochelle, and Mrs. Zanca seconded it. The February 17th, 2025 regular meeting of BOSAC ended at 7:58 PM.

The next regular meeting of BOSAC is scheduled for March 17th, 2025.

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Nikki LaRochelle, Chair

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Memorandum	
To:	Breckenridge Open Space Advisory Commission
From:	Open Space & Trails Staff
Re:	March 17th, 2025 Meeting

Staff Summary

A map, with bookmarks for many of the locations referenced in this Staff Summary, can be found here. Trails highlighted in pink indicate winter grooming activity.

Field Report

Joel Dukes, Open Space & Trails Lead, is on family medical leave following the birth of his first child, James Paul Dukes, on March 3, 2025. The remaining three OST staff members are scrambling to fill the field operations workload void left in his absence.

While the majority of 2024 OST seasonal staff members are expected to return for the 2025 field season, based on confirmed openings, staff has posted employment opportunities for Trail Technician and Naturalist positions. Staff expect to complete the 2025 seasonal hiring process by April 2025 with an anticipated mid-May start date for seasonal employees.

Summit County Open Space Ambassador Program

Summit County Open Space (Summit County) has launched an Ambassador Program, with the intention of hiring two employees for the summer 2025 field season. The primary role of the ambassador position will be educating the public about how to recreate responsibly, in a manner that is conducive to sharing trails and open spaces with other users, and that protects our natural resources, including ecosystems, plants, and wildlife. They will also educate the public on the Summit County Open Space Rules and Regulations as needed when witnessing a violation but, per input from the Summit County Sheriff's Office, will not have an enforcement role. This is a field-based position that may also perform minor maintenance duties on open space or collect data on visitation and use of OST assets.

The role of the Town's OST Naturalist position is similar in its emphasis on public education regarding responsible recreation and natural resource protection. Summit County and staff recommend expanding the impact of these positions by allowing both County OST Ambassadors and Town OST Naturalists to perform these duties on open space properties jointly owned by the Town and Summit County. Please advise staff if commissioners have concerns with this approach.

Great Outdoors Colorado Community Impact Grant

Staff met with members of Great Outdoors Colorado (GOCO) to receive feedback for the denied grant application for the construction and installation of a new bridge on the Blue River Trail and improved bi-lingual and all-persons trail signage at in-town trailheads. GOCO shared that the combination of multiple projects within the single grant request felt "disjointed" and had concerns with the demonstration of need for the grant funding.

Looking ahead, GOCO suggested the Town apply for the GOCO Community Impact Grant to fund the production and installation of the forthcoming OST sign package. Following an opportunity to better understand production and installation costs through the planned signage pilot program on the Illinois Creek trail network in summer 2025, staff should be able to sufficiently forecast costs for system-wide

implementation, potentially applying for GOCO Community Impact grant funding in late 2025 or early 2026.

Additionally, GOCO endorsed the idea that the Town of Blue River, with expressed support from the Town and Summit County, apply to the Colorado Parks and Wildlife (CPW) Non-Motorized Trails grant in September 2024 for funding assistance for the proposed new bridge on the Blue River Trail.

Wellington Oro Water Treatment Plant

Colorado Department of Public Health and Environment (CDPHE) contracted Tetra Tech to conduct a "Limited Treatability Assessment for the French Gulch Site" to "help evaluate if a semi-passive or passive treatment alternative for cadmium and zinc could (1) be less expensive than operation of the current water treatment plant (WTP) and (2) reduce contaminant loading to French Gulch". This study was completed on February 11, 2025.

Although additional assessment could help address data gaps, the findings of this study suggest that the three passive treatment methods examined (lime basins, anaerobic wetlands, and aerobic ponds) would not be effective in accomplishing the stated goals of reducing contaminant loading into French Gulch and potentially eliminating the need for the WTP. Improved efficiency of the WTP, in conjunction with one or more of the examined passive treatment methods, as well as analysis of other potential passive and semi-passive treatment methods, comprise possible next steps.

McCain RFP

The Request for Proposals (RFP) for the McCain Open Space Design and Management Plan was issued on February 21, 2025 and will close on March 28, 2025. Jay Beckerman will be representing BOSAC on the selection committee and the Town plans to award a contract for this project by May 2, 2025.

Little Daisy Residential Lease

During their February 25, 2025 work session, Breckenridge Town Council (Council) discussed a renewal and extension of the residential lease at the Little Daisy Load property. Proposed lease revisions include extending the term to five years, allowing tenants to conduct certain improvements themselves, conditions for snow plowing, a prohibition of the use of the garage as living space, an annual 3% rent increase, and an option for tenants to terminate the lease with written notice.

Council expressed support for the proposed renewal and extension of the lease and is scheduled to formally approve by two ordinance readings, as stipulated by Breckenridge Town code, during their March 11, 2025 and March 25, 2025 meetings.

Jackpot and Evening Star Claims

During their February 25, 2025 meeting, The Summit County Board of County Commissioners (BOCC) formally agreed to contribute 40% ($70,071) of the purchase price of the Jackpot and Evening Star mining claims to the Town. The Town purchased these mining claims, located near French Pass and totaling 10.24 acres, for $175,178 on November 7, 2024.

Memorandum	
To:	Breckenridge Open Space Advisory Commission
From:	Open Space & Trails Staff
Re:	March 17, 2025 Meeting

Open Space & Trails (OST) Discussion

2024 Cucumber Gulch Preserve Wetland Monitoring Update

The attached 2024 Cucumber Gulch Preserve (CGP) Wetland Monitoring Update, prepared by Jessica Doran of EcoMetrics, provides the Town of Breckenridge with a review of the 2024 wetland monitoring program for the approximately 57 acres of wetlands within the CGP. This report tracks the ecological condition of the wetlands, focusing on wetland health, function, and biodiversity; building upon in-depth analyses of ecological and landscape-level factors. The Town utilizes this monitoring data and broader community values to continually adapt management strategies to meet changing ecological and societal conditions. This report supports OST's goal of maintaining the long-term health and resilience of the Cucumber Gulch Preserve's wetlands through data-driven adaptive management. Ms. Doran will be in attendance at the BOSAC meeting to provide further details and help answer any questions relating to CGP wetland monitoring and management.

1) **Does BOSAC have any questions or comments regarding the 2024 CGP Wetland Monitoring Update document?**
2) **Does BOSAC have any questions or comments on wetland monitoring efforts for staff or EcoMetrics?**
3) **Does BOSAC have any questions or comments relating to future management of the Cucumber Gulch Preserve?**

2024 Cucumber Gulch Preserve Wetland Monitoring Update

Submitted to the Town of Breckenridge, Open Space and Trails Department
By EcoMetrics Dec 31, 2024

Town of Breckenridge's Cucumber Gulch Preserve (CGP) has been adaptively managed since establishment in 1999 to preserve the natural biodiversity of the area. This report provides the Town with a review of the 2024 wetland monitoring program tracking ecological condition of the approx. 57 acres of wetlands in the Preserve. The Town uses monitoring data, considered alongside broader community values, to continually adapt management adjusting to meet the stated purpose of the preserve amidst changing ecological and societal conditions.

This update focuses on wetland health, function, and biodiversity building on in depth analysis of ecological and landscape level factors. Past annual reports (2011-2023) offer broader context and history explaining the value of wetlands, specific wetland characteristics, and the purpose of CGP wetland monitoring program.

Overall health of wetlands is informed using FACWet assessment methodology considering landscape condition, hydrological condition, and the abiotic and biotic components of the system.

Understanding system health is complex but critical to evaluating ecological function and biological integrity. Monitoring efforts are in place to track changes in indicators of function over time to identify trends and shifts in condition. A summary table on the following slide describes trends in wetland variables since 2011, observed ranges for monitoring parameters, and 2024 observations. Specifics for each variable and monitoring tasks are offered on following slides.

An adaptive approach is essential to meeting management goals in this dynamic environment. An ongoing picture of system health is important for the Town to respond to unforeseen and developing impacts resulting in increased ecological stress. This report summarizes management considerations and actions in 2024.

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2024 Monitoring Summary

	Monitoring effort	Trends	Observed ranges (2011-2023)		2024 summary
Overall Heath	FACWet evaluation: Holistic evaluation of wetland health	Existing conditions and trends in eight key variables show minimal variations over the last 10 years. Overall wetland health maintained or improved in recent years.	UCG: dynamic system, varying D to C+ MCG: dynamic system, varying B+ to C LCG: stable system , B rating Peak 7 SS CG: stable system , B+ rating		The overall health of UCG is threatened by the dominance of reed canary grass and lack of beavers. MCG health is steady. LCG hosts the only occupied beaver lodge where overall health is steady. Peak 7 slide slope health improved with rerouted trail infrastructure and restored wetland hydrology. Total human use in 2024 was not reported. 17 Species of animals were observed by wildlife cameras.
	Photopoint monitoring: Qualitative tracking of general conditions throughout CGP	Photopoint monitoring have been most helpful in tracking changes in pond levels, vegetation structure, and land use changes in surrounding area.	The extent and depth of ponds varies with beaver activity, but ponds can maintain in the absence of beaver. Invasive weeds continue to be a stressor in UCG.		Photo comparison in UCG shows decreasing Willow abundance and increasing Reed Canary Grass. Loss of willow species means less native plant cover and fewer resources for beaver. Vegetation in all areas except UCG appear steady. Pond extent is decreasing in UCG, MCG, and LCG with decrease in beaver activity.
Buffer/ Landscape	Habitat Connectivity and Buffer Capacity: Periodic evaluation of land use changes near CGP	Increasing area with altered land use due to expanding development footprint.	1999: 30% developed or deforested 2015: 56% developed or deforested 2019-2024: slight increase on SE boundary		Residential development continues in the Shock Hill neighborhood and near the Nordic Center. New impacts to the buffer area were not identified.
Hydrology	Water Source: Ground water monitoring within CGP and contributing watershed	The influence of past landscape level and internal level impacts continue to simplify the water sources of CGP.	Groundwater monitoring has not identified any new negative trends within or outside of CGP.		Groundwater monitoring on Peak 8 related to upslope development continued from 2003/4 to 2022, and the study is completed. Ground and surface water monitoring on Peak 7 is expected to continue but details are unclear.
	Water Distribution: Surface water monitoring of beaver ponds throughout the preserve	Surface water area varies with beaver activity. Ponds can persist in the absence of beavers but slowly decline over time.	UCG: 0.2-0.9 acres MCG: 0.2-1.1 acres LCG: 1.3 – 3 acres CGP Total: 2.5-4 acres		Overall, pond surface area has been approx. 4 ac over the last 4 years. This trend reflects consistent beaver activity throughout CGP and is a positive indicator of wetland health. In 2024, pond area decreased in all areas. UCG was 0.71 ac, MCG is 0.86 ac, and LCG was 1.76 ac. Overall, pond area decreased from 4 ac in 2023 to 3.3 ac in 2024. This is the lowest acreage since 2019.
	Water Distibution: Ground water monitoring in MCG	Ground water elevation increased modestly from 2020-2021. Beaver returned in 2022 causing further increases.	Wetland hydrology present in 2 of 7 well locations in 2019, 5 of 7 well locations in 2022, and 7 of 7 wells in 2023.		Pond area in MCG increased from 2020 to 2023 with beaver mimicry work followed by beaver reoccupation. In 2024, no beaver activity was observed in MCG, and pond area decreased suggesting ground water distribution also decreased.
Abiotic and Biotic Habitat	Geomorphology: Volume of sediment accumulation in UCG Spreader Pond	Input from the watershed varies annually. Inputs were highest from 2012-2017 and decreased from 2019 to 2023.	Approx 20 yd^3/year from 2012 to 2017, 10 yd^3 in 2019, 0 in 2020-2021, 9.6 yd^3 in 2022, and approx. 4 yd^3 in 2023 and 2024.		Dredging of the Spreader Pond was done in September 2024. Approximately 5.5 yd^3 of material was removed from the pond and transported out of CGP. Bathymetric survey after the clean out show a net fill of 4.3 yd^3 in 2024.
	Chemical environment: Water Quality monitoring	Data show no element routinely above established limits.	Plotted values for all elements are available for 2004 to 2020.		No water quality data was provided in 2022 -2024. Extensive algae presence in UCG observed in 2023 was not observed in 2024. The 2023 event may have been due transitory conditions. Ongoing monitoring will watch for changing conditions.
	Wildlife: Beaver activity between May and September	Beavers are successfully observed May through September, with evening surveys more active than morning surveys.	Most activity is observed in June and Sept with slightly less in July. The highest number of individuals/survey was 6 during August 2022 survey. The lowest is zero.		Beaver activity in 2024 was significantly lower than previous years. Normalized by effort per year from 2013-2024, the most observations were in 2022, and the lowest observations were in 2024. No beavers were observed May-August of 2024.
	Wildlife: Beaver lodge survey	Highest observed number in 1999 and since then leveled off with average of 2 lodges per year.	Since 2004, there have been 1 to 3 active lodges throughout CGP.		In October of 2024, one occupied beaver lodge with food cache was in Josies Pond of LCG. This lodge was last occupied in 2019, 4 years ago. This sequence follows the broader pattern of an average of 4.5 years between lodge occupancy.
	Wildlife: Boreal Toad monitoring	Periodic observation of individuals average about every other year. No evidence of breeding since 1997	Zero to 1 or 2 adult observations per summer.		No toads or breeding were observed during surveys in 2024. 2024 marks 25 seasons of surveys without sign of toad reproduction. This suggests it is unlikely toads are breeding in CGP, but individual toads may be present.

Overall Wetland Health

Monitoring	2024 Observations	Stewardship Considerations
FACWet evaluation: holistic evaluation of wetland health	General conditions to FACWet variables were observed during site visits for all monitoring activities. Reed canary grass (Phalaris arundinacea) continues to present the biggest threat to wetland health. Fen and slope wetlands in Peak 7SS area have improved water distribution due to removal of the trail through wetlands. Beaver occupation at the lowest level since 2017, and beaver activity at the lowest observed level since surveys started in 2013.	Action should be taken to stop the spread of reed canary grass (RCG) in UGC and upper MCG. This invasive species dominates the vegetation community, outcompeting native species. Ultimately this shift impacts overall health as native vegetation is decreased with cascading effects impacting hydrologic variables, as well as biotic and abiotic variables. Continued observation of beaver activity is recommended. Population variability is expected and may increase without intervention.

FACWet Evaluation –

UCG decreased in overall health due to increasing cover of non-native vegetation altering natural vegetation structure and complexity (V9). MCG overall health remain steady with water distribution (V5) maintaining despite the decrease in beaver activity in 2024. LCG overall health has been steady since 2011. The slope and width of LCG allow for wetland health to persist more steadily despite variations in beaver occupation and activity. The only occupied lodge in CGP in 2024 is in LCG, suggesting continued wetland health with the influx of beaver presence. Peak 7 SS overall health condition improved slightly with the removal of trail infrastructure that negatively impacted hydrology variables. Trail removal from wetlands dramatically improved the water distribution and outflow in approx. 1 acre of fen wetlands. Reestablishing natural flow patterns will support system health in all abiotic and biotic variables. This effort will have additional indirect positive effects on downslope habitats.

	FACWet Variables	Upper CG 2011	Upper CG 2024	Middle CG 2011	Middle CG 2024	Lower CG 2011	Lower CG 2024	Peak 7 SS CG 2011	Peak 7 SS CG 2024
Buffer/ Landscape	V1-2: Habitat Connectivity	C	C-	B	B+	B	B	C	C
Buffer/ Landscape	V3: Buffer Capacity	D	D-	B	B+	B	B-	B	B-
Hydrology	V4: Water Source	D	C	C+	B+	C+	B-	B+	B+
Hydrology	V5: Water Distribution	D-	C+	B-	B+	B-	B-	B+	B+
Hydrology	V6: Water Outflow	D-	B-	B+	B+	B+	B+	B+	B+
Abiotic and Biotic Habitat	V7: Geomorphology	D	B-	B+	B	B+	B+	B+	B+
Abiotic and Biotic Habitat	V8: Chemical Environment	D	B-	B+	B+	B+	B+	B	B+
Abiotic and Biotic Habitat	V9: Vegetation Structure and Complexity	C	C	B+	B+	B+	B+	B-	B
Wetland Health		D	C+	B	B+	B	B	B	B+

Hydrologic Health

Monitoring effort	2024 Update	Stewardship Considerations
Water Source: ground water monitoring within CGP and contributing watershed	Ground water levels and vegetation species along sample transects in UCG were monitored from 2003 to 2021 to track changes during and after construction on Peak 8. The 2021 final report by Peak Ecological Services, LLC stated "*there have been no significant changes in the plant composition and plant species diversity of Wetland B, and no trend towards upland species that can be attributed to the development of Peak 8*"	UCG will continually be influenced by past landscape level (pre-2003) and internal level impacts that simplify water sources. The mandatory hydrologic and biologic monitoring relating to Peak 8 development are concluded. As the study is over, consider removal of monitoring equipment that is no longer in use.
Water Distribution: surface water monitoring of beaver ponds throughout CGP	Surface water extent is measured using an orthomosaic created from recent aerial imagery. UAV imagery was captured on Oct 10th, 2024, and pond area is quantified using this imagery. In Fall of 2024, total CGP pond area is 3.34 ac, UCG is 0.71 ac, MCG is 0.86 ac, LCG is 1.76 ac.	All values are within or at the high end of observed ranges for CGP total and each sub area. No management action is recommended beyond continuing to support beaver presence in CGP.

Water source –

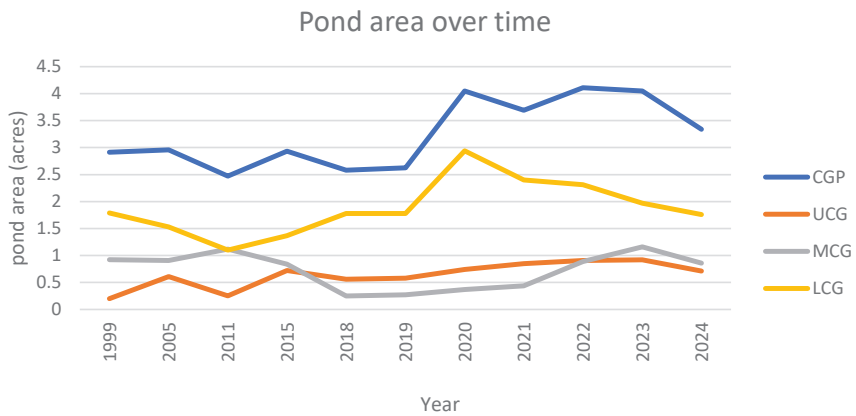
During the observation period, our evaluation of available data did not suggest any significant changes. Ground water data was last provided in 2022 by Ganser Lujan & Sobol.

Water distribution in MCG –

Direct measurements of ground water distribution in MCG ended in 2022. Surface water area and ground water levels both increased with mimicry efforts and beaver activity from 2019-2023. In 2024, beaver activity decreased as did pond surface area. It is reasonable to assume ground water levels decreased accordingly in 2024.

Water distribution –

Beaver populations vary spatially and temporally in CGP, and so does the influence beavers have on water distribution. The combined pond area for Upper, Middle, and Lower CCP has fluctuated between a low of 2.5 ac in 2011 to over 4.0 ac in 2022. In 2024, the total pond area was 3.34 ac indicating a slight decrease from the high end of the range that persisted for the past 4 years. MCG pond area decreased by 0.3 ac from 2023 to 2024. This area had the most dramatic decrease and is directly related to the recent change in beaver occupation. Ponds in the area decreased in extent but all ponds persist. UCG pond area decreased by 0.21 acres with some ponds shrinking and 3 ponds completely dried out. LCG also decreased by 0.21 acres but due to the larger overall size of the area this represents a smaller percentage of change.
Water distribution is a key factor in the extent of wetland area as the presence of wetland hydrology is directly connected this variable. Current conditions show decreasing distribution, but not to levels that warrant intervention.



↑ **The table above compares pond area in CGP, UCG, MCG, and LCG over time. These data show the relatively stable pond area of MCG and LCG compared with the highly variable values in UCG. It also highlights the elevated levels observed in recent years and gives perspective to the decrease in 2024. While decreasing area reflects decrease beaver influence, the fluctuation is within recently observed ranges and does not indicate changes to long term, overall health.**

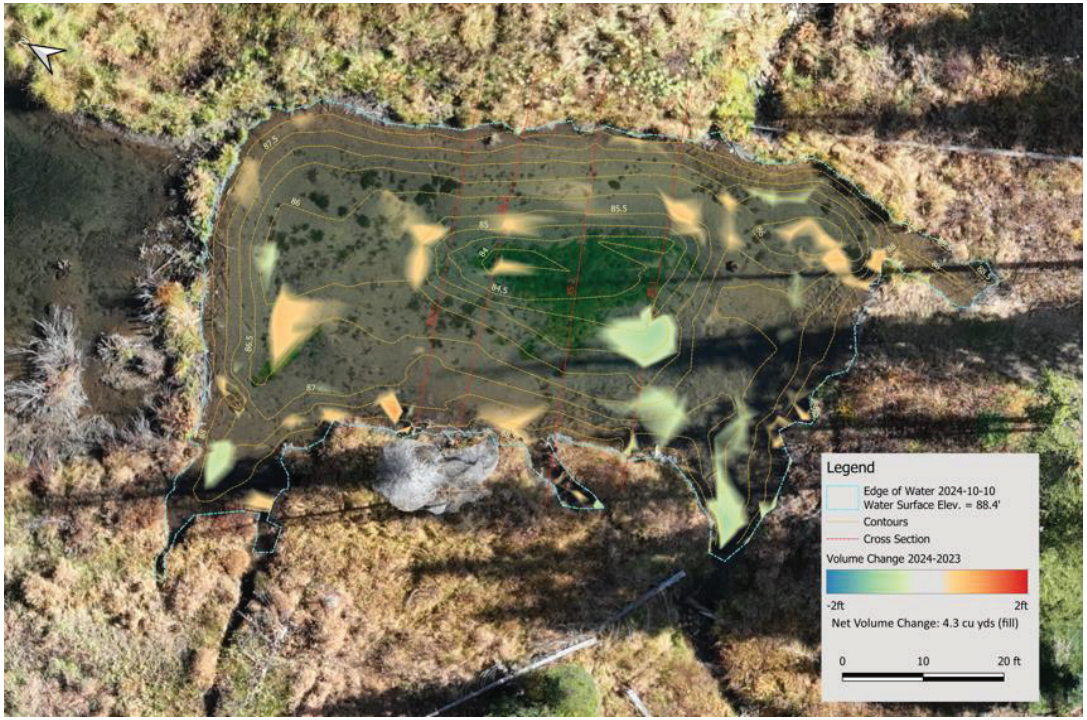
↑ **This lodge in MCG was occupied in 2023 and abandoned in 2024. Without upkeep from beavers, flows simplify, pond area decreased indicating decreased ground water levels.**

Abiotic and Biotic Habitat Health

Monitoring effort	2024 Update	Stewardship Considerations
Geomorphology: Volume of sediment accumulation in UCG Spreader Pond	On October 5th, EcoMetrics staff surveyed the bed surface and extent of water surface in the Spreader Pond and inlet channels. These data were used to create a bathymetric map of the ground level and calculate the volume of material accumulated (fill) or evacuated (cut) from the pond and channels. In 2024, we estimate net fill = 4.3 yd^3.	The cumulative input from 2022 (9.6 yd^3) and 2023 (4.1yd^3) warranted the recommendation of sediment clean out in 2024. Dredging operations in September 2024 removed approx. 5-6 yd^3 of material. No further action is needed at this time.
Chemical environment: Water Quality monitoring	Water quality data from 2011-2020 does not show consistent exceedance of any elements at sample locations on Peak 8 and 7 base areas and in the Preserve. 2023 field observations in UCG show an increase in algal presence in Spreader Pond in October. This was not observed in 2024.	The status of water quality monitoring in CGP and upstream sample sites is unknown. Clarification of water quality monitoring is recommended. No action is recommended regarding observed algae in 2023 as it did not reoccur.

Geomorphology – Allochthonous sediment input

An ongoing stressor to wetland health is the input of sediment from the contributing watershed. The degree of this impact is monitored by quantifying sediment as it accumulates in UCG. This map of the Spreader Pond shows the survey area used to calculate changes in bed surface from year to year. The color scale indicates elevation change with warm colors indicating increases in volume (fill) and cool colors indicating decreases in volume (cut). In 2024, the pond was dredged to remove sediment and this survey was conducted post dredging efforts. As expected, the map shows most of the cut to be near where the excavator removed material. Despite the dredging, there was a net fill of 4.3 yd^3 of fill measured from 2023 to 2024. This measurement is complicated by the removal of approx 5.5 yd^3 and the redistribution of bed material during this process.



Chemical environment – Water quality monitoring

Tetra Tech conducted monitoring through 2020. The status of this monitoring is unknown as data has not been reported since 2020.

During the Fall lodge survey in October 2023, algae was observed covering the entire bed of the Spreader Pond in UCG. Algal blooms suggest eutrophic conditions (low oxygen/high nutrient). Eutrophication is commonly due to nutrient enrichment that can arise from both point and non-point sources. In 2024, the extent of algal cover in the Spreader Pond was minimal suggesting no ongoing water quality issue.

← Annual orthomosaic images allow comparison of algal presence to track changes over time. The dark green color in the center of the Spreader Pond is the extent of algal cover in 2024, which is greatly reduced from 2023.

Abiotic and Biotic Habitat Health

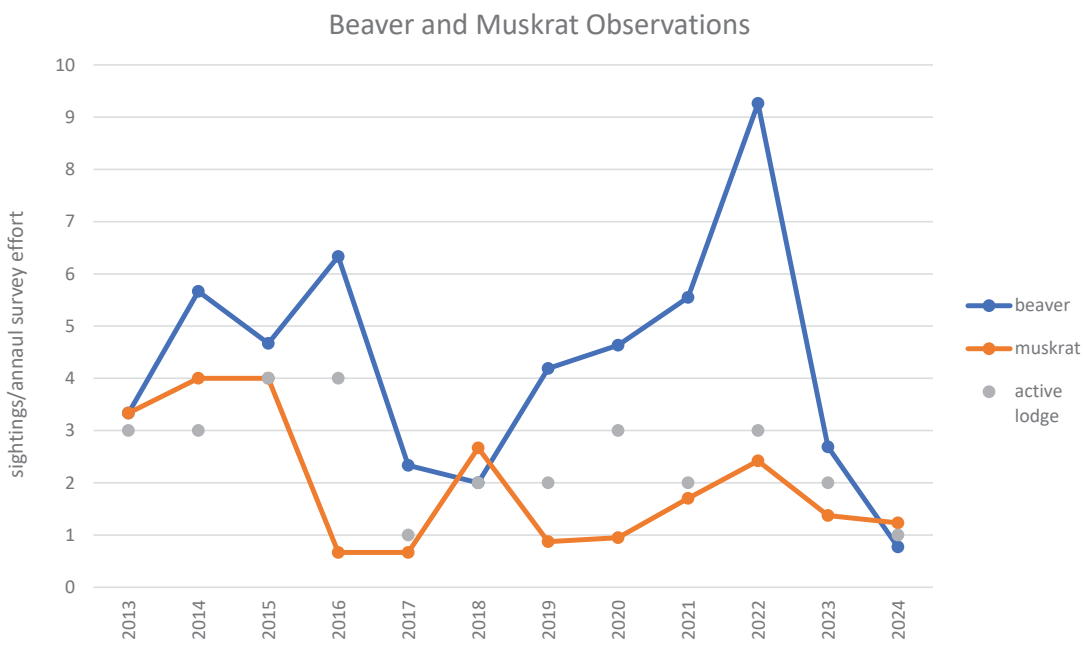
Monitoring effort	2024 Update	Stewardship Considerations
Wildlife: Beaver and muskrat activity between May and September	Beavers were observed with less frequency in 2024. No beavers were observed in May, June, or August. 5 beaver observations were made in Sept/Oct. Muskrats were observed during every month of observations throughout the summer with slightly lower frequency than the previous 3 summers.	Beaver and muskrat observations were low in 2024, but no action is recommended beyond continued observation with focus on spring and fall surveys informing activity patterns and location.

Wildlife – *North American beaver* (Castor canadensis) and *Muskrat* (Ondatra zibethicus) activity survey

Beaver and muskrat activity surveys were done biweekly from late May to early October, except during July. These surveys help establish areas of beaver activity and provide a minimum number of individuals. Early spring surveys inform winter survival and late fall surveys indicate where colonies intend to spend the winter.

In 2024, the lowest number of beaver observations were recorded since surveys began in 2013. This was a continuation of low observations in 2023 that were attributed to difficulty in observing beavers in their areas of activity. *Detectability* refers to the ease of observing a species during a survey given that it is present in the survey area. In 2023, detectability was low but other evidence like willow chews, slides, dam building, and occupied lodges suggested beavers were present in the study area. In 2024, observations of beavers were low and there was little other evidence of presence. This suggests that observations were not low due to detectability, but actually reflect a low number of beavers occupying the study area. The singular occupied lodge identified during the lodge survey is further evidence of low numbers of beavers in CGP in 2024.

All beaver observations in 2024 occurred in September and October in LCG. The lack of observations in the Spring suggest the possibility of winter mortality or relocation before surveys began in May. Since beavers are difficult to identify individually, it is impossible to know if the beavers observed in the Fall relocated from other areas within CGP or from outside the Preserve. In either case, these data highlight the variability and vulnerability of small populations and the importance of habitat connectivity to allow for movement of species between habitats.



↑ The table above shows beaver and muskrat sightings over the last 11 years normalized by survey effort. Additionally, the number of active lodges from the Fall lodge survey is included to compare summer activity with overwintering beaver colonies. There appears to be little correlation between beaver sightings and the number of occupied lodges. This suggest activity patterns of beavers is not directly indicative of number of lodges. Summer activity and overwinter activity vary greatly. Muskrat activity appears to vary independently from beaver activity.

Abiotic and Biotic Habitat Health continued

Monitoring effort	2024 Update	Stewardship Considerations
Wildlife: Beaver lodge survey	The lodge survey was done October 19th by EcoMetrics and Town staff. A total of 1 inhabited lodge with a food cache was found in Josie's Pond in Lower CGP. With an estimate of 4-8 individuals per lodge, the beaver population estimate is 4-8 beavers (realistically, 2-4 due to the low observations during summer surveys, and no kit sightings).	The observed range of active beaver lodges over the last 10 years is 1-3 lodges throughout CGP. 2024 count is down from 3 lodges in 2022. Since the 2024 lodge count is within the observed range, no action beyond continued monitoring is recommended. It is noteworthy that this population is small and vulnerable to disturbance events.
Wildlife: Boreal Toad monitoring	Boreal toad surveys were conducted in May, June, and July in 2024. Surveys were done by staff from Town of Breckenridge Open Space and EcoMetrics. No adult toads or evidence of reproduction were found.	Considering the long period (24 years) since evidence of toad reproduction was observed, and the lack of neighboring known toad population, it is unlikely that the CGP toad population is viable. Consider altering the survey schedule to reduce effort reflecting the unlikelihood of toads in the Preserve.

Wildlife – *North American beaver* (Castor canadensis) Lodge Survey

Active lodges are identified by fresh mudding on the lodge and adjacent dams, and by the presence of a food cache in fall and winter. Each active lodge is the winter residence of a beaver family (or colony). Lodges are associated with deep ponds where there is sufficient depth to maintain portions of open water providing an exit to the lodge.

←
Josie's lodge in LCG has not been inhabited since 2019. The last period of occupation lasted four years and was followed by four years of absence. Since returning to this area in 2024, beavers have built up the outlet to the dam increasing the water level. Signs of occasional activity were observed over the summer, but it was uncertain if beavers were living in the lodge until October.

In the fall, beavers built the cache (visible in the center of the pond) and added fresh mud and sticks to the lodge (center left of photo). A wildlife camera is in place and may offer information on how many beaver occupy the lodge. There have been no camera captures, yet.

Wildlife – *Boreal toad* (Anaxyrus boreas) Presence/absence survey

The last evidence of toad reproduction was in 1999, and the last evidence of individual toad presence was in 2019. Given these data, it is unlikely there is currently a reproducing population of toads. While individual toads may remain, without successful reproduction the Boreal toad population in CGP is unlikely to persist.

Following the CPW's updated Boreal Toad management plan, the expert consensus is that *after 10 consecutive years without activity, a site can be deprioritized after which it only needs to be surveyed once every five years to establish presence/absence (based upon the time it takes for a cohort to reach adulthood).* This guidance was offed by Scott Schneider Colorado Parks and Wildlife Biologist and echoed by Brad Lambert with Colorado Natural Heritage Program. The status of toad presence at a site can change over time, and both experts suggested deprioritizing the site, but continuing some level of surveys to capture any changing conditions. Lambert shared his experience with a site in Chaffee County that saw a resurgence of a breeding population after 13 years of no observed activity.

The Boreal toad population in CGP is currently low to non-existent, but this condition may change in time. There are many factors that influence the presence/absence of boreal toads at any given site. Since these factors change over time, we believe there is value in continuing with a modified schedule of boreal toad monitoring in the Preserve.

2024 adaptive management

Plan

Develop a Conservation Plan to support implementation of the Open Space Master Plan. We recommend rearticulating the purpose of CGP as organized goals, objectives, and strategies reflecting the Town ordinance that founded the Preserve, scientific documents, and research and monitoring data collected over the last 20+ years. This plan will provide transparent management of CGP.

Review and revise management objectives. A primary purpose of CGP is to protect natural biodiversity. Habitat fragmentation and increasing human disturbance from recreational traffic was recognized as a stressor of increasing importance in 2020.

Adjust and Do

Reenergize reed canary grass control measures. We recommend revising methods to minimize disturbance and expansion of reed canary grass that continues to thrive in areas of CGP. Consider the possibility of herbicide application to control spread.

Modify Boreal Toad surveys. Considering the absence of observed breeding activity, adjust survey schedule to 2 surveys/year. One in early spring and one in August.

Continue ongoing stewardship. We recommend continuing with stewardship efforts such as the seasonal closures and naturalist program to protect wildlife and engage the community.

Evaluate

Monitor recovery of old Toad Alley Trail. Observe revegetation on the trail footprint and signs of patterns of flow in reconnected wetlands.

Continue monitoring programs that track wildlife and people. We recommend continuing monitoring programs that track beaver, wildlife, avian species, boreal toads, and human use and identifying repeatable metrics to report changes in human use and wildlife communities.

Continue monitoring sediment accumulation. We recommend continued monitoring of incoming sediment to capture annual net accumulation volume.

Ecological stressors are not static over time and since identification in the initial 2011 assessment, the severity and extent of agents acting on the system have shifted. These changes are incorporated in the FACWet evaluation and summarized below with arrows indicating increasing, steady, decreasing.

Exterior wetland stressors

- Commercial and residential development ↗
- Artificial drainage and ditches (Ski Area, Base Areas, roads) →
- Sedimentation from the contributing watershed ↘
- Inconsistent and isolated beaver populations →
- Forest clearing and devegetation in the watershed →
- Augmented snowpack (snowmaking, compaction) →

Interior wetland stressors

- Artificial drainage and ditches (history of mining activity) →
- Sedimentation from the contributing watershed ↘
- Inconsistent and isolated beaver populations →
- Channel incision ↘
- Weeds ↗
- Recreational activities ↗

Exterior stressors are steady, except the increase in development and decrease in sediment from the watershed. The pattern of decreasing incoming sediment is positive but the altered land use of the watershed still delivers turbid waters to the Preserve. When beaver ponds spread and slow water, turbid waters settle in UCG and purified waters flow down valley. This image is one example of turbid waters delivered to CGP in May of 2024. ↓

Interior stressors that are steady reflect historic impacts and landscape position. Recreational activities and weeds are increasing in severity. Reed Canary Grass (pictured below) is the primary threat to wetland health. In UCG, this species is outcompeting native species creating a monoculture. The reduction in willow species negatively impacts beaver populations decreasing habitat suitability. ↓

2024 adaptive management actions

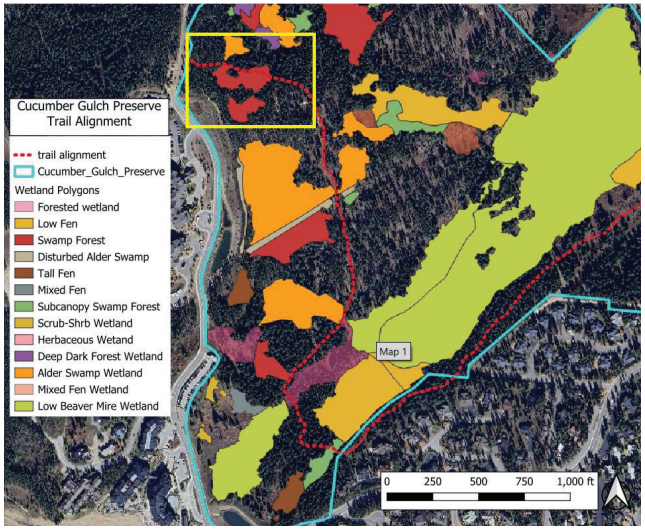
Spreader Pond Clean Out

Sediment from the watershed (ski area) comes into the Preserve through the Boreas Creek culvert and accumulates in the string of beaver ponds in Upper Cucumber Gulch. Overtime, the accumulating sediment fills the ponds, making them uninhabitable by beavers, and eventually leading to incision, as occurred in 2009-2011. The ponds were restored in 2012, and we have been monitoring sediment accumulation in the spreader pond since 2013. Based on annual bathymetric and topographic surveys, we estimate an average of about 20 cy^3 of deposition per year from 2013-2017, 7 cy^3 of material per year from 2017 to 2019, and 0-4 cy^3 per year from 2020-2024. These accumulations have warranted four dredge events to remove about 33 cy^3 from the delta area at the inlet. The rate of accumulation has decreased since monitoring started in 2013.

Year	Volume (cy^3)
2015	7
2017	10
2019	10
2024	6

This is a positive trend requiring less frequent dredging efforts. Dredging (pictured below in 2024) helps maintain volume in the pond which is necessary for beavers and creates space for incoming sediment to settle in the desired location where it can be removed with large equipment and transported out of the Preserve. While this approach is effective in the short term, it is not a long-term solution and will require ongoing management and cooperation between the Town and ski area.

Trail Realignment



In coordination with Timberline Trail Craft, The Town decommissioned 900 ft of trail at the upper end of Toad Alley that impacted fen wetlands (area in yellow rectangle). The non-native trail material was removed, and native elevations were reestablished to allow natural water patterns throughout the fen wetlands (red/orange polygons within yellow rectangle). This work will have direct positive impacts on approximately one acre of swamp and alder fen habitats and allow for all wetlands down valley to benefit indirectly over time.

→

In several locations, the original Toad Alley trail was built up with imported materials to cross wetland areas. This view shows one of these sections after material was removed and the recovered ground was scarified and clump planted with local sod and plants. Since native plants are still present in the area and in the wetland seedbank, we expect revegetation to be quick.

Summit County Safe Passages – East Vail Wildlife Crossings

Summit County Safe Passages (SCSP) is a collaborative team of stakeholders—including local, state, and federal agencies, land managers, county and town planners, ski areas, recreation groups, conservation organizations, and invested community member working toward a common vision: balancing wildlife needs with an increasing human presence in Summit County. To support these efforts, and specifically to complete the design phase of the East Vail Pass Wildlife Crossing project, SCSP requests $148,000 from the Town of Breckenridge's Open Space program. Breckenridge's contribution would establish the Town as a regional leader in wildlife conservation and encourage other I-70 corridor municipalities to provide similar support. Eagle and Summit Counties have each contributed $250,000 toward the design phase, signaling a strong regional push to advance this project. SCSP will actively pursue continued fundraising from neighboring municipalities, including the Towns of Vail, Frisco, and Silverthorne, to build broader community support for this wildlife crossing project. The Colorado Department of Transportation (CDOT) has designated this wildlife crossing a statewide priority, placing it within the 4-Year Statewide Transportation Improvement Plan (STIP) and is actively moving forward with design and environmental reviews, supported by new funding that builds upon the 2020 feasibility study.

The proposed East Vail Pass Wildlife Crossings are located within vital habitat for diverse wildlife including Canada lynx and 10 other carnivore species identified by the Denver Zoo. Located just west of Copper Mountain Resort along Interstate-70, the East Vail Pass Wildlife Crossing project is the focus of a collaborative effort to enhance connectivity with new crossing structures, potentially including Colorado's first I-70 wildlife overpass. SCSP has also identified future wildlife connectivity needs, including critical linkages in and around the Town of Breckenridge, such as across State Highway 9 between Breckenridge and Blue River and at Fourmile Creek. These connections, crucial for moose and other species like mule deer, elk, and Canada lynx, face mounting threats from increased residential development and traffic volumes. Representatives of SCSP will be in attendance at the BOSAC meeting to provide further details about the proposed wildlife crossings and funding request.

1) **Does BOSAC have any questions regarding the overall mission of SCSP and/or the specific East Vail Pass Wildlife Crossing project?**
2) **Does BOSAC have any questions regarding past, current, and future SCSP fundraising?**
3) **Does BOSAC recommend Council consider a contribution of Open Space funds toward the design phase of SCSP's East Vail Pass Wildlife Crossing Project? If so, for how much and with what conditions, if any?**

Colorado Wildlife & Transportation Alliance

I-70 EAST VAIL PASS

Wildlife Crossings Project

Credit: Summit County Safe Passages

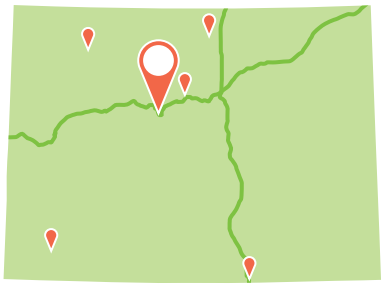
DESCRIPTION

The I-70 East Vail Pass Wildlife Crossings project represents an opportunity to restore connectivity for wildlife and reduce wildlife-vehicle collisions on one of the nation's most important transportation corridors. Averaging 22,000 vehicles per day, the stretch of Interstate 70 between Vail and Copper Mountain bisects 12 miles of National Forest lands, yet East Vail Pass remains an important landscape for many wildlife despite this highway barrier—including the federally threatened Canada lynx, Rocky Mountain elk, mule deer, moose, bighorn sheep, black bear, mountain lion, and bobcat.

This was designated as one of six priority projects of the Colorado Wildlife & Transportation Alliance (CWTA) in 2025 (see map for all locations) because of its alignment with local, state, and regional plans; its impact on improving safety in critical corridors for motorists and wildlife; and the opportunity to showcase Colorado as a national leader and garnering support for future collaborative wildlife crossing projects. The Colorado Department of Transportation (CDOT) has identified this project as a statewide priority and has thus included it in its 4-year Statewide Transportation Improvement Plan (STIP).

Mitigation investments on East Vail Pass leverage the existing infrastructure for a cost-effective solution to wildlife-vehicle conflict with far-reaching human and ecological benefits. Three new wildlife crossing structures on the westbound lanes of I-70 and continuous wildlife fencing will complement five existing bridges under eastbound lanes, creating a comprehensive mitigation system.

LOCATION



Interstate 70 Mileposts 190-194
Summit County, CO

STATUS

EXPECTED 2026

CONCEPT > **30% DESIGN** > **60% DESIGN** > **90% DESIGN** > **CONSTRUCTION**

Building on the 2020 engineering feasibility study, new outside funding has been secured for CDOT and its consultant team to continue advancing the project designs and environmental review processes.

Colorado Wildlife & Transportation Alliance

Credit: Jill/USFS

BENEFITS

*Protecting one of the few known breeding grounds in Colorado of a federally listed threatened species, the **Canada Lynx**.*

*Restoring access to **valuable habitats** for elk and other wildlife.*

*Avoiding collisions with wildlife for the **thousands of motorists** that drive this stretch of I-70 each day.*

*Preserving long-term ecological connectivity in the **heart of Colorado's Rocky Mountains.***

***Restoring connectivity** through over 12 miles of National Forest lands bisected by I-70 by amplifying benefits of wildlife mitigation on the west side of Vail Pass.*

COMPONENTS

Three new structures—**two underpasses** and **one overpass**—are recommended for the westbound lanes of I-70 at East Vail Pass. These new wildlife crossings would combine with existing bridges under *eastbound* lanes and with CDOT's forthcoming crossings on the west side of Vail Pass in Eagle County to produce a resilient and connected landscape across the entirety of Vail Pass and establish the first wildlife overpass along I-70.

PROJECT SUPPORT

Partners of this project include state and federal agencies, municipalities, land managers, ski areas, recreation groups, conservation organizations, and local community members.

Contact: Summit County Safe Passages
scsafepassages@gmail.com
(970) 281-5843

I-70 East Vail Pass Wildlife Crossings

Project Update

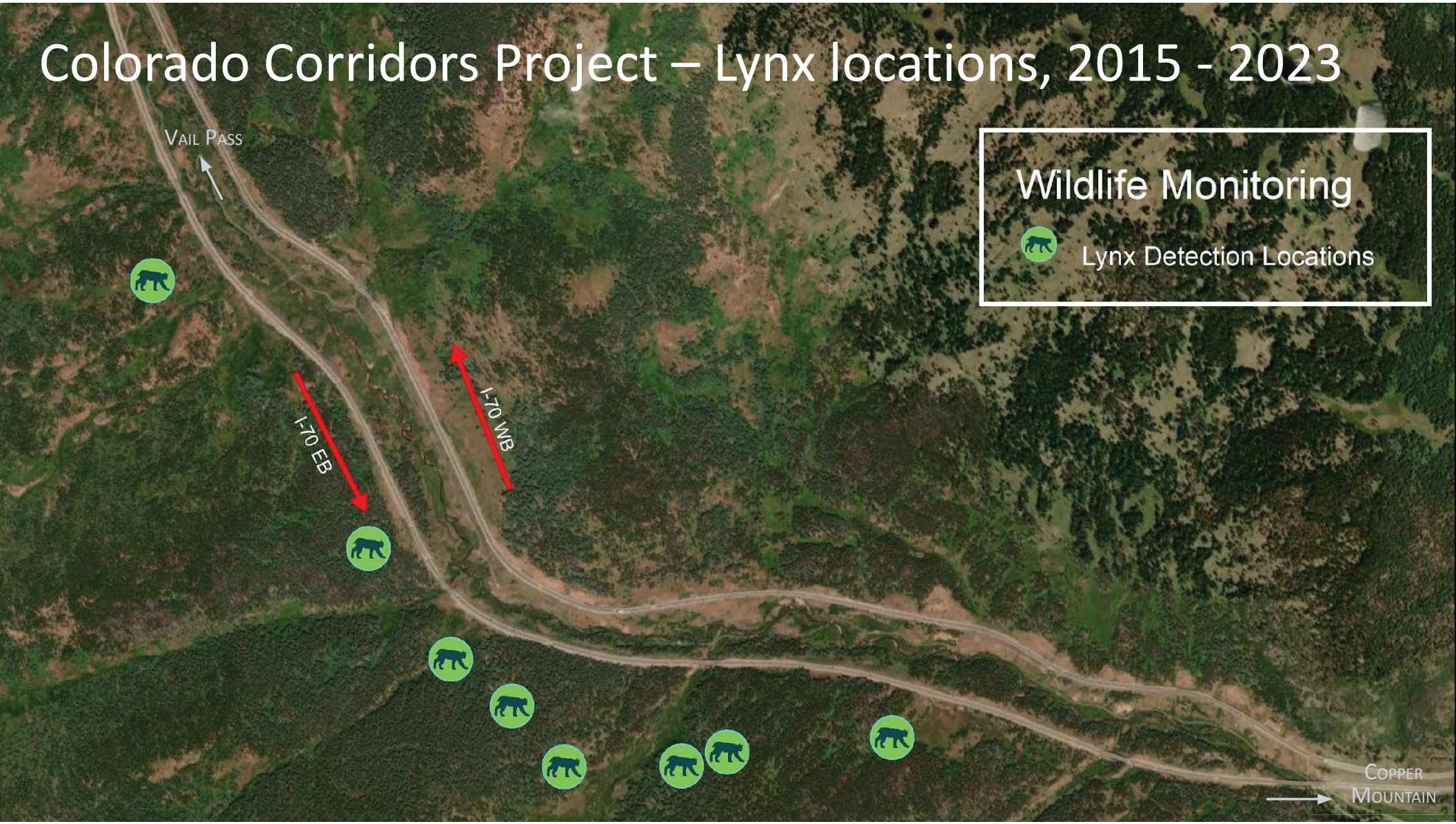
Breckenridge Open Space Advisory Commission :: March 17, 2025

Despite high traffic volumes, wildlife-vehicle collisions are the *3rd leading cause of crashes* reported to law enforcement on East Vail Pass (CDOT, 2013-2022)

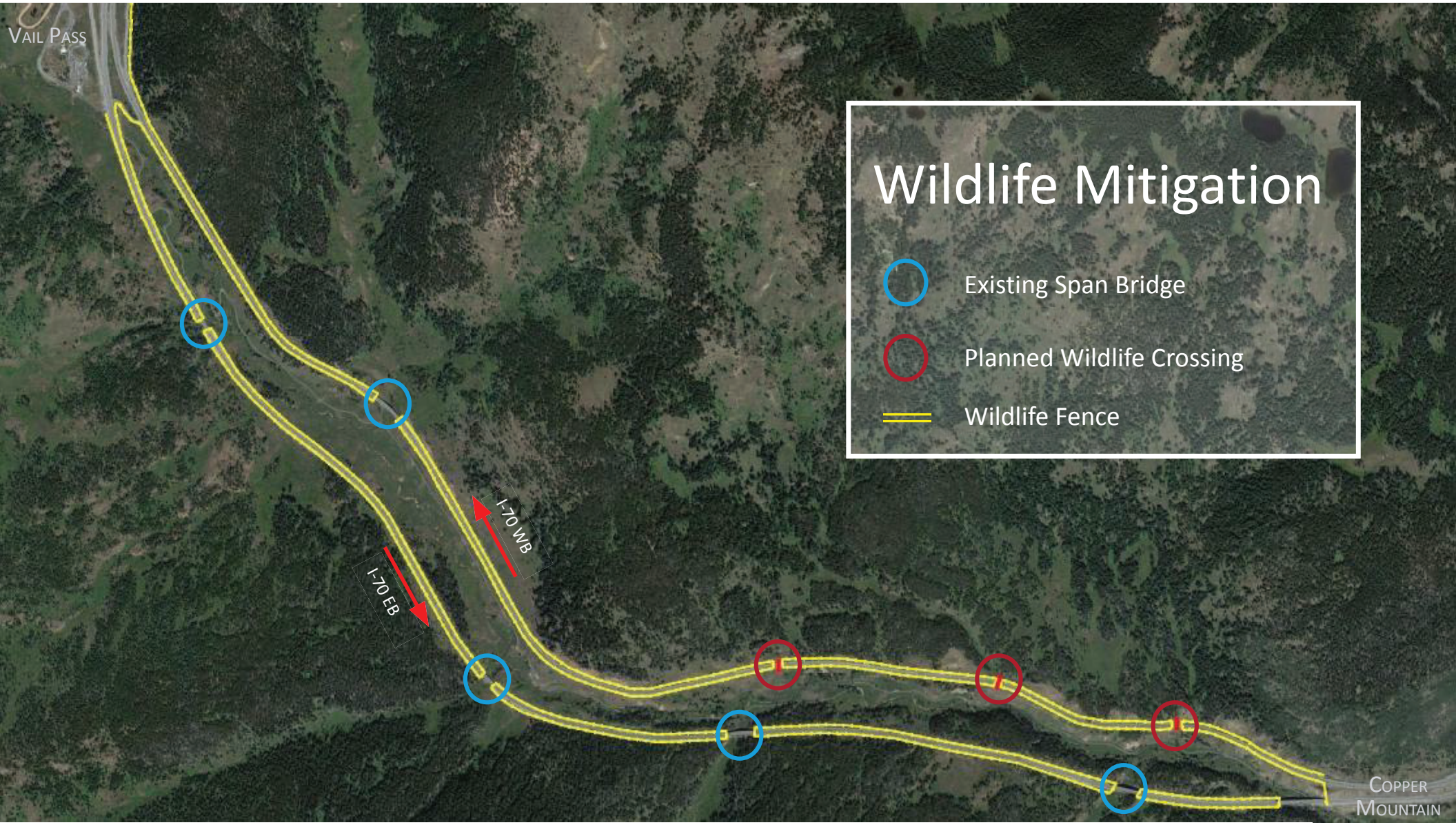
The economic cost of these collisions is $696,360 every year

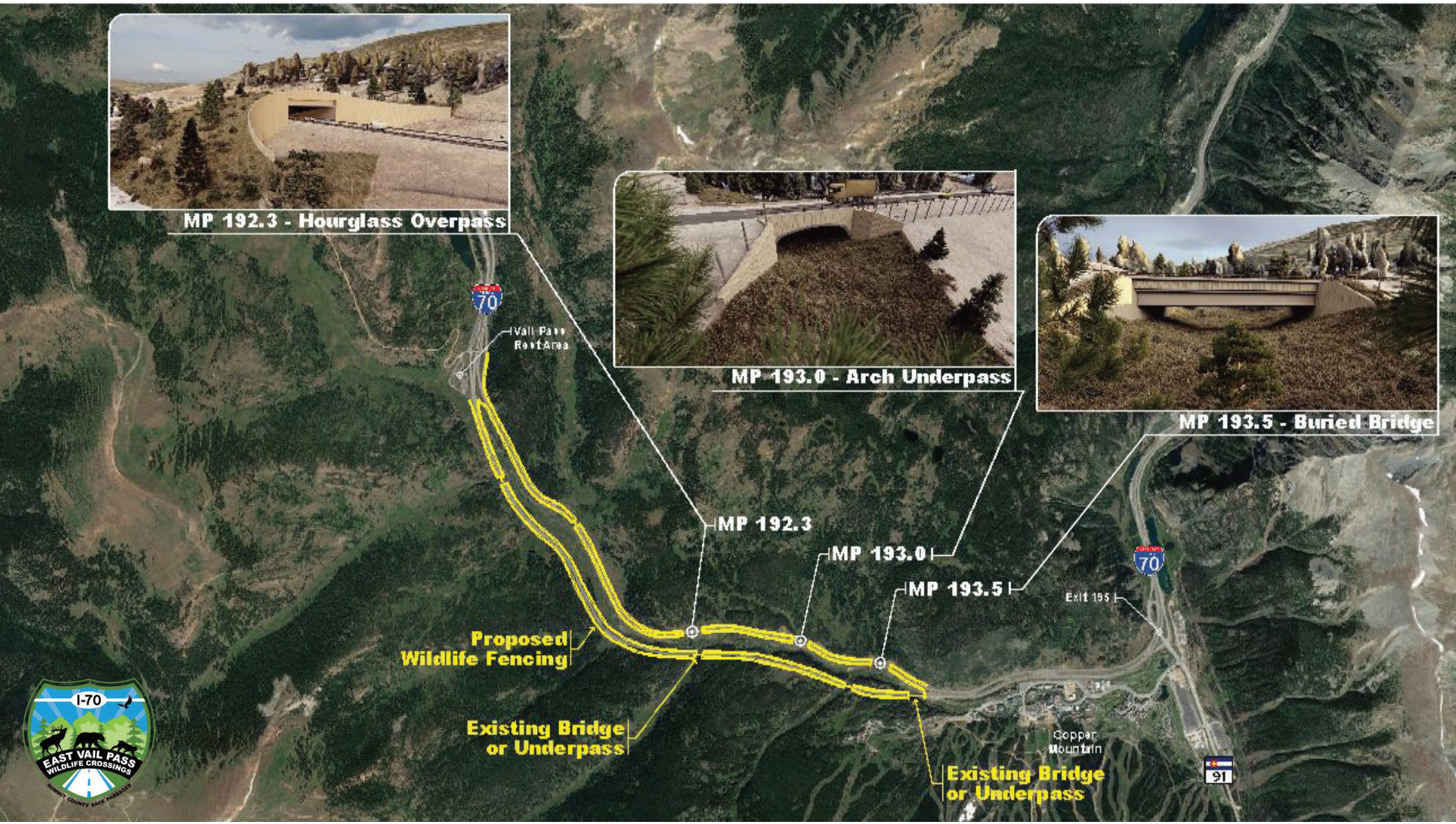
Every hour that the I-70 Mountain Corridor is closed the state's economy takes an almost $2 million hit – Shoshana Lew, CDOT Executive Director

Colorado Corridors Project – Lynx locations, 2015 - 2023



Vail Pass
Wildlife Mitigation
Existing Span Bridge
I-70 WB
I-70 EB
Copper Mountain


Vail Pass
Wildlife Mitigation
Existing Span Bridge
Planned Wildlife Crossing
Wildlife Fence
I-70 WB
I-70 EB
Copper Mountain


MP 192.3 - Hourglass Overpass
MP 193.0 - Arch Underpass
MP 193.5 - Buried Bridge
70
Vail Pass
Rest Area
MP 192.3
MP 193.0
MP 193.5
Exit 195
Proposed
Wildlife Fencing
Existing Bridge
or Underpass
Copper
Mountain
Existing Bridge
or Underpass
91
I-70
EAST VAIL PASS
WILDLIFE CROSSINGS
SUMMIT COUNTY SAFE PASSAGES

I-70 East Vail Pass Wildlife Crossings Project is a *top priority* for Colorado

- CDOT
- Governor’s office
- Colorado Wildlife and Transportation Alliance

$205,000 ✓

Engineering Feasibility Study

2021

2025

CDOT Engineering Design

- 30% design
- 60% design

$1,815,000 ✓

$698,000

Raised: $250K
Need: $448K

CDOT Final Design 'shovel ready'

2026

?

Construction

Private & Local Match: $6.4M

Leveraged Funds: $25.4M

NGO Grants

Monitoring

.....

Funds Raised to Date

Phase	Source	Amount
Feasibility Study	Vail Resorts	$145,000
	Arapaho Basin	$50,000
	Center for Large Landscape Conservation	$10,000
Project Scoping & Design	Summit County	$250,000
	Colorado Safe Passages Fund (SB-151)	$750,000
	National Fish & Wildlife Foundation	$450,000
	SB-151 matching funds	$275,000
	USDA Forest Service	$10,000
	Private Donations	$82,000
	Eagle County	$250,000
	TOTAL RAISED	**$2,272,000**

TOTAL DESIGN: $2.7M

TOTAL RAISED: $2.27M

REMAINING DESIGN: $448,000

Funding Roadmap

Phase	Funding Need	Source	Amount
Final Design	**$448,000**	Town of Breckenridge	$148,000
		Catalyze other Towns: Vail, Frisco, Silverthorne, Eagle	$300,000

Funding Roadmap

Phase	Funding Need	Source	Amount
Final Design	**$448,000**	Town of Breckenridge	$148,000
		Catalyze other Towns: Vail, Frisco, Silverthorne, Eagle	$300,000
Construction	**$32,000,000**	Congressional Discretionary Spending Grant	$1,500,000
		Rocky Mountain Elk Foundation	$500,000
		Major Donor Campaign • Individual and Corporate Donations	≥ $4,400,000
		FHWA Grants • FLAP, NSFLTP, FLPP, FLTP	Up to $25,600,000
	Total Remaining Funds Needed		**$32,448,000**

CDOT Engineering Design Accomplishments

30% Design → **60% Design** → **Final Design**

- ✔ Project scoping
- ✔ NEPA inventories & field surveys:
  - ✔ Environmental, historic, aesthetic
- ✔ Geotechnical borings & report
- ✔ Preliminary structure verification
- ✔ Stakeholder engagement
  - ✔ Context Sensitive Solutions process
- ✔ Project Purpose and Need
- ✔ Visual impacts investigation

CDOT Engineering Design Accomplishments

30% Design → **60% Design** → **Final Design**

- ✔ Project scoping
- ✔ NEPA inventories & field surveys:
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- ✔ Geotechnical borings & report
- ✔ Preliminary structure verification
- ✔ Stakeholder engagement
  - ✔ Context Sensitive Solutions process
- ✔ Project Purpose and Need
- ✔ Visual impacts investigation

- ✔ NEPA clearances
  - ✔ Documented Categorical Exclusion or Environmental Assessment
  - ✔ Historic effect determination
- ✔ Structure selection report
- ✔ Preliminary designs & review
- ✔ Stakeholder input

CDOT Engineering Design Accomplishments

30% Design

- ✔ Project scoping
- ✔ NEPA inventories & field surveys:
  - ✔ Environmental, historic, aesthetic
- ✔ Geotechnical borings & report
- ✔ Preliminary structure verification
- ✔ Stakeholder engagement
  - ✔ Context Sensitive Solutions process
- ✔ Project Purpose and Need
- ✔ Visual impacts investigation

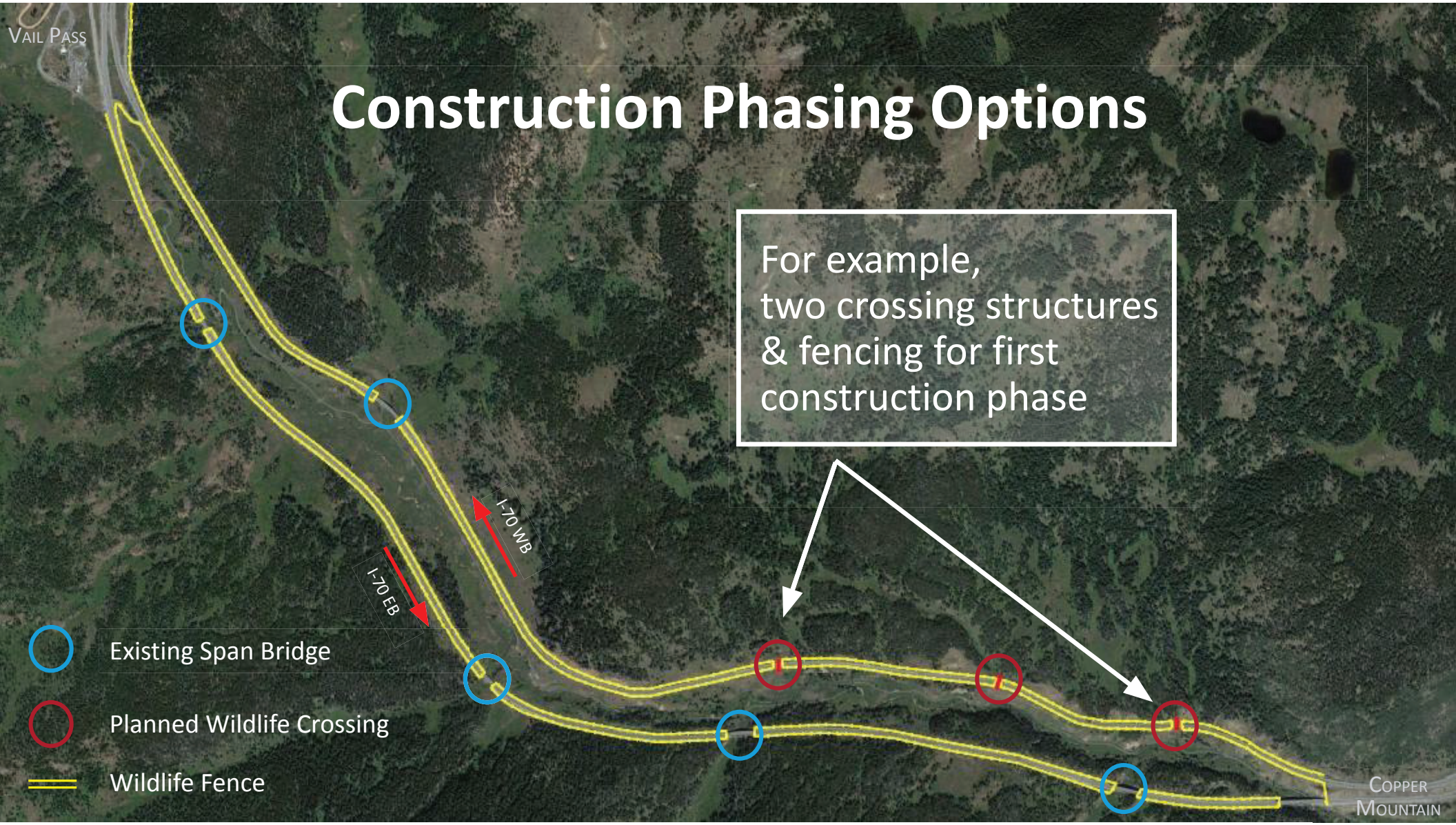
60% Design

- ✔ NEPA clearances
  - ✔ Documented Categorical Exclusion or Environmental Assessment
  - ✔ Historic effect determination
- ✔ Structure selection report
- ✔ Preliminary designs & review
- ✔ Stakeholder input

Final Design

- ✔ Verified plan specifications:
  - ✔ Crossing structures
  - ✔ Wildlife fencing
  - ✔ Roadway & drainage
  - ✔ Utilities
  - ✔ Traffic control
- ✔ Project cost estimate
- ✔ Ready for advertisement

Construction Phasing Options



Breckenridge as a catalyst and local leader

87% of Coloradans support wildlife crossings

High visibility project will support future crossings projects elsewhere in Summit County and across the State

The I-70 East Vail Pass Wildlife Crossings project needs your help!

OUR ASK:

Recommend a $148,000 contribution from the County's Open Space budget to help complete the design and catalyze other Towns to contribute to the project

I-70
EAST VAIL PASS
WILDLIFE CROSSINGS
SUMMIT COUNTY SAFE PASSAGES
SUMMIT COUNTY
SAFE PASSAGES
FOREST SERVICE
U S
DEPARTMENT OF AGRICULTURE
CDOT
SUMMIT COUNTY
COLORADO
www.summitcountysafepassages.org

2025 OST Field Projects
Staff, in collaboration with Summit County Open Space, has compiled a list of potential projects for the 2025 field season. The majority of these projects focus on maintaining existing infrastructure, along with the addition of two new multi-use trail connections: the Ranch at Breckenridge Trails and Copper Canyon Trail. These new trails have been reviewed through the newly revised Trails Development Decision-Making Framework outlined in the Open Space Master Plan. Staff would like to conduct public outreach to the surrounding neighborhoods of the Copper Canyon Trail, should BOSAC recommend moving forward. Please see the list of projects below, including the two new trail projects related to the Trails Development Decision-Making Framework.

Staff is still finalizing the Friends of Breckenridge Trails Volunteer Projects. A few highlights include partnering with Town Clean-Up Day to clean up popular trailheads, celebrating National Trails Day, working on the popular trails surrounding the Carter Park Trail system, and partnering with the Friends of Dillon Ranger District to work on the Baker's Tank Trail. Once the list is finalized, staff will share with BOSAC at our next meeting.

1) **Does BOSAC have questions or input regarding the proposed 2025 field season projects?**

Field Season Projects Include:

- **French Creek Trail:** Relocate 400 feet of crusher fine trail to the south, stabilize the eroding bank, and plant vegetation.
- **Ranch at Breck Trails:** Construct two new multi-use trails connecting Sallie Barber Rd to Cumberland Dr and True Romance, in partnership with Summit County Open Space and the Ranch at Breck.
- **Middle Flume:** Realign the middle portion of the trail to the north for an improved user experience and drainage, in collaboration with Summit County Open Space.
- **Copper Canyon:** Conduct public outreach and construct a new multi-use trail connecting Boreas Pass Rd to Baldy Rd.
- **Reliance Dredge:** Construct a new All-Persons Trail to the Reliance Dredge, partnering with Breck History.
- **New Sign Installation:** Install new trailhead kiosks and signs at potential test locations, including Illinois Creek and Carter Park.
- **Wellington Bike Park:** Reshape and compact trails in the park, with the possible addition of a couple of jumps.
- **Breckenridge Outdoor Educational Center:** Expand public parking to accommodate two ADA parking spots and create a small space for the Town's e-bike parking area.
- **Laurium Trailhead:** Construct a new trailhead to the south on CR 532. Decommission the old parking area, with the possibility of realigning it with the road, in collaboration with Summit County Open Space and Road & Bridge.

Table A: Ranch At Breck Trails Decision Making Framework

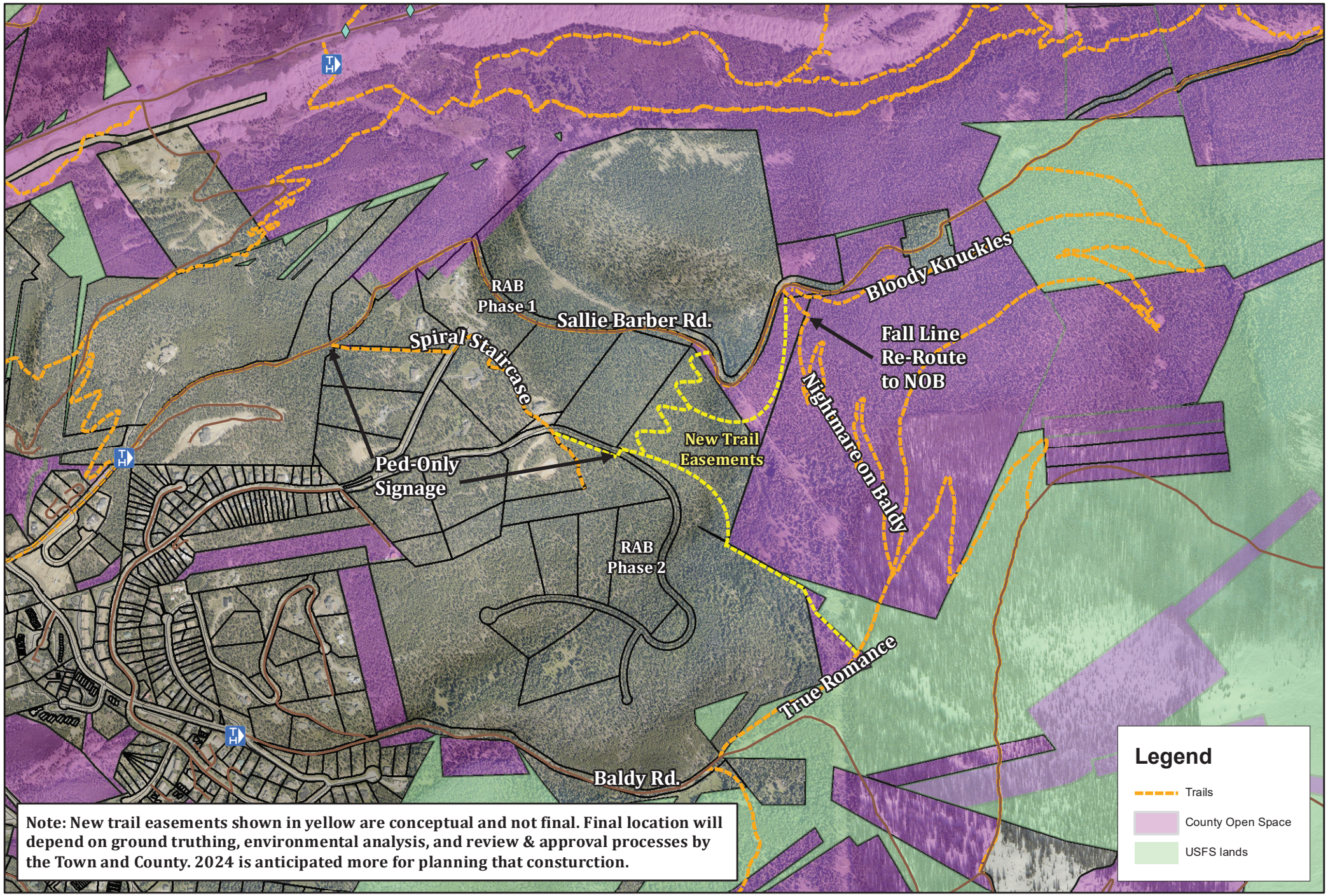
CONSERVATION	Yes/No	Description
Avoids sensitive habitats and areas of high-quality natural resources, including wetlands?	Yes	
Minimize new fragmentation of habitat blocks?	Yes	Habitat fragmentation will occur but is minimized through careful trail alignment and planned future housing development.
Utilize existing roads or corridors?	No	
Provide an opportunity to decommission roads or other disturbances?	No	
Avoid Scenic Views and Visual Disturbances?	Yes	
USER EXPERIENCE	**Yes/No**	**Description**
Provide new or unique experiences?	Yes	Improved connectivity for both winter and summer activities.
Provide an experience that the differently abled could benefit from?	No	
Provide trail access and open space experience for all age groups?	Yes	
Improve user experience and circulation?	Yes	
Reduce potential for user conflict?	Yes	
Support distribution of users to minimize hot zones?	Yes	
COMMUNITY CONTEXT	**Yes/No**	**Description**
Provide access to underserved communities?	No	
Partnership Opportunities?	Yes	Partnership with Ranch at Breckenridge for trail easements and with Summit County Open Space to share responsibilities and costs associated with construction and long-term maintenance.

Create a needed community connection?	Yes	Provides a new multi-use connection following the recent designation of the Spiral Staircase Trail as hiking-only.
MANAGEMENT	**Yes/No**	**Description**
How feasible is construction?	Yes	The estimated cost for the 2.5-mile trail is approximately $80,000, to be evenly split with Summit County Open Space. The trail will be machine-constructed due to the nature of the north-facing aspect and challenging terrain.
How intense will the maintenance be?	No	Trail alignment and construction will follow sustainability guidelines, with no large infrastructure such as bridges being installed, thereby minimizing long-term maintenance costs.
Is the proposed trail compatible with the Management Zone in which it falls?	Yes	Mid-Country: Areas and trail systems that are moderately accessible, with low to moderate levels of development, use, and interaction with other trail users.
RECRECATIONAL VALUES	**Yes/No**	**Description**
Recreational access potential, to establish or improve trails and other public access.	Yes	
Interesting and unique natural features, offering a rewarding destination for recreation users.	No	
Infrastructure potential, for road access, parking, restrooms, and interpretive signage.	No	
CULTURAL VALUES	**Yes/No**	**Description**
Historical Resources, including historical sites, structures, or artifacts.	Yes	Enhances connectivity around Sallie Barber Mine.
Scenic value or undisturbed and/or iconic viewsheds.	No	
Sense of place, emphasizing what is quintessential Breckenridge.	Yes	

Table B: Copper Canyon Decision Making Framework

CONSERVATION	Yes/No	Description
Avoids sensitive habitats and areas of high-quality natural resources, including wetlands?	Yes	
Minimize new fragmentation of habitat blocks?	Yes	The area is already fragmentated due to existing roads and housing development.
Utilize existing roads or corridors?	No	
Provide an opportunity to decommission roads or other disturbances?	Yes	Proposed trail could allow for decommissioning some of the social trails in the area.
Avoid Scenic Views and Visual Disturbances?	Yes	
USER EXPERIENCE	**Yes/No**	**Description**
Provide new or unique experiences?	Yes	Establish a new neighborhood connection, improve overall trail connectivity, and enable potential future connections.
Provide an experience that the differently abled could benefit from?	No	
Provide trail access and open space experience for all age groups?	Yes	
Improve user experience and circulation?	Yes	
Reduce potential for user conflict?	Yes	
Support distribution of users to minimize hot zones?	Yes	
COMMUNITY CONTEXT	**Yes/No**	**Description**
Provide access to underserved communities?	No	
Partnership Opportunities?	Yes	There is a possibility for partnership with Summit County Open Space to share associated costs, but it is not currently a priority for them.

Create a needed community connection?	Yes	Establishes a new multi-purpose connection for residents of adjacent housing developments and a trail connection from Boreas Pass to Baldy roads.
MANAGEMENT	**Yes/No**	**Description**
How feasible is construction?	Yes	The estimated construction cost is $50,000. Due to the steep terrain, which has been altered by hydraulic mining, the project would require machine-based construction from an outside contractor.
How intense will the maintenance be?	No	Trail alignment and construction will follow sustainability guidelines, with no large infrastructure such as bridges being installed, thereby minimizing long-term maintenance costs.
Is the proposed trail compatible with the Management Zone in which it falls?	Yes	Frontcountry - Accessible areas and trail systems with higher levels of development and use, and moderate to high levels of interaction with other trail users.
RECRECATIONAL VALUES	**Yes/No**	**Description**
Recreational access potential, to establish or improve trails and other public access.	Yes	Presents an opportunity for future connections to enhance overall trail accessibility.
Interesting and unique natural features, offering a rewarding destination for recreation users.	Yes	Interesting landscape features shaped by hydraulic mining.
Infrastructure potential, for road access, parking, restrooms, and interpretive signage.	Yes	This location has potential for a parking area and a small trailhead at the bottom, near the intersection of Boreas Pass Rd and Bunker Hill Lode Rd.
CULTURAL VALUES	**Yes/No**	**Description**
Historical Resources, including historical sites, structures, or artifacts.	No	
Scenic value or undisturbed and/or iconic viewsheds.	Yes	
Sense of place, emphasizing what is quintessential Breckenridge.	Yes	



Note: New trail easements shown in yellow are conceptual and not final. Final location will depend on ground truthing, environmental analysis, and review & approval processes by the Town and County. 2024 is anticipated more for planning that consturction.

SUMMIT COUNTY
Open Space & Trails

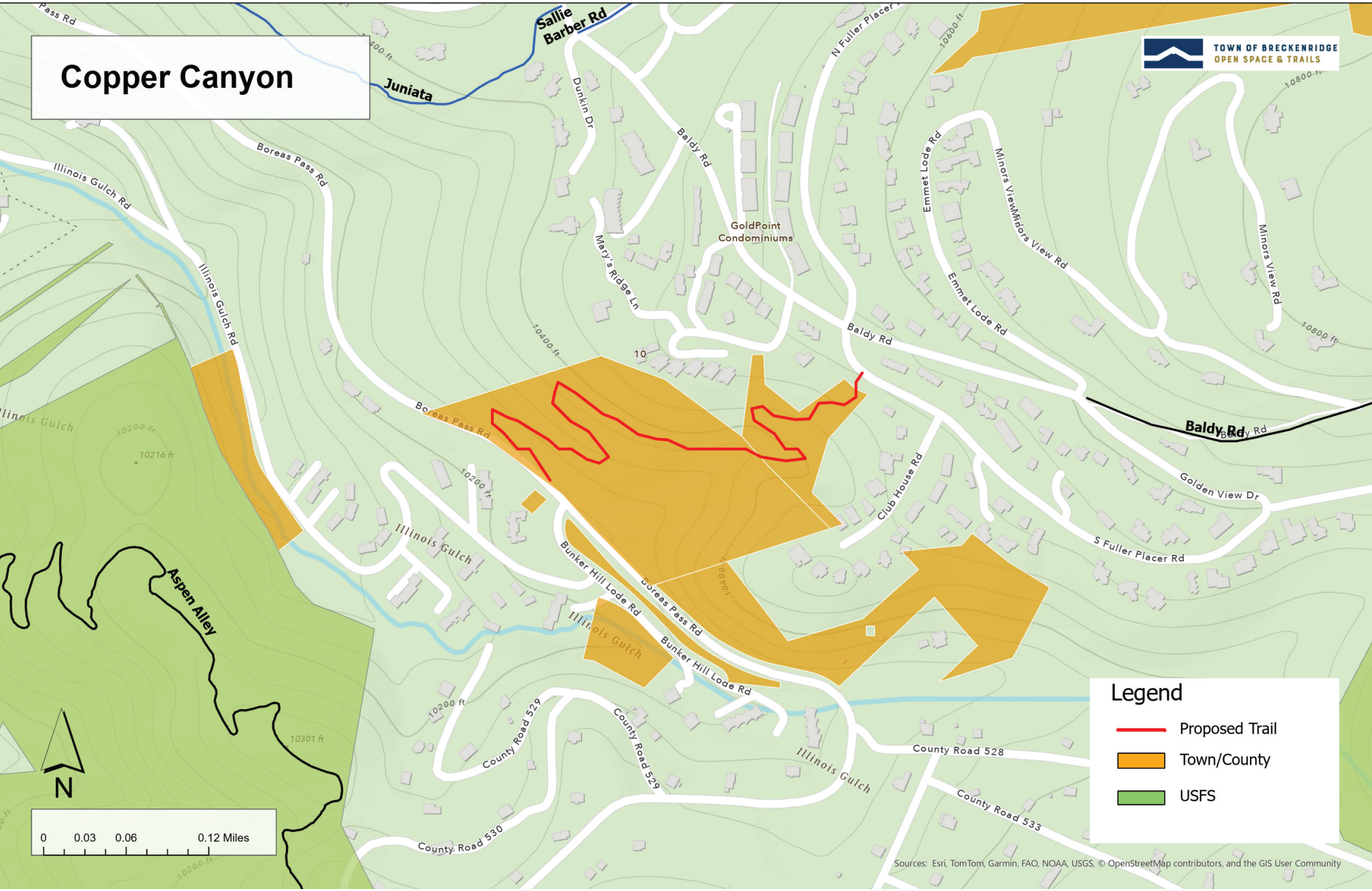
DISCLAIMER: This map is for planning and conceptual purposes only and is not accurate to survey or National Mapping Accuracy standards. Do not use for legal conveyance.

Ranch at Breckenridge Trail Planning

0 0.125 0.25 0.5 Miles N

Toms Baby Trail
Toms Baby Trail
The Ledge
Gold Run Gulch Road
Traylor Way Trail
Middle Flume Trail
Upper Flume Trail
Slalom Tr
Dry Gulch Tra

Salmon Ford Trail
Sallie Barber Rd
Juniata
Baldy Road
Nightmare on Baldy
Tree Romance
Connection to Illinois Gulch Rd.
Potential future connection to Juniata Trail
See Detailed map of Copper Canyon for more information on trails in this area
Baldy Road Parking
Connection to Baldy Road
Baldy Rd
Illinois Gulch Rd.
Boreas Pass Rd
Existing trail easement through Goldenview Sub
Easement needed
Connection to Baldy Road at Iowa Mill
"Five Points"
Connection across Spruce Park PUD Open Space Parcel (Easement may be needed)
Connection to Breckenridge Park Estates (Easement may be needed)
Laurium Road
Pandair Alley
Aspen Alley
Baker's Tank Trailhead
Baker's Tank
Laurium Trailhead
Mountain Pride
Roosbah
Boreas Pass Rd
Valdera Trail
Existing Trails
Proposed Trails
Hike
Hike/ Bike
Downhill Bike


Copper Canyon
TOWN OF BRECKENRIDGE
OPEN SPACE & TRAILS
Sallie Barber Rd
Juniata
Dunkin Dr
Baldy Rd
N Fuller Placer
Emmet Lode Rd
Minors View Rd
Boreas Pass Rd
Illinois Gulch Rd
Mary's Ridge Ln
GoldPoint Condominiums
Baldy Rd
Golden View Dr
S Fuller Placer Rd
Club House Rd
Illinois Gulch
Bunker Hill Lode Rd
Aspen Alley
County Road 529
County Road 528
County Road 533
County Road 530
10216 ft
10301 ft
N
0 0.03 0.06 0.12 Miles
Legend
Proposed Trail
Town/County
USFS
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community