

TOWN OF BRECKENRIDGE
OPEN SPACE ADVISORY COMMISSION
Monday, January 16, 2012
150 Ski Hill Road

4:00	Site visit to potential Upper Blue acquisition sites (Executive Session) (Meet behind Town Hall. We will drive from there. Bring snow boots and warm clothes.)	
5:30	Call to Order, Roll Call	
5:35	Discussion/approval of Minutes – November 21, 2011	7
5:40	Discussion/approval of Agenda	
5:45	Public Comment (Non-Agenda Items)	
5:50	Staff Summary	
	• 2012 Workplan	10
	• 2012 VOC Project dates	
	• Joint OSAC/BOSAC meeting 2/1/12	
	• Bicycle Friendly Community	11
6:00	Open Space and Trails	
	• Cucumber Gulch Preserve conservation monitoring program	17
	• Cucumber Gulch Management Plan	20
	• 2011 Trail Crew year-in-review	58
	• February BOSAC meeting date	
7:30	Executive Session	
8:00	Adjourn	

For further information, please contact the Open Space and Trails Program at 970-547-3155 (Scott) or 970-453-3371 (Chris).

Memorandum

To: Breckenridge Open Space Advisory Commission
From: Open Space Staff
Re: January 16, 2012 meeting

Staff Summary**2012 Workplan**

Attached is the final version of the 2012 workplan, which outlines projects for the upcoming field season. This version was updated to include BOSAC comments from the November meeting. Unless commission members have any additional edits or additions, staff will proceed with the attached as the 2012 workplan.

2012 VOC Project dates

For 2012, Volunteers for Outdoor Colorado (VOC) selected the Town/County Galena Ditch project application. The project includes recruiting 125 or more volunteers to formalize the historic Galena Ditch as a non-motorized system trail. The trail will connect Summit Gulch Road with Rock Island Road, and provide a non-motorized alternative to Tiger Road. Project dates are August 4-5, 2012. Please place this event on your summer volunteer schedule.

Joint OSAC/BOSAC meeting 2/1/12

As planned, OSAC and BOSAC will hold a joint meeting at 5:30 pm on Wednesday, February 1st in the BOCC room of the County Courthouse (208 Lincoln Ave). U.S. Forest Service personnel, including District Ranger Jan Cutts, will be present for the meeting, which will pertain largely to the joint management the Golden Horseshoe.

Agenda items include:

- 1) Golden Horseshoe Management Plan
- 2) Swan River Restoration
- 3) Abandoned Mine Closures
- 4) Gold Run Nordic Center Operations

A packet will be sent to OSAC and BOSAC prior to the meeting. Please be prepared to discuss these topics at the joint meeting on February 1st.

Bicycle Friendly Community

Attached is some information regarding the Town's recent designation as a gold-level Bicycle Friendly Community. Town Council has expressed continued support for staff's work on this program. Staff will continue to improve the Town's support of bicycle-friendly initiatives.

Open Space and Trails

Cucumber Gulch Preserve conservation monitoring program

Since 2001, the Town has conducted biological and hydrological resource monitoring in Cucumber Gulch Preserve to better understand, and therefore manage, the sensitive wetland ecosystem. In 2011, water quality monitoring received additional focus and resources because: 1) Council and BOSAC directed staff to conduct a more thorough wetland and water quality review; and 2) A record snowpack followed by significant runoff and rain events prompted drainage issues throughout the Upper Blue basin. Those elevated water flows stressed the overall hydrologic system and exacerbated existing drainage issues (e.g. Sawmill Creek and Coyne Valley Road).

To help structure BOSAC's review of these monitoring reports, the water quality and biodiversity research elements, although strongly interrelated, are presented separately below. The 2012 Cucumber Gulch Preserve monitoring priorities are then outlined and proposed.

a. Water Quality Monitoring

In 2011, Ecometrics and Johnson Environmental Consulting ("Ecometrics") were contracted to provide a holistic wetland health evaluation of Cucumber Gulch Preserve. Ecometrics is a wetland and hydrologic consultant whose expertise is the "[FACWet](#)" assessment of wetland systems, which targets specific stressors affecting wetland health. In addition to the FACWet assessment, Ecometrics was asked to formally delineate wetlands throughout Cucumber Gulch Preserve, and evaluate previous water quality monitoring program elements in the Preserve. The intent was to provide an overall Preserve wetlands health report, benchmark existing wetland size and distribution, and improve and streamline future monitoring goals

Attached, please find a copy of Ecometrics' 2011 monitoring report and a cover memo summarizing the findings. In general, the report indicates the following:

- 1) Overall, Cucumber Gulch Preserve continues to contain a valuable and productive wetland complex with high functioning water quality and biodiversity values. The Preserve's interior wetlands are the most functional and intact.
- 2) Wetlands in Upper Cucumber Gulch below the Peak 8 base area appear to be shrinking in size. This wetland area loss may be related to the drying of beaver ponds and the concentration of water flows in Boreas Creek.
- 3) The primary issues facing the wetlands in Upper Cucumber Gulch include:
 - a. Altered sediment budget
 - b. Altered water source and distribution
 - c. Loss of beaver
- 4) Existing threats and stressors on the edge of the Preserve will likely impair interior wetlands over time.
- 5) Immediate action should be taken to address the above concerns and prevent further degradation.

- 6) The 2012 monitoring program should be refined to inform management objectives related to these results.

Ecometrics believes that many of the stressors in Upper Cucumber Gulch are related to Boreas Creek below the culvert that carries flows from the Peak 8 drainage into Cucumber Gulch Preserve. Although Breckenridge Ski Area's consultants are still reviewing Ecometrics' report, ski area representatives have agreed to brainstorm and evaluate potential actions to address these issues. As detailed in the report, potential solutions could range from short to long term and from inexpensive to cost-prohibitive. Staff will keep BOSAC updated on the specifics of these ongoing discussions with ski area representatives. A potential short-term solution aimed at correcting an immediate problem is the subject of current discussions with ski area employees, who will be available at the BOSAC meeting to discuss this item.

Please read the attached memo and report, focusing particular attention on the Discussion section in the report (pages 57-66). Staff requests BOSAC answer the following question regarding water quality monitoring:

1. *Does BOSAC have any clarifying questions after reviewing the attached report?*
2. *Does BOSAC support Town staff continued cooperative work with ski area representatives to outline and implement necessary measures to address the concerns outlined in Ecometrics' report?*

b. Wildlife Monitoring

Dr. Christy Carello also provided initial findings for the wildlife and vegetation research in Cucumber Gulch Preserve. These findings are preliminary, and are being presented at this meeting so that a broader review of the program can be taken by BOSAC for 2011 and 2012. A complete wildlife monitoring report will be provided to BOSAC at its March meeting.

In summary, Dr. Carello's initial findings include:

- 1) There are no notable or significant changes in overall species richness, diversity, composition or abundance in the Preserve.
- 2) Although limited in the interior of the preserve, noxious weeds appear to be expanding on the periphery, typically following recently disturbed areas such as the gondola alignment and the area below the Peak 8 base.
- 3) Vegetation patterns in Upper Cucumber Gulch have begun to change, consistent with a loss of wetland area.
- 4) Avian research in Upper Cucumber Gulch suggests a reduction of species diversity, abundance, and richness.
- 5) Willow research on groomed and maintained Nordic ski trails show an increase in stem density, with limited or non-existent sexual reproduction (catkins), suggesting that Nordic ski management affects willow reproduction within the groomed ski trails.

- 6) The willow exclosure study indicates that browsing mammals (e.g. moose and beaver) prefer to browse in unaffected areas, when compared to managed ski trail alignments.
- 7) Avian research along summer recreational routes indicates no change in abundance between closed and open trails.
- 8) Trail camera-based research suggests that moose, coyote and fox are all displaced from trail corridors when a trail experiences significant recreational use. Coyote and fox tend to accept a 40 person per day threshold along trails without being displaced.
- 9) The months of May and June continue to be a sensitive time for wildlife in the Preserve. Trail and gondola closures until July 1st at the earliest are recommended.

These preliminary findings will be thoroughly discussed at BOSAC's March meeting. This brief preview is intended to provide a broader perspective of the 2011 monitoring program results. Dr. Carello will be present at the BOSAC meeting to answer any specific questions from BOSAC.

c. 2012 Monitoring Program

Based on the findings above, Dr. Carello and Ecometrics have worked with Town staff to draft the 2012 Cucumber Gulch Preserve monitoring plan. In general, the consultants recommended the following:

- 1) Thoroughly evaluate the wetland distribution and condition in Upper Cucumber Gulch.
- 2) Quantify water flows and impacts at Boreas Creek culvert.
- 3) Quantify sediment loads at Boreas Creek culvert.
- 4) Monitor channel instability and erosion rates in Boreas Creek.
- 5) Research beaver health and habitat requirements.
- 6) Establish wetland habitat photo points.
- 7) Evaluate and revise current ambient wildlife monitoring program.

The Town is committed to a long-term monitoring program to inform and improve Cucumber Gulch Preserve management. However, this program should also be well conceived and financially sustainable. In 2010, BOSAC and staff evaluated and reprioritized the Cucumber Gulch conservation monitoring program, yielding the 2011 water quality evaluation. The 2011 evaluation met its goals by performing a holistic assessment of wetland health in the area, identifying specific issues of concern, and outlining an efficient future monitoring program.

The proposed 2012 monitoring program represents a shift from baseline data gathering toward research of specific known problems. With the consultants' approval, staff recommends:

- 1) Retaining previously prioritized research elements (e.g. site-specific trail or gondola impacts, weed surveys, some water quality elements, wildlife photo points)

- 2) Reducing the frequency of some monitoring elements (e.g. general vegetation research, some wildlife-focused studies, some redundant water quality measures).
- 3) Redirecting research monies towards known problem elements (e.g. weed surveys, channel stability measures, wetland photo plots, beaver health evaluations outlined above)

The goal on this monitoring strategy is to downsize research costs, while targeting specific information that will help staff design and implement solutions to the concerns raised in Ecometrics' and Dr. Carello's reports. Research should effectively inform management of the Preserve, yet decline in cost over time.

Staff requests BOSAC consider the proposed 2012 monitoring goals and answer the following questions:

1. *Does BOSAC support the suggested 2012 monitoring program, devoted specifically to gathering additional information about the concerns outlined in Ecometrics' 2011 report?*
2. *Does BOSAC have any additional questions or recommendations regarding the 2012 Cucumber Gulch Preserve monitoring program?*

Cucumber Gulch Management Plan

Staff has compiled input received through the Cucumber Gulch Management Plan's public process and has produced a final draft. Please read the attached memo, which highlights public comments, and the final draft of the plan.

Staff requests BOSAC answer the following questions regarding the Cucumber Gulch Management Plan:

1. *Does BOSAC have any clarifying questions after reviewing the input received through the Plan's public process?*
2. *Does BOSAC have any final changes or suggestions pertaining to the attached draft Plan?*
3. *Is BOSAC comfortable making a recommendation to the Town Council for formal adoption of the Cucumber Gulch Management Plan?*

2011 Trail Crew Year-in-Review

Attached is a memo outlining the Town trail crew's accomplishments from 2011. Lead Trail Technician Tony Overlock will be present at the BOSAC meeting to provide an annual report from the 2011 field season.

February BOSAC meeting date

The next regularly-scheduled BOSAC meeting is on February 20th. Since this meeting is during the Summit school district's mid-winter break, staff requests BOSAC adjust the February meeting to the 13th or the 27th so that all Town staff and BOSAC members can attend.

Staff requests BOSAC select an alternative meeting date to improve meeting attendance.

Roll Call

Dennis Kuhn called the November 21, 2011 BOSAC meeting to order at 5:31 pm. Other BOSAC members present included Scott Yule, Devon O'Neil, Erin Hunter, Jeff Carlson, Mike Dudick, and Jeff Cospolich. Staff members present were Peter Grosshuesch, Mark Truckey, Tony Overlock and Scott Reid. Prior to the meeting start, staff and BOSAC had done a site visit to the MBJ property.

Approval of Minutes

The minutes were approved as presented.

Approval of Agenda

The agenda was approved as presented.

Public Comments

Brian Raitman, Town resident, indicated his disappointed in the Town's attempt to manage the natural resources of Cucumber Gulch. He noted his opposition to the dog prohibition, stating that dog impact is minimal compared to all the other impacts to the Gulch (noises from construction at Peak 7, snowmaking noise, etc.). It is no longer quiet in the Gulch. He doesn't see wildlife there like he used to. He feels the use of motion cameras is inappropriate and a bad precedent. It seems there is an overall deterioration of open space values in the Town in recent years.

Scott Reid explained the draft Cucumber Gulch Management Plan is undergoing public review and encouraged Brian to attend the December 12 open house. Also noted that many of the impacts that Brian was discussing (e.g., noise from snowmaking, construction) are activities that were approved years ago and the BOSAC understands that these activities are the baseline that they must work with in managing the Gulch.

Dennis Kuhn: Thanked Brian for attending and providing input. Encouraged him to attend the upcoming open house. He made it clear that, as proposed in the management plan, dogs will continue to be banned in the Gulch.

Staff Summary

Year-End Trail Projects Update

Draft Cucumber Gulch Preserve Management Plan and Open House

Tiger Dredge Lot Park Update

Open Space and Trails

Trail Counter Results

Staff provided a brief overview of the user numbers from the trail counters employed this past season on trails in and near Cucumber Gulch. Toad Alley experienced the highest number of users. The overall trend for all trails was increased use compared to previous years. It's the first year we have actually had one of the trail counters tampered with (turned off for two weeks in August). We

will continue to monitor that and if more tampering occurs take steps to prevent tampering. Use on Toad Alley was relatively low when the trail was closed in July, but there was still some use.

BOSAC comments:

Jeff Cospolich: How do the user numbers compare to use at Sallie Barber (Tony Overlock: user counts are fairly similar.)

Devon O'Neill: We saw a big spike in use at some locations in mid September. (Tony Overlock: particularly at the Nordic center sauna location—the Daytonos may have been doing some work there at the time.)

Scott Reid: The training area, one of the portals from the Nordic center, is showing decreased trail use.

Scott Yule: There was a sizeable amount of users on the Peaks Connect trail. We could increase use further by moving signage so southbound Peaks trail users are directed onto the Peaks Connect, as opposed to being pointed towards the Peaks trailhead.

Mike Dudick: Will be interested to see the results of the wildlife monitoring/motion camera analysis and see if there is any correlation to trail users.

Jeff Cospolich: We should consider placing a trail counter on the Carter Park stairs, to understand what kind of use they are getting. (Staff: Not sure how large a number this is, but the stairs provide other benefits, as people are no longer cutting down the fall-line and initiating erosion). Do other open space programs use motion cameras and counters? (Scott Reid: Yes, trail counters are frequently used by other Front Range open space programs. Some are also using wildlife motion cameras.)

Mike Dudick: Regarding trails, questions if open space purchases should be predicated solely on trail connection potential of a parcel. (Dennis Kuhn: typically these acquired properties have always also involved other open values identified in the Open Space Plan.)

Scott Yule: Could we add a trail counter near the Josie's cabin access from Shock Hill? (Scott Reid: the trail runs across private property in this area.) We should evaluate the portal and how much access occurs.

2012 Workplan

Erin Hunter: Are we and do we plan to close some of the unsustainable non-system trails in the Golden Horseshoe? (Staff: We are and plan to do more closings, except the motorized trails that are undergoing additional Forest Service analysis. We will add the closings as a work plan task for 2012.)

Devon O'Neill: NEPA for Aspen Alley: what does it entail? (Scott Reid: The goal would be to improve the trail and make it sustainable. We may help pay for the NEPA to expedite the review process.) What are we doing regarding an inventory of Warriors Mark and Peak 7 social trails?

(Scott Reid: we need to better understand exact locations of trails and ownership before we can work to get some added to our system or the national forest system.)

Jeff Cospolich: Could we add as an item more attention and some improvements to the pump track? Frisco has done a number of improvements recently. We should look at ways to improve it for kids, who give it a fair amount of use.

December Meeting Date

Most of the BOSAC members are able to attend the December 12 open house on the draft Cucumber Gulch Management Plan. Given that there are no other major pending items, it was decided to cancel the regular December 19 meeting.

Jeff Cospolich: Suggested that we post some signage advertising the open house at the major entrance portals to Cucumber Gulch.

Other Items

Scott Reid provided an update regarding the Summit Huts Weber Gulch project. The Forest Service is concluding the scoping process of the NEPA review. The Town has submitted its scoping comments. A petition has been submitted to the Forest Service by a community resident with over 100 signatures objecting to the hut.

Next Meeting

BOSAC has been asked to attend the Cucumber Gulch Management Plan open house at the Breckenridge Recreation Center Multi-purpose Room on December 12 between 6-7:30 pm. The next regularly scheduled meeting is on January 16, 2012 in the Administrative Conference Room at the Breckenridge Town Hall (150 Ski Hill Road).

The meeting was adjourned at 6:55 p.m.

Dennis Kuhn, Chair

2012 Project Workplan

Project	Proposed Completion Date	Priority	Notes
Assist USFS and Summit County Government with Travel Management Plan implementation	Summer 2012	High	Implementation delayed until May, 2012.
Complete Golden Horseshoe Management Plan Document	Spring 2012	High	Working with Summit County staff on this currently.
Perform overall trail system evaluation and repair	Summer 2012	High	Task list drafted in autumn 2011.
Implement forest health management strategies as prioritized in the forest health plan	Summer 2012	High	Focus will be on remaining, untreated parcels and new open space parcels.
Plant and reseed recently cut parcels	Summer 2012	High	Barney Ford is primary focus in 2012.
Work with County on forest health/fire mitigation projects on joint properties	Summer 2012	High	Potential projects not yet identified.
Construct Golden Horseshoe non motorized routes as outlined State Trails grant.	Summer 2012	High	VOC has approved Galena Ditch Trail project for 2012. Other six projects pending.
Complete several new trail construction efforts	Spring 2012	High	See list below.
Evaluate and potentially reprint trail map	Spring 2012	High	
Evaluate and improve signs and sign posts throughout Town system	Summer 2012	High	Maintain and improve existing trail posts.
Complete Cucumber Gulch Preserve Management Plan	Spring 2012	High	Draft being considered by BOSAC and Council now.
Review and comment on Summit Huts Weber Gulch Hut Proposal	Spring 2012	High	Time sensitive due to USFS process.
Pursue options for relocating the Peaks trailhead	Spring 2012	High	
Evaluate proposed new Golden Horseshoe routes and initiate NEPA for new alignments.	Autumn 2012	Medium	Dependant on USFS NEPA analysis priorities.
Initiate NEPA for existing routes outside of Town boundaries.	2012	Medium	e.g. Aspen Alley, Wheeler Trail.
Inventory Peak 7 and Warrior's Mark Neighborhood Trails	Autumn 2012	Medium	Work to begin following 2012 snowmelt.
Organize, catalogue and electronically document property files	Winter 2012	Medium	
Develop wildlife management plan in conjunction with TOB Sustainability Plan	Autumn 2012	Medium	Work together with County, CDOW and TOB PD.
Organize and refine trail counts and system-wide monitoring program	Summer 2012	Medium	
Distribute special event maps via website	Spring 2012	Medium	Coordinate effort with County website.
Create and manage OS&T-related social media	Spring 2012	Low	Distribute information on acquisitions, trail projects, trail conditions, etc.
Evaluate annexation of open space parcels	Summer 2012	Low	Not started
Develop management plans for open space parcels deemed appropriate	Unknown	Low	
Improve pump track	Spring 2012	Low	
Install toilet facilities at F&D Placer	Autumn 2012	Low	

Proposed Trails projects include: Country Boy Trail, Shekel Trail, Betty's/Sisler trail extension, Lower Flume and Mike's Trail realignments, Klack Placer Trail, Claimjumper Trail, Toxic Forest realignment, Upper Flume boardwalks, Slalom Trail, Great Flume drainage, Galena Ditch Trail, Barney Ford reroute,



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Breckenridge gets the gold in bike-friendliness

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Thursday, September 15, 2011

Town one of 14 communities nationwide to land gold-level award as a bike-friendly community

By [Caddie Nath](#)
 Summit Daily News

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Plenty of dedicated bike lanes are part of what's made Breckenridge a favorite spot for cyclists. Summit Daily file photo

BRECKENRIDGE – With enhanced bike lanes, a communitywide bike-to-work program and, recently, some of the best cyclists in the world passing through its streets, Breckenridge was upgraded this week to a gold-level bike-friendly community by the League of American Bicyclists.

The town is now one of only 14 communities in the country to have received a gold designation, an elite group that includes Fort Collins, Steamboat Springs, Seattle and San Francisco.

Breckenridge's ties to and note in the bicycling community now rival those in the ski community, town officials said following the announcement of the award Tuesday.

"This is one of those arrows in the quiver to make Breckenridge more of a sustainable community," town spokeswoman Kim Dykstra-DiLallo said. "The more people ride bikes and the easier it is to ride bikes, the less people have to rely on fossil fuel vehicles. It's a testament to how committed we are to cycling. It's a reflection of this community."

This year, Breckenridge has put a renewed focus on improving the community for cyclists through infrastructure projects, events and programming that promote cycling in the community.

In the last year the town has created designated bike lanes on Main St. and Park Ave., as well as increasing educational resources about biking on its website, passing bike-friendly ordinances and increasing signage for bikes. This summer, Breck hosted a bike week complete with around-town rides with Mayor John Warner and director of the Colorado Tourism Office Al White and the stage five finish of the USA Pro Cycling Challenge, one of the biggest spectator events in state history.

"We think that those are some of the reasons why we were increased up to the gold level," Dykstra-DiLallo said. "The USA Pro Cycling Challenge put a good spotlight on Breckenridge. That probably had something to do with it as well."

The League of American bicyclists ranks communities on a four-level scale - with bronze being the lowest, gold being the second highest and platinum the highest level - as part of its Bike Friendly America Program.

There are currently only three platinum-level bike-friendly communities in the country, one of which is Boulder, but Breck already has its sights set on getting to that highest level. Officials said they will be communicating with the League to get suggestions on ways to improve the ranking.

There are currently 190 ranked bicycle-friendly communities in 46 states nationwide that have implemented "successful, long-term bicycle plans and programs that provide quality of life improvements for their citizens," League president Andy Clarke stated in a recent release. "Cities are choosing investment in bicycling, even in tough economic times as a key to building the places people want to live, work and visit."

The bicycle friendly community award is given to communities that commit to improving conditions for bicycling, educational programs, infrastructure and pro-biking policies. The application process too receive the award is "rigorous," according to the League. Out of 490 applications, only 190 communities have been given a bronze, silver, gold or platinum designation. The designation lasts four years, and in renewing their application communities can attempt to improve their rankings.

Additional information about the Bicycle Friendly America program is available online at www.bikeleague.org.

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Top Jobs

Current Bicycle Friendly Communities -- October 2011

Community	State	Award Level	Since	Population
Boulder	CO	Platinum	2004	101,500
Davis	CA	Platinum	2005	63,722
Portland	OR	Platinum	2003	533,492
Breckenridge	CO	Gold	2009	4,540
Corvallis	OR	Gold	2003	53,165
Eugene	OR	Gold	2004	142,681
Fort Collins	CO	Gold	2003	118,652
Jackson and Teton County	WY	Gold	2006	18,251
Madison	WI	Gold	2006	221,551
Minneapolis	MN	Gold	2008	379,499
Palo Alto	CA	Gold	2003	64,403
San Francisco	CA	Gold	2006	739,426
Scottsdale	AZ	Gold	2005	217,385
Seattle	WA	Gold	2008	563,374
Stanford University	CA	Gold	2008	13,315
Steamboat Springs	CO	Gold	2007	12,088
Tucson & East Pima Region	AZ	Gold	2004	512,023
Ann Arbor	MI	Silver	2005	114,028
Arlington	VA	Silver	2003	210,280
Austin	TX	Silver	2007	681,804
Bellingham	WA	Silver	2006	73,460
Bend	OR	Silver	2005	80,995
Bloomington	IN	Silver	2003	69,107
Boston	MA	Silver	2011	645,169
Burlington	VT	Silver	2004	42,417
Carrboro	NC	Silver	2004	18,162
Chicago	IL	Silver	2005	2,896,016
Colorado Springs	CO	Silver	2008	360,890
Columbia	MO	Silver	2009	102,324
Denver	CO	Silver	2003	598,707
Durango	CO	Silver	2008	15,878
Flagstaff	AZ	Silver	2006	57,391
Folsom	CA	Silver	2003	63,960
Gainesville	FL	Silver	2004	117,182
Hilton Head Island	SC	Silver	2011	33,862
La Crosse	WI	Silver	2007	51,818
Missoula	MT	Silver	2003	57,053
New York City	NY	Silver	2007	8,143,197
Olympia	WA	Silver	2008	44,460
Presidio of San Francisco	CA	Silver	2003	3,000

Current Bicycle Friendly Communities -- October 2011

Redmond	WA	Silver	2003	49,637
Sacramento	CA	Silver	2006	456,394
Salt Lake City	UT	Silver	2007	181,743
San Luis Obispo	CA	Silver	2007	43,766
Santa Barbara	CA	Silver	2003	87,370
Santa Cruz	CA	Silver	2007	54,593
Sisters	OR	Silver	2011	1,925
Tempe	AZ	Silver	2003	172,589
Washington	DC	Silver	2004	599,657
Wood River Valley	ID	Silver	2008	12,506
Ada County	ID	Bronze	2004	395,974
Albany	OR	Bronze	2010	48,770
Albuquerque	NM	Bronze	2005	448,607
Alexandria	VA	Bronze	2009	140,024
Anchorage	AK	Bronze	2009	284,994
Arcata	CA	Bronze	2008	16,651
Arvada	CO	Bronze	2008	107,050
Ashland	OR	Bronze	2004	19,522
Athens-Clarke County	GA	Bronze	2011	115,000
Auburn	AL	Bronze	2005	52,205
Bainbridge Island	WA	Bronze	2008	20,300
Baltimore	MD	Bronze	2010	631,000
Baton Rouge	LA	Bronze	2009	428,360
Beaverton	OR	Bronze	2003	79,350
Billings	MT	Bronze	2008	100,147
Boca Raton	FL	Bronze	2003	83,960
Brentwood	CA	Bronze	2006	40,007
Brunswick	ME	Bronze	2003	21,820
Calistoga	CA	Bronze	2009	5,300
Carbondale	CO	Bronze	2010	5,196
Carmel	IN	Bronze	2006	70,000
Cary	NC	Bronze	2003	119,745
Cedar Falls	IA	Bronze	2009	36,145
Chandler	AZ	Bronze	2004	252,257
Chapel Hill	NC	Bronze	2010	55,616
Charleston	SC	Bronze	2010	124,000
Charlotte	NC	Bronze	2008	648,387
Charlottesville	VA	Bronze	2008	40,315
Chattanooga	TN	Bronze	2003	167,674
Chico	CA	Bronze	2004	79,000
Claremont	CA	Bronze	2008	36,612

Current Bicycle Friendly Communities -- October 2011

Coeur d'Alene	ID	Bronze	2008	41,983
Columbia	SC	Bronze	2008	116,278
Columbus	OH	Bronze	2009	748,000
Concord	NH	Bronze	2010	43,225
Conway	AR	Bronze	2011	59,511
Cupertino	CA	Bronze	2011	50,479
Davidson	NC	Bronze	2010	10,300
Dayton	OH	Bronze	2010	154,200
Des Moines	IA	Bronze	2011	203,433
Durham	NC	Bronze	2010	212,789
Eau Claire	WI	Bronze	2011	101,353
Fayetteville	AR	Bronze	2010	67,158
Franklin	PA	Bronze	2010	7,212
Fresno	CA	Bronze	2011	500,121
Gilbert	AZ	Bronze	2003	196,000
Golden	CO	Bronze	2010	18,026
Goshen	IN	Bronze	2011	31,719
Grand Rapids	MI	Bronze	2009	688,937
Greensboro	NC	Bronze	2009	258,671
Greenville	SC	Bronze	2009	57,400
Gresham	OR	Bronze	2010	101,537
Harrisonburg	VA	Bronze	2011	48,814
Houghton	MI	Bronze	2010	8,238
Huntington Beach	CA	Bronze	2010	202,250
Indianapolis & Marion County	IN	Bronze	2009	872,842
Iowa City	IA	Bronze	2009	65,219
Irvine	CA	Bronze	2009	186,220
Juneau	AK	Bronze	2011	30,711
Kansas City	MO	Bronze	2011	482,228
Keene	NH	Bronze	2011	24,769
Knoxville	TN	Bronze	2010	177,646
Lakewood	CO	Bronze	2009	146,000
Lansing	MI	Bronze	2010	111,304
Las Cruces	NM	Bronze	2011	92,235
Lawrence	KS	Bronze	2004	88,664
Lexington-Fayette County	KY	Bronze	2007	246,800
Liberty Lake	WA	Bronze	2007	7,270
Long Beach	CA	Bronze	2009	466,520
Longmont	CO	Bronze	2004	84,636
Los Altos	CA	Bronze	2011	27,483
Louisville	KY	Bronze	2006	700,030

Current Bicycle Friendly Communities -- October 2011

Marquette	MI	Bronze	2010	21,000
Menlo Park	CA	Bronze	2010	30,648
Mesa	AZ	Bronze	2003	437,454
Milwaukee	WI	Bronze	2006	554,965
Mountain View	CA	Bronze	2004	70,708
Naperville	IL	Bronze	2009	128,358
Newark	DE	Bronze	2010	29,886
New Orleans	LA	Bronze	2011	343,829
Norman	OK	Bronze	2011	112,551
North Little Rock	AR	Bronze	2009	60,433
Northampton	MA	Bronze	2011	28,978
Oakland	CA	Bronze	2010	365,875
Oceanside	CA	Bronze	2008	174,925
Omaha	NE	Bronze	2011	408,958
Orlando	FL	Bronze	2004	205,648
Oxford	MS	Bronze	2008	16,727
Park City	UT	Bronze	2007	20,620
Philadelphia	PA	Bronze	2009	1,454,382
Pittsburgh	PA	Bronze	2010	316,718
Port Townsend	WA	Bronze	2008	8,334
Portage	MI	Bronze	2010	46,143
Raleigh	NC	Bronze	2011	405,612
Reno-Sparks Washoe County	NV	Bronze	2011	421,407
Ridgeland	MS	Bronze	2010	22,809
Riverside	CA	Bronze	2009	311,575
Roanoke	VA	Bronze	2010	94,911
Rochester	MN	Bronze	2010	102,437
Roseville	CA	Bronze	2008	109,154
Roswell	GA	Bronze	2006	85,920
Saint Paul	MN	Bronze	2011	281,244
Salem	OR	Bronze	2008	152,239
San Antonio	TX	Bronze	2010	1,144,646
San Jose	CA	Bronze	2006	912,332
Sanibel	FL	Bronze	2010	6,064
Santa Clara	CA	Bronze	2010	110,376
Santa Clarita	CA	Bronze	2007	175,314
Santa Fe	NM	Bronze	2011	67,947
Santa Monica	CA	Bronze	2009	87,400
Schaumburg	IL	Bronze	2003	73,346
Sedona	AZ	Bronze	2011	10,192
Shawnee	KS	Bronze	2003	57,628

Current Bicycle Friendly Communities -- October 2011

Sheboygan County	WI	Bronze	2011	115,507
Shorewood	WI	Bronze	2011	13,267
Simsbury	CT	Bronze	2010	23,256
Sioux Falls	SD	Bronze	2009	154,000
Sitka	AK	Bronze	2008	8,883
Sonoma	CA	Bronze	2009	9,128
Somerville	MA	Bronze	2011	77,478
South Bend	IN	Bronze	2010	100,842
South Lake Tahoe	CA	Bronze	2006	23,609
South Sioux City	NE	Bronze	2006	11,925
Spartanburg	SC	Bronze	2007	39,487
Spokane	WA	Bronze	2010	204,428
Springfield	MO	Bronze	2010	156,206
St. Louis	MO	Bronze	2009	350,759
St. Petersburg	FL	Bronze	2006	249,090
Sunnyvale	CA	Bronze	2006	131,760
Tallahassee	FL	Bronze	2009	176,336
The Woodlands Township	TX	Bronze	2011	97,023
Thousand Oaks	CA	Bronze	2008	127,644
Tybee Island	GA	Bronze	2011	3,713
Traverse City	MI	Bronze	2009	14,532
Tulsa	OK	Bronze	2009	384,037
Urbana	IL	Bronze	2010	40,550
Vail	CO	Bronze	2009	4,806
Vancouver	WA	Bronze	2005	156,600
West Windsor	NJ	Bronze	2011	27,165
Wilmington	NC	Bronze	2011	101,353

Memo

To: Scott Reid, Open Space and Trails Planner, Town of Breckenridge

From: Mark Beardsley, EcoMetrics, LLC, and
Dr. Brad Johnson, Johnson Environmental Consulting, LLC

Date: November 14, 2011

Re: Cucumber Gulch Preserve Wetlands Assessment

(The full report can be accessed [here.](#))

EcoMetrics, LLC and Johnson Environmental Consulting, LLC were contracted by the Town of Breckenridge to map existing wetland boundaries within its Cucumber Gulch Preserve (CGP) and to assess the functional condition, or ecological health, of those wetlands. The study culminated in a report to the Town on October 31, 2011 titled *A Comprehensive Assessment of Wetland Condition in Cucumber Gulch Preserve, Breckenridge, CO*, which contains a full account of our findings and supporting evidence. The study area includes lands owned by the Town of Breckenridge within CGP. To increase the resolution of the evaluation, we divided the area into three individual units: Upper CG, Lower CG, and the Peak 7 Side Slopes.

We mapped the extent of wetlands in CGP according to US Army Corps of Engineers delineation protocol¹ and compared the resulting wetland boundaries to past wetland maps from 1997 and 2007 provided to us by the Town. While our 2011 map is finer resolution, there is otherwise generally good correspondence between the 1997 and 2011 maps. Most of the boundary discrepancies can seemingly be attributed to technological advances, presumed differences in methodology, or mapping and file errors. However, both the 2007 and 2011 wetlands delineations do indicate a very clear pattern of wetland habitat loss in the Upper CG portion of the Preserve near the Peak 8 Base Area. By coarse estimation, these losses may amount to about 2.5 acres, which is about 5% of the total wetland area of the Preserve. The pattern of wetland decline in this area closely follows the drying of beaver ponds and distributary channels as water distribution became concentrated into a single Boreas Creek channel.

¹ Corps delineation protocols are found in: 1987 *Corps of Engineers Wetland Delineation Handbook* and the 2008 *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region*.

Our assessment of wetland condition began with the evaluation of existing monitoring information including 25 research reports and raw dataset of 23,152 water quality observations made in and around Cucumber Gulch between 1999 and 2010. We did a comprehensive analysis of the water quality database (which is summarized in the report) and combined this with the findings from existing reports to focus our 2011 field surveys. We then incorporated our own field measurements and observations to complete the assessment according to the FACWet² structure and methodology.

Following FACWet, we compiled a list of ecological stressors affecting the Preserve and evaluated their impact on the nine state variables that drive wetland function. Our report outlines evidence for stressors as well as quantitative and qualitative observations of their impacts to wetland state variables. In general, the interior of the Preserve has been well protected. Nevertheless, the wetland system within it is subject to various ecological stressors – some of them severe – that impair its ability to function to its potential as habitat for the diversity of biota native to the site.

Currently, the majority of stressor-induced impacts are confined to the edges of the Preserve, with peripheral habitats serving as a buffer from surrounding development. Consequently, the interior portions of the Preserve, including most of Lower CG, are largely in good condition and highly functional. Similarly, the conditional status of wetlands in the Peak 7 Side Slopes (SS) area appears to be relatively secure, despite the presence of considerable nearby development. While we acknowledge that the Peak 7 SS wetlands may be sensitive to environmental alterations, their primary water source is tied to deep groundwater that appears to be relatively unaffected by existing up-gradient modifications. The typical habitat on the Peak 7 SS is also much less dependent on the vagaries of beaver activity.

Our assessment of the wetlands in Upper CG, on the other hand, is much less positive. Evidence strongly suggests that a substantial alteration of the wetland's sediment budget and hydrologic regime, coupled with a lack of buffer area due to adjacent developments and the recent loss of a keystone species (the beaver) have reduced the level of wetland functioning to "impaired" or even "non-functional." Aquatic and wetland habitat within Upper CG has been visibly disappearing at a rapid rate.

The extent of this negative impact is capable of penetrating deeper into the Preserve, and available evidence points to real and serious threats to the interior wetlands. The recent rapid collapse of the pond and wetland complex in Upper CG may well be viewed as "the canary in the coal mine" and a harbinger of what may soon happen to down-valley habitats if stressors

² *The Functional Assessment of Colorado Wetlands (FACWet) Method: User Manual Version 2.0.* Colorado Department of Transportation Research Report.

are not effectively managed. In short, the same stressors and mechanisms that caused failure of the Upper CG system are beginning to intrude into Lower CG, which is the largest and most diverse wetland complex in the Preserve.

There are three fundamental issues facing the preservation of Cucumber Gulch wetlands at this time: 1) disruption of the sediment budget, 2) altered water source and distribution, and 3) loss of beaver. The effects of all of the other stressors are minor in comparison to the fundamental importance of these three. From a management perspective, we suggest that the Town would be best suited to direct the bulk of their resources towards addressing these three primary issues.

The causes of sediment and water impairment generally originate outside of the Preserve, and are, therefore, difficult or impossible to manage at the source. Consequently, watershed-scale impacts to sediment and hydrology would probably best be mitigated by creative engineering solutions on the periphery of the Preserve (at the head of Upper CG), and we highly recommend that the Town take this approach to stressor mitigation. Effectively dealing with these first two issues (sediment and water) would also be a primary step towards correcting the third (loss of beavers). The factors driving the recent decline of beaver activity in CGP are not well understood, but we suspect that mitigating impacts to sedimentation and hydrology would be important components to restoring viable beaver habitat in the Preserve.

In addition to the above management prescriptions, we also suggest that this would be an ideal time for the Town to review and update its monitoring strategy for the Preserve. Extensive monitoring over the past decade has effectively defined baseline conditions and trends in many hydrology, water quality, vegetation, and wildlife parameters. The Town could probably scale back much of this ambient monitoring without sacrificing the quality of the information by leveraging the efforts of related studies rather than duplicating them. Large-scale surveys of vegetation and bird populations, for example, could be sampled on a less frequent basis, for instance every 3 years rather than annually, and still effectively track these parameters.

We highly recommend that the Town focus a greater percentage of its monitoring resources towards targeted studies designed to inform specific management objectives. Studies related to quantifying the magnitude of sediment and hydrology impacts would be particularly useful, as would a monitoring program aimed at quantifying the effectiveness of mitigating these problems. Likewise, targeted studies to support beaver restoration efforts would be invaluable at this time.



Cucumber Gulch Preserve Management Plan



Cucumber Gulch Preserve

Management Plan



Town Council

John Warner, Mayor

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Mike Dudick

Jeffrey Bergeron

Peter Joyce

Jennifer McAtamney

Mark Burke

Open Space Advisory Commission

Dennis Kuhn, Chair

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Prepared by the Community Development Department

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INTRODUCTION

A. Executive Summary

The Town of Breckenridge, as the steward of the 121-acre Cucumber Gulch Preserve (the Preserve), is crafting a management plan to guide use of this precious resource. The Town seeks to establish a plan to preserve the natural resources of the Gulch while allowing for limited public access.

This management plan is designed to:

- Protect sensitive natural areas of the Preserve that may need additional conservation.
- Provide for limited, managed public access to the Gulch.
- Monitor the resource values of the Preserve to determine if the management objectives are being achieved.

The management plan is designed to guide use and achieve the management objectives of the Gulch. The Town of Breckenridge Open Space and Trails Division, with oversight from the Breckenridge Open Space Advisory Committee, will administer and maintain the Preserve in accordance of this management plan. In order to be a perpetually effective management document, a review of the plan should take place annually following the monitoring report release.

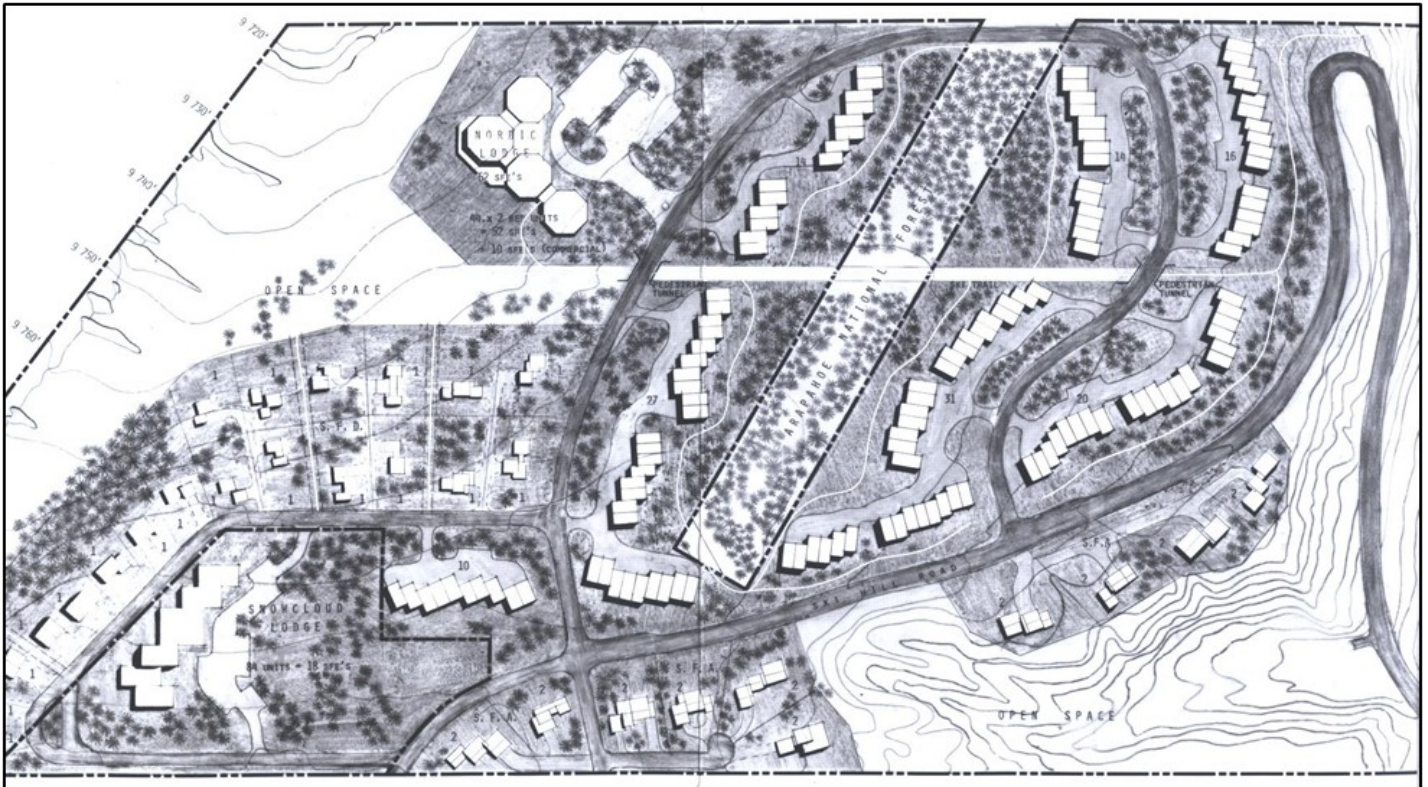
B. History of Cucumber Gulch

For much of its existence, Cucumber Gulch developed untrammelled, allowing its unique ecology of rare plants, fens and peat wetlands to develop over thousands of years. The Gulch's first exposure to humans occurred during the mining boom of the 1880's. Mining activity was limited to a small area located near the base of Shock Hill and scattered sites on the MBJ parcel. During this period, the first trails were established in the Gulch by miners traveling to nearby claims.

Except for a limited number of miners utilizing the trails, Cucumber Gulch continued to be minimally impacted by human activity until the establishment of the Breckenridge Ski Resort in 1961. Initially, the area was not impacted by significant development; however the operation of the ski resort altered some of the area's drainage patterns and wildlife corridors. Later, in the 1970's and 80's, significant development occurred near the base of the ski resort and adjacent to Cucumber Gulch. During this period, there was very little concern or knowledge about the impacts that development could inflict on the Gulch's fragile ecosystem. Some examples of projects that were developed adjacent to the Gulch during this period include Peak 8 Village, Gold Camp, Ski Watch, the Breckenridge Nordic Center and the Christie Heights subdivision. In addition to these completed projects, several other much larger projects were proposed. These proposed developments included building footprints, parking, tennis courts and an amphitheater

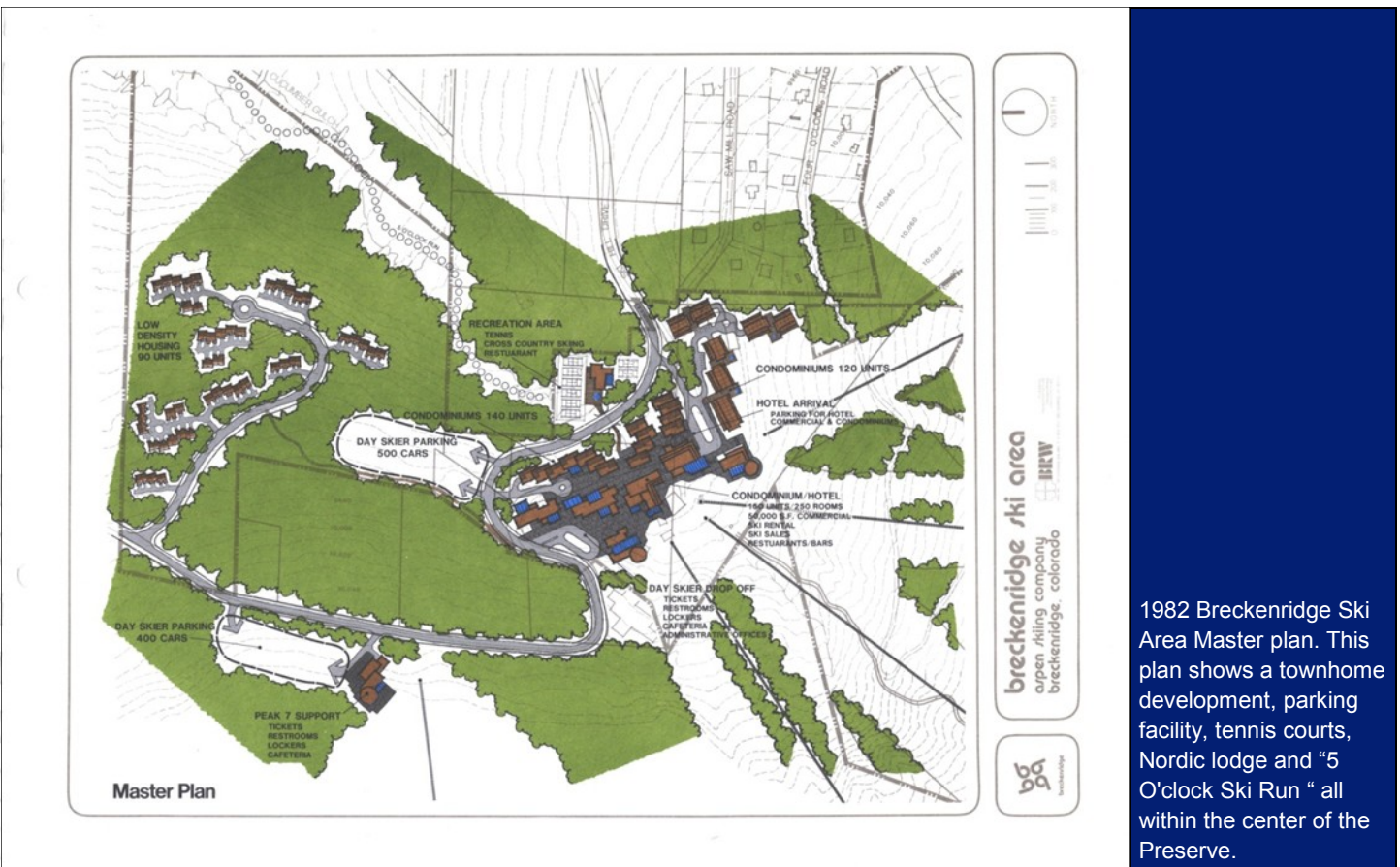


Cucumber Gulch from 1965 Breckenridge Ski Area Trail map, prior to the development of the 1970's & 80's



Proposed 1979 Nordic Life Fitness Complex. This proposal anticipated adding hundreds of SFEs in areas now protected by the Town.

within the area now protected as the Preserve. Due to cyclical economic patterns, none of these more dramatic proposed developments was completed.

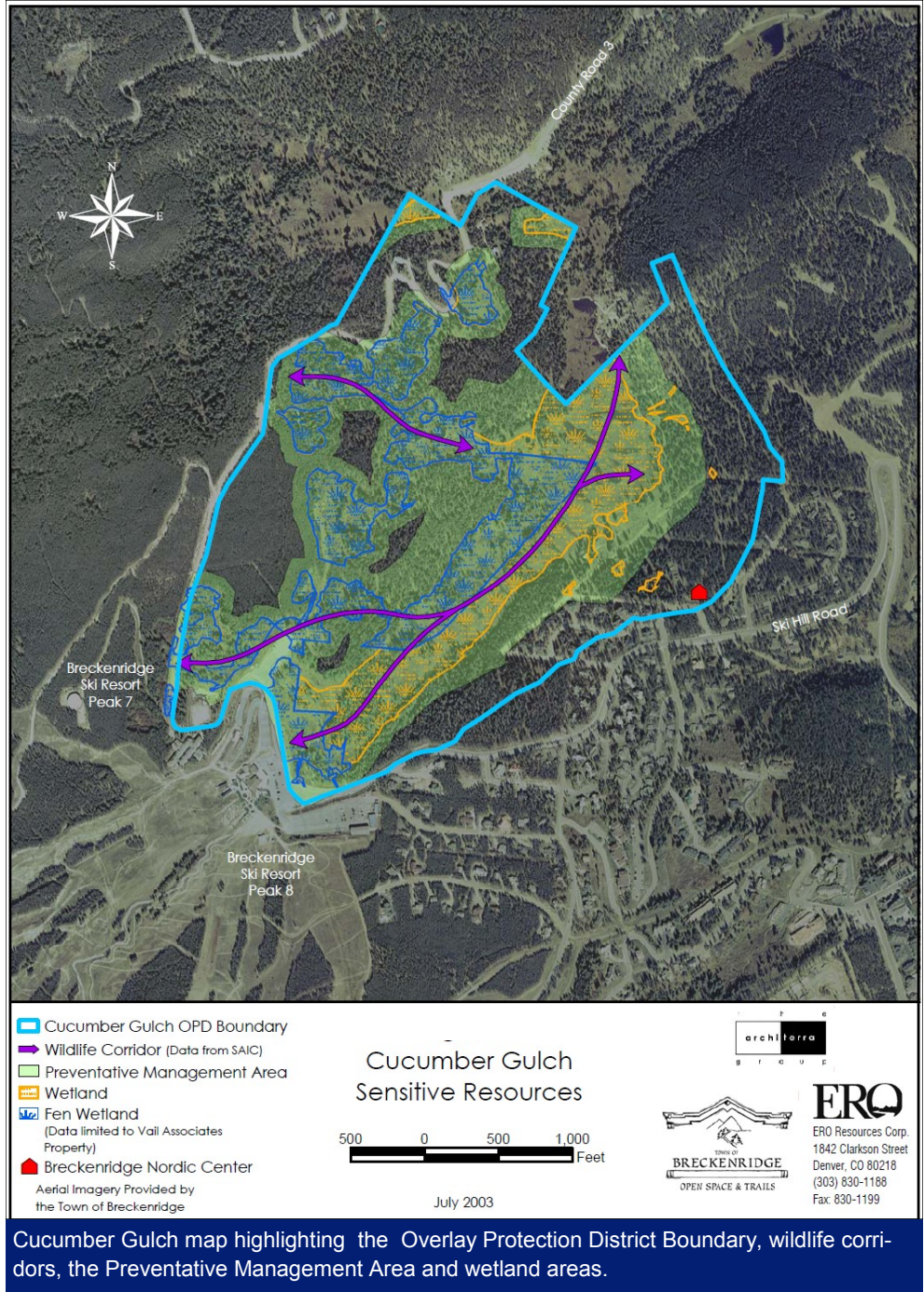


1982 Breckenridge Ski Area Master plan. This plan shows a townhome development, parking facility, tennis courts, Nordic lodge and "5 O'clock Ski Run " all within the center of the Preserve.

Until the mid 1990's, protection of the Cucumber Gulch continued to be mostly an afterthought for area residents. The Gulch received minimal visitation other than Nordic skiers during the winter months and a small number of hikers in the summer season. This pattern changed when Colorado State University (CSU) launched a large-scale research project to study biodiversity on private property. The newly formed Summit County Open Space Advisory Committee saw the CSU research project as an opportunity to investigate local private properties and establish an acquisition priorities list. Through the study, several privately owned properties in Summit County, including areas of the Gulch, were analyzed for their conservation values. Information released in the CSU report indicated the Gulch to be an extraordinary natural resource worthy of the greatest conservation efforts. Between the findings from the CSU study and the many decades of development pressure surrounding the Gulch, many local citizens started to demand its protection. It has been speculated that protection of Cucumber Gulch was a main impetus behind the Breckenridge Open Space program. 'Citizens for Open Space' was founded in 1996 and its members viewed the impending development around the Gulch, the potential loss of wildlife habitat, and a reduction in recreational access as problematic. This movement led to a voter initiative dedicating an additional .5% Town sales tax to open space acquisition and management.

Since the inception of the Open Space Program, the Town has been involved in many endeavors to protect the resources of the Preserve. The significance of Cucumber Gulch's natural resources is illustrated by the area's classification as a:

- Special Aquatic Site under the Guidelines for Specification of Disposal Sites for Dredged or Fill Material of the Clean Water Act;
- Aquatic Resource of National Importance (ARNI) by the EPA;
- Resource Category 1 under USFWS Region 6 Policy on Protection of Fens;



- Endangered Species Habitat by Colorado Division of Wildlife; and
- Protection Urgency Rank P1 and Management Urgency Rank M1 by the Colorado Natural Heritage Program.

In 1998, the Town hired Science Applications International Corporation (SAIC), an environmental consulting firm, to study the ecology of the area. Based on the recommendations of this study, the Town began embarking on a protection program for the area. In 2000, the Cucumber Gulch Overlay Protection District was adopted by the Breckenridge Town Council. This ordinance prevents any human disturbance within the most ecologically sensitive areas of the Gulch and encourages the use of Best Management Practices in the surrounding buffer areas. Subsequent large scale development approvals on Peak 7 & 8 in 2006 and 2007, and the Shock Hill Lodge in 2008 have included additional conditions requiring best management practices and continued monitoring as part of their approvals¹. Through both of these development approvals, the Town received sizable land parcel dedications within the Gulch. Since 2001 the Town has acquired 121 acres of land through dedications and purchase to form the Preserve as it is currently known.

C. Management Objectives

The Town of Breckenridge has two primary objectives for managing the precious habitat of the Preserve, and those are to preserve the conservation values of the Preserve while striking the appropriate balance with public access and adjacent development.

1. Preserve the wetland ecosystems and natural resources. The primary management objective is to preserve existing habitat in the Preserve. The Preserve is a groundwater-fed, fen wetland complex that purifies water in Cucumber Creek while providing exceptional habitat for moose, beaver, muskrat, migratory birds and other animals. Due to the Gulch's unique characteristics and sensitive ecosystem, it is in greater need of protection and regulation than other Town-owned open space parcels.

2. Public access. Historically, the Preserve has been utilized as a recreational resource by the Town's residents and visitors. During winter months, the Breckenridge Nordic Center hosts thousands of skiers and snowshoers in the Preserve. In the summer months, the Preserve has an extensive trail network for hiking, mountain biking and wildlife viewing.



One of the Preserve's resident moose



Nordic skiing in the Preserve

The challenge for managing the Preserve is balancing public access with natural resource protection goals. Although resource protection is the primary reason for the Town's investment, public recreational access in the Preserve has a long history. Continued recreational access will serve to educate the public and engender support for the Town's resource preservation goals.

II. PROPERTY DESCRIPTION

A. Location and Character of Cucumber Gulch Preserve

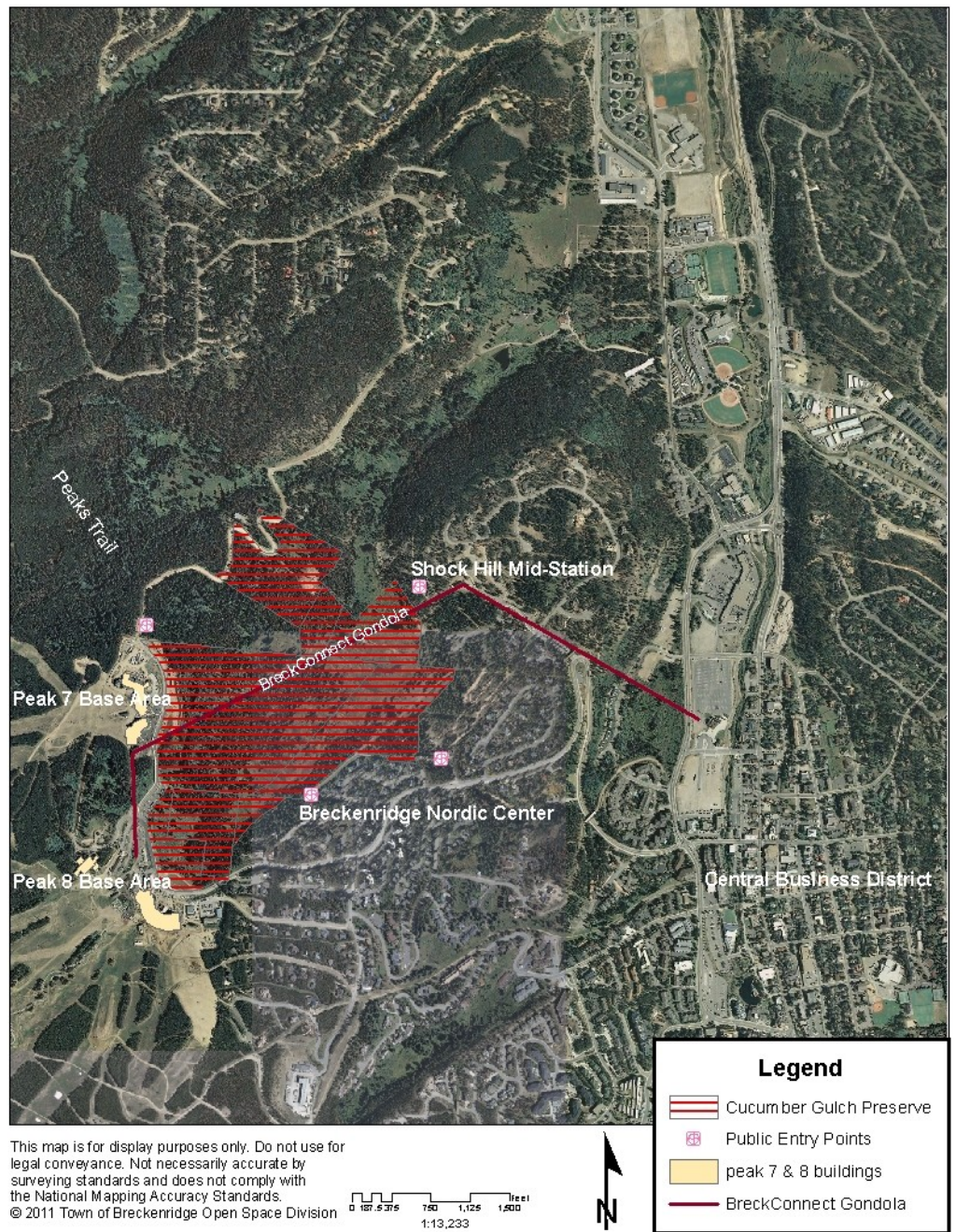
The Preserve is a north- to northeast-facing drainage and associated wetlands complex located northwest of the Town of Breckenridge Central Business District. The wetland complex lies just below Breckenridge Ski Resort's Peaks 7 and 8 and is bordered to the south, west, and much of the north by adjacent existing or planned residential development. To the northeast, the Preserve joins with Cucumber Creek, which stretches 3/4- mile to the Blue River confluence just north of Town.

The Preserve is valued for its summer and winter recreation opportunities and as an ecologically significant habitat area for sensitive wildlife and vegetation. Being located within walking distance from Town, the Preserve provides local residents and visitors an opportunity to enjoy the scenic beauty of alpine forests and wetlands.

Popular summer opportunities in the Preserve include hiking or mountain biking along one of the many summer trails. In the

winter, visitors enjoy Nordic skiing and snowshoeing. The Breckenridge Nordic Center, which has been in operation since 1981, provides about 5.7 miles of groomed Nordic ski trails and about 1.5 miles of snowshoe trails, most of which are located within the Cucumber Gulch OPD. Bird and wildlife viewing also are popular activities throughout the year.

While winter recreation is the single largest draw for visitors to the Preserve, the area has attracted a significant amount of attention since the 1995 and 1997 discoveries of breeding populations of the state-level



Cucumber Gulch Preserve Vicinity Map

endangered boreal toad (*Bufo boreas boreas*). The boreal toad historically resided throughout much of the Rocky Mountain Region between 7,000 and 12,000 feet in elevation, and has experienced dramatic declines in the last 20 to 25 years (CDOW 2002).

The Preserve also is known for the presence of about 77-acres of wetlands ranging from isolated wet meadows and seeps to large stream-side (riparian) complexes occurring along the bottom of the Preserve. Some of these wetlands also are categorized as fens, which provide a unique environment for rare plants. Fens accumulate organic material at an extremely slow rate and are driven by nutrient-rich ground water. Because of this, fens in the Preserve are an irreplaceable resource.

B. Property Boundaries and Adjacent land Uses

The Preserve consists of seven individual properties, all owned by the Town, ranging in size from 2.22 acres to 55.79 acres. Significant development pressure surrounds the Preserve on three sides. Adjacent land uses consist of the Peak 7 & 8 base areas of the Breckenridge Ski Resort, residential development off of Ski Hill



A section of the Preserve's wetlands

Road, residential development in the Shock Hill subdivision, and a large private holding located outside of the Town's limits in unincorporated Summit County.

West of the Preserve is the Peak 7 & 8 base area of the Breckenridge Ski Resort. The Peak 7 & 8 base areas are two primary portals where the majority of the 1.65 million annual skiers enter the ski resort. Additionally, there is significant existing and expected real estate development at Peak 7 & 8. When fully built out, Peak 7 & 8 will have 450.5 single-family equivalents (SFEs) of residential density and 20 SFEs of commercial density.

To the south of the Preserve a variety of existing and planned residential development is located in the Idlewild, Boulder Ridge III, GlenWild, White Wolf, Settlement and Cucumber Creek Estates subdivisions. Within these subdivisions, 12 single-family homes and 27 townhome lots are immediately adjacent to the Preserve.

On the eastern border of the Preserve lies the Shock Hill subdivision. Shock Hill is a residential subdivision that has three single-family lots, a lodge site with vested development rights for up to 129 SFEs and a gondola station adjacent to the Preserve.

North of the Preserve is a 40 acre property under a single ownership. The parcel has not been developed and functions as private open space. Within a large area of this parcel are high quality wetlands that are critical to area wildlife.

C. Existing Public Use Features

The Preserve's present use consists of a wildlife preserve and recreational open space. Despite its current role as a preserve, there has been a tradition of public recreational use of the property by various user groups prior to the Town's ownership. Therefore, recreational access to the Preserve is viewed as an important component of its management along with wildlife habitat preservation.

The most common uses of the property currently include:

- Nordic skiing
- Snowshoeing
- Hiking
- Mountain biking
- Running
- Environmental research
- Gondola usage
- Nature appreciation & education

These existing uses of the property are the baseline for considering which types of uses are compatible with the Town's mission to protect habitat and to enhance environmental systems of the Gulch. Some of the uses are suitable year round, while others are appropriate on a more seasonal or limited basis.

III. Conservation Values

Within the Preserve's boundaries are some of the most biologically diverse and sensitive wetlands within the State of Colorado. The Preserve's wetlands have a diversity of vegetation that provides important habitat to numerous bird species, aquatic insects, mammals and amphibians. As mentioned above, some of these wetlands also are categorized as fens, which provide a unique environment for rare plants. Fens accumulate organic material at an extremely slow rate and are driven by nutrient-rich ground water. While the first objective of the management plan is protecting sensitive habitat and wetlands, securing public access to the Preserve is also an important management component. The introduction of hundreds of visitors per month to the area impacts the Preserve, but the intent is to balance public recreational access with resource protection efforts. Identifying acceptable recreational uses in the Preserve will ensure that the recreating public recreates in a manner that will also preserve the natural resource values of the area

IV. STEWARDSHIP ISSUES

A. Protecting Sensitive Habitat

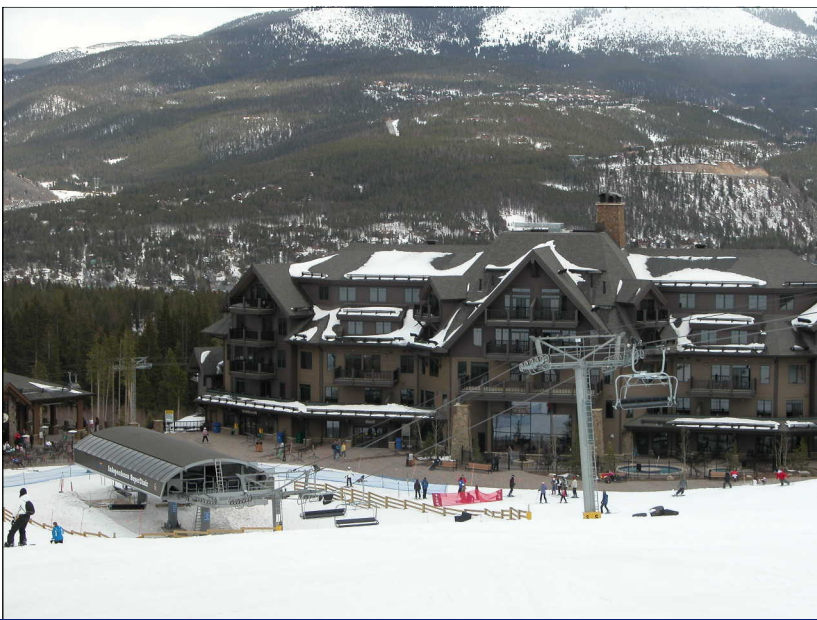
Construction adjacent to Cucumber Gulch presents particular challenges to the Preserve's management. At full build-out, 15 single-family homes, 27 townhomes and 579.5 multi-family SFEs are planned directly adjacent to Cucumber Gulch Preserve, with hundreds more residences nearby. One goal of this plan is to consider the impact Cucumber Gulch Preserve management will have on adjoining properties, and vice versa.

Development to the west (Peak 7 & 8) of Cucumber Gulch Preserve is ongoing and presents water quality, wildlife, and site buffering issues. The development adjacent to the eastern edge of the Preserve (Shock Hill)

is less defined but has the potential to match the developmental scale on the western edge. The proposed development in Shock Hill could affect the Preserve's wildlife, water quality and vegetative buffering. Development bordering the southern property boundaries of Cucumber Gulch is generally much less dense and largely built-out. However, the properties along the southern border present a host of issues including the lack of a geographic barrier to the gulch, greater site disturbance areas, and an abundance of household pets and individual ownership of properties (i.e. no central management). Specific conditions were placed into the Peak 7 & 8 and Shock Hill development permits to ensure minimal disturbance to Cucumber Gulch¹.

In addition to the threat from adjacent development, unrestricted recreational access also has the potential to impact the Preserve. Recreational visitors can damage the wetland complex by not staying on designated trails or by bringing an unleashed pet to the preserve, among others.

To address the conflicts with adjacent development and unregulated recreational access the Cucumber Gulch Overlay Protection District (OPD) ordinance Cucumber OPD was adopted in 2000 based on recommendations included in the 1998 Cucumber Gulch Resource Protection and Recreation Plan. The Cucumber Gulch OPD provides protection for the important and unique natural and recreation resources of Cucumber Gulch by prohibiting activities within a "Preventative Management Area" (PMA), requiring development standards, and establishing best management practices. The purpose of the PMA is to create a buffer area that maintains native vegetation, and minimizes disturbance from human activities. Section 13 of the Cucumber Gulch OPD ordinance requires that the Town develop a recreation plan identifying approved recreation activities and locations. In 2003, to further address problems arising from unregulated recreational access, a recreation plan was developed for the Preserve. In subsequent years, additional plans and analytical documents pertaining to the Town's Open Space program and the Preserve have been developed. Due to the abundance of planning recommendations and analytical information contained in a variety of documents, it is the intent of this plan to consolidate the findings descriptions and policies into a single resource document and establish clear policy direction for managing the Preserve. Below is a brief synopsis of existing scientific studies, formal policy documents and policy responses related to the Preserve.



Peak 7 Base Area Development

B.1. Scientific Studies

Colorado State University Natural Heritage Assessment of Wetlands and Riparian Areas in Summit County, Colorado (1997) The CSU study analyzed many privately owned properties in Summit County for their conservation importance. The study indicated Cucumber Gulch to be the most biologically diverse property included in the study. This study piqued local interest for protecting Cucumber Gulch's natural resources.

Annual Conservation Monitoring Reports for Cucumber Gulch (2001-2010) For the last ten years, the Town has produced annual reports detailing information and findings obtained from monitoring conducted in the Gulch. The monitoring preceded development of the Peak 7 & 8 master plan by 6 years, and therefore provides a base line condition to compare the pre-development and post-development health of the resources

within the Preserve. Information contained in these reports enables the Town Council and Town staff to make informed management adjustments on a year to year basis. More information about elements of the monitoring program is contained in the Management Policy section of this plan.

Forest Health and Mountain Pine Beetle Analysis in the Cucumber Gulch Preserve (2007) This report assessed Forest Health in Cucumber Gulch by looking at current conditions and forecasting those conditions into projections for the near and long-term. This document also provides direction on treatment to optimize forest health within the Gulch, without compromising other sensitive ecological aspects.

B.2. Formal Policy Documents

SAIC, Cucumber Gulch Resource Protection & Recreation Plan (1998) The SAIC plan was developed with the objective of providing a strategic framework for preserving the natural resources of Cucumber Gulch and planning for appropriate recreational uses. This represented the first comprehensive assessment of the basin's natural resources and their vulnerability or compatibility with adjacent land uses. Within the plan several key actions were identified that were subsequently carried out by the Town.

- Researching the hydrology of the wetlands
- Targeting land protection through acquisition efforts
- Establishing a Preventative Management Area
- Establishing Wildlife Movement Corridors
- Promoting Best Management Practices
- Establishing a Lead Entity (BOSAC currently fulfills this role)
- Establishing a recreation plan

Cucumber Overly Protection District (OPD) (2000) The OPD was established by a Town ordinance for the protection of the sensitive natural resources within Cucumber Gulch based on the recommendation from the SAIC plan. The ordinance required the Town to do the following:

- Establish a Preventive Management Area (PMA) around the important resources of the area, including wetlands, endangered wildlife habitat, and wildlife corridors.
- Conduct scientific studies in the PMA that identifies resources of concern in the area.
- Prohibit certain potentially harmful activities within the PMA until the ordinance can be revised based on the studies.
- Require that development meets certain standards.
- Provide that Best Management Practices be applied through restrictive covenants to new development within or adjacent to the district.
- Require new roads have wildlife passageways if constructed within the district but outside the PMA.
- Provide that a recreation plan for the area be adopted by the Town in conjunction with other agencies, based on the result of scientific studies.
- Allow for relief from the ordinance under certain circumstances.

Cucumber Gulch Recreation Master Plan (2003) The *Cucumber Gulch Recreation Master Plan* (Plan), called for in the SAIC plan referenced above, established a conceptual framework for setting management priorities and provided specific management direction for recreational resources within the OPD. The Plan was the culmination of a six-month comprehensive planning process that focused on balancing summer and winter recreational use with preservation of the sensitive natural resources found in the area. Its development was a collaborative effort that included input from Town Open Space and Trails staff, Breckenridge Open

Space Advisory Commission, key stakeholders (which included private landowners, representatives of adjacent homeowner associations, as well as Vail Associates and Breckenridge Ski Resort) and local citizens. At its foundation, the Plan emphasizes the protection of natural resources within Cucumber Gulch.

Town Open Space Plan (2007 Update) The Open Space Plan provides a strategic framework for the Town's Open Space Program, and reflects the needs and desires of the community. Specifically, the Open Space Plan has two actions for the Cucumber Gulch Preserve:

1. *"Devise measures to protect environmental quality and recreation".*
2. *"Strive to acquire additional parcels in the Cucumber Gulch area to further protect the sensitive wetland area".*

Town Trails Plan (2009 Update) The Town Council and the Breckenridge Open Space Advisory Commission (BOSAC) recognize that preserving and expanding trail access throughout the Town and the Upper Blue Basin is critical to maintaining and enhancing the quality of life in and around Breckenridge. The Trails Plan, along with the Trails Plan Maps, have been created to provide guidance to Town staff and BOSAC for future trail related priorities and decisions. It is recognized that a balance must be achieved between growth/development and the maintenance of a healthy quality of life, and that development should provide a means for preserving and improving an interconnected recreational trail network.

Sustainability is the main guiding philosophy of the Town with respect to its Trails Plan. It is important first and foremost to maintain the existing trails already within the Town's system. There also needs to be a monitoring and evaluation aspect to the Trails program to ensure that trails are not being created where they could have negative environmental or social impacts and that poorly aligned existing trails are correctly rerouted or decommissioned. Recommendations pertaining Cucumber Gulch include:

1. *"Continue to implement the tasks outlined in the Cucumber Gulch Recreation Master Plan. Monitor trail conditions and use within the Cucumber Gulch Preserve and adjust trail alignment and management accordingly".*
2. *"Work cooperatively with Nordic area concessionaires to ensure appropriate winter management of Cucumber Gulch Preserve".*
3. *"Designate specific access points to the Cucumber Gulch Preserve and work to secure other potential, undesirable, social accesses to ensure strong protection of the Preserve's natural values".*

B.3. Policy Responses to Stewardship Issues

Prohibition of Dogs (2007) Pets are prohibited within the PMA. Despite this fact, many visitors to the Gulch bring their dogs to the area, the majority of which are off-leash. Such actions disturb local wildlife and in some instances, other trail users. One of the greatest threats posed to the wildlife in the Preserve is an off-leash dog. By swimming in the ponds, disturbing the beavers, and pursuing vulnerable wildlife and ground-nesting birds, dogs have exacted a heavy toll on the area's wildlife. Other problems associated with dogs include their excrement



Dog prohibition signage in the Preserve

and associated odors, as well as potentially harmful increases in surface water nutrient levels. As a result, dogs are not permitted in the Preserve.

Nordic Center License Agreement (2008 renewed periodically) In order to assure harmony with the Town's stewardship goals, the Breckenridge Nordic Center's operator must enter into a license agreement that is limited in scope to use of designated areas of the Town's property within Cucumber Gulch for Nordic skiing, snowshoeing and other related winter operations. Through a license agreement, the operator agrees to specified "standards of operation" and does not have the right to alter or change the operator's use of the Property without the Town Manager's prior written consent.

Group Size Limit (2009) To minimize the noise and disturbance associated with groups, a group size limit was instituted within the Preserve capping the maximum group size at 8 persons.

Prohibition of Non-Winter Special Events (2010) Historically, the Preserve hosted special events in a limited capacity. Events such as the Breckenridge Crest Marathon, the Summit Mountain Challenge Mountain Bike Series and the Summit Trail Running Series have all previously included sections the Preserve's trail network in their course routes. Despite the popularity of special events utilizing the Preserve, it was directed by the Town Council to discontinue allowing special events in the Preserve outside of the Nordic ski season. The prohibition of special events is based the intensity and concentrated special event activity levels compared with typical recreational use. The decision to prohibit special events is also supported by the fact that alternative routes that do not enter the Preserve are available.



Group size is limited to eight individuals in the Preserve

Summer Trails Use and Closure Protocol (2010) Summer trails use in Cucumber has been limited until after July 1st annually. This date was established to keep visitors out the Gulch during the incubation period and the beginning of the chick-rearing stage for many of the migratory birds that utilize Cucumber Gulch Preserve habitat. This start date also avoids moose calving season which begins in late May and extends through early June. After July 1st, trail access is subject to conditions being determined suitable for the travel of hikers, bikers and runners. Cucumber Gulch's trails may be periodically closed at times after July 1st if staff determines them to be too wet, muddy, degraded and at risk of being damaged.

Summer Gondola Operations (2010) The gondola impacts study conducted in 2010 revealed localized impacts to avian species in Cucumber Gulch during the week after the gondola began operating. An evaluation of the other data from the conservation monitoring program in 2010 did not show significant changes in avian populations in the Gulch over the span of the field season. At the same time, the timing of the start of the gondola is critical. A July 1st start date falls during the end of the incubation period and the beginning of the chick-rearing stage for many of the migratory birds in Cucumber. If the gondola is started earlier in the season, birds may be more likely to abandon their nests. They will not have had the investment in their nests or eggs that they do later in the year. Thus, starting the gondola earlier may have significant ecologic impacts, particularly to bird populations.

Cucumber Gulch is a year-round habitat for moose. The ample availability of willows, a major staple in the diet of moose, makes this an ideal location for moose during all seasons. Cucumber Gulch provides ample cover for young, access to fresh water and abundant high quality food. Moose calving in Colorado begins in late May and extends through early June. All measures should be taken to minimize any disturbance to nursing cows during this period. Motion sensor cameras and direct observation have shown that moose cows use Cucumber Gulch during this time as a nursery. Due to the potential conflicts with moose calving, it has been recommended to not operate the gondola between May 15th and the end of June so as not to disturb moose cows and their offspring during the sensitive calving and early rearing stages.

Because of these known wildlife conflicts affecting Cucumber Gulch the Town has recently established the following regulations for summer gondola operations:

- Summer season operating hours are from 9:30 am until 6:00 pm daily beginning July 1st through September 5th. In addition to regular hours the Ski Resort has the option to extend operations until 8:00 pm on Fridays and Saturdays from July 1st through August 14th.
- Bicycles may be carried on the Gondola only by those persons that have a ticket to use the Ski Resort lifts and trails.
- Persons transporting bicycles in the Gondola will only be permitted to ride up the Gondola once during the day to avoid “yo-yoing” (taking the Gondola up and riding bicycles down through Cucumber Gulch). However, persons will be allowed to take their bicycles down the Gondola at any time, free of charge, to help provide a way of getting people back to Town without going through Cucumber Gulch.
- The Ski Resort must provide signage at the base of the Gondola advising guests of the sensitive nature of Cucumber Gulch and requesting that riders avoid engaging in conduct that could cause any harm to the Gulch.
- The Toad Alley trail must be excluded from the Ski Resort’s summer trail map.

Use of Josie’s Cabin (2011) Use of Josie’s Cabin is limited to use as a warming hut for patrons of the Nordic Center. Hours of use are the same as the hours of operation for the Nordic Center, with an exception for nighttime guided snowshoe tours conducted by the operators of the Nordic Center. At all other times the cabin is to remain locked to prevent vandalism and to discourage individuals from using it as living quarters.

Best Management Practices (BMPs) for Adjacent Development (Ongoing) In addition to the requirements for adjacent development outlined in the OPD, additional BMPs and monitoring have been instituted through the findings and conditions for the Peak 7 & 8 Master Plan area, the Shock Hill Lodge and the Breck Connect Gondola¹.



Josie's Cabin

V. Action Plan

The Action Plan provides the framework to work towards enhanced protection of the Preserve by providing specific Goals and Action Steps for the Preserve under four core categories; Land Management, Recreational Access, Educational Efforts and Development Restrictions. The proposed Action Steps include a variety of recommendations to facilitate achievement of the broader goals of each category. Below are more in-depth descriptions of how the Goals and Actions work within the framework of the Action Plan.

Goals: Within each Category are specific Goals which comprise the overall vision for the Preserve and represent what we must achieve to better protect the Preserve. The stated Goals of each category summarize the higher priority items that were identified for long-term protection of the Preserve.

Actions: As a strategy to achieve desired goals, specific actions are featured under each category. These actions offer a strategy to accomplish goals over the near, mid and long-term.

A. Land Management

Town Council Directives

- Prioritize resource protection in the Preserve
- Demonstrate a visible management presence
- Strictly enforce regulations, particularly regarding pets
- Better utilize fencing to secure sensitive areas and define a perimeter boundary to adjacent residential properties
- Implement limited forest health intervention

Goals

1. Preserve the critical habitat and functional wetlands of the Preserve as the primary management goal. (The high degree of biodiversity present in the Preserve is dependent on the integrity of the wetlands complex. Plant and wildlife biodiversity is the primary conservation value of the Preserve.)
2. Convey a strong management presence in the Preserve to send an important resource protection message to visitors and citizens.
3. Inform residents and visitors that the Preserve as a precious and vulnerable ecological open space area, visibly and strictly managed by the Town.

Actions

1. **Establish and maintain controlled points of entry for the Preserve**

Construct a clearly defined perimeter for the Preserve adjacent to developed land. In constructing the perimeter, utilize wildlife-friendly native materials, such as buck-and rail fencing that will clearly define boundaries for human visitors. Note: as an added measure of protection, entry points may be equipped with motion detection cameras to clearly catalogue all Preserve visitors.

2. **Post clearly defined regulations for visitors entering the Preserve.**

Regulations should be clearly posted at all established entry points to inform visitors of the importance of their actions in protecting the Preserve's natural resources.

3. **Initiate regular or periodic patrols of the Preserve by uniformed community service officers.**

Regular uniformed patrols of the Preserve will reinforce the Town's management presence and increase the likelihood that visitors will comply with the defined rules of conduct for the Preserve.

4. **Institute a strict policy on regulations infractions within the Preserve, with a particular emphasis on pet infractions.**



Buck and rail fencing in the Preserve

Substantial fines should be given to visitors that do not comply with the established rules and repeat offenders should be banned from future entry to the Preserve. Consider the use of motion cameras as an additional monitoring tool to use for identification of violators.

5. **Conduct monitoring studies to gather information to better evaluate and track natural resource trends and the overall health of the Preserve. Refine Preserve regulations and management as needed.**

Scientifically-based monitoring studies provide the information needed to evaluate the Town's stewardship goals in the Preserve. Routine monitoring allows natural resource trends to be tracked over time and helps inform an adaptive management approach when results fall below acceptable conditions. Of particular importance is water quality and water quantity monitoring, which will benefit wetland distribution and health and wildlife protection goals.

6. **Investigate any negative trends in water quality and water quantity reported through annual monitoring.**

The water resources of the Preserve are the foundation of the Preserve's system health.

7. **Remediate sources of water degradation as soon as possible upon confirming causation of a trend.**

Water research should prompt additional evaluation and management steps to address identified water resource threats. A significant portion of the Preserve's water resources are fen wetlands, which take thousands of years to develop and are virtually irreplaceable. Due to the uniqueness, importance and vulnerability of fens in our region, the U.S. Fish & Wildlife Service has set a goal that every "reasonable effort" should be made to avoid impacting fen habitat. Due to the sensitivity of the Preserve's fens and the importance to area wildlife, timely remediation is critical in cases of confirmed water quality degradation.

8. **Initiate additional impact studies if expanded gondola hours of operation are requested.**

The gondola serves as a useful transportation amenity, delivering passengers from the center of Town to the Peak 7 and 8 base areas of the Breckenridge Ski Resort. The gondola passes directly through the Preserve's boundaries, potentially affecting on the area's native species. Due to the unknown affects on area species, additional impact studies should be required prior to the consideration of additional operating hours for the Gondola.



Gondola Alignment through the Preserve

9. **Use signage to inform direct and educate visitors.**

Preserve signage should clearly inform visitors of area regulations, direct visitors along designated trails, and educate visitors about the Preserve's unique natural resource values worthy of extensive conservation efforts. Signage should be designed to be visible but also compatible with the surrounding character. All signs should fit a coherent professionally-developed pattern.

10. **Selectively acquire land to protect and enhance the Preserve's wildlife habitat value and wetland ecosystem.**

Land in the direct vicinity of the Preserve that connects to the Preserve’s wetland system or functions as a wildlife movement corridor should be considered for acquisition to the Town’s Open Space portfolio, when available.

11. Initiate minimal forest health management activities within the Preserves boundaries.

The 2007 Forest Health and Mountain Pine Beetle Analysis of Cucumber Gulch Preserve recommended no forest health intervention (e.g., tree cutting, tree spraying) for areas within the Preserve due to vulnerable wetland soils and a limited percentage of lodgepole pine trees in the area. Any new acquisitions (including the MBJ and Wedge parcels) should be evaluated for forest management needs. Tree removal may also be acceptable in limited areas for defensible space and forest health purposes.

B. Recreational Access

Town Council Directives

- Allow existing Nordic trail system to continue
- Prevent the proliferation of additional snowshoe trails
- Lower the intensity of non-winter recreation

Goals

1. Facilitate safe, low intensity public recreational access and enjoyment of the Preserve, while meeting the primary goal to protect natural resources and wildlife habitat.
2. Maintain existing levels of winter recreational opportunities. Allow summer recreational access, provided that it does not compromise conservation objectives. Control access with fencing of sensitive areas, targeted trail closures and signage.
3. Implement greater restrictions on summer recreation as needed.

Actions

1. Allow the Breckenridge Nordic Center to continue operating on existing trails.

Threats to the Preserve’s natural resources fluctuate seasonally. The winter’s ample snow provides the Preserve’s sensitive ecosystems a barrier of protection from human disturbance and allows Nordic skiers and snowshoers to navigate areas that are unsustainable for recreational use at other times. Despite the protection it provides, snow also allows the proliferation of additional undesignated trails that impact local wildlife. Due to this concern and acknowledging the importance of Nordic skiing to the Town’s winter sports economy, it is recommended to allow the continued operation of the Breckenridge Nordic center on existing trails, without the possibility of future network expansion within the Preserve.



Nordic trail through the Preserve

2. Establish Nordic center hours of operation as one hour after sunrise until one hour before sunset.

Wildlife activity in the Preserve is most prevalent during dusk and dawn. To minimize wildlife disturbance concerns associated with the operation of the Nordic center, nighttime operations shall be limited to

approved, guided snowshoe tours limited to a maximum of three days per week with a maximum group size of eight. BOSAC and Town Council will oversee and limit the amount of nighttime use in the Preserve.

3. Establish non-winter use standards for Nordic center building and grounds.

It is likely that the Town will receive future requests from groups such as weddings and family retreats to use the Nordic Center building during the summer season. Due to the Nordic center's proximity to the Preserve and the intensity of these uses (particularly nighttime uses), non-winter use standards for the Nordic center facility should be established by Town Council.

4. Restrict access and seasonally close trails within the Preserve during sensitive periods

Seasonal closures are intended to keep visitors out of the Preserve during the most important and sensitive periods. These critical periods include the incubation period and the beginning of the chick-



Moose Calving is a particularly sensitive period for the Preserve

rearing stage for many of the migratory birds, moose calving season, and other periods when staff determines the Preserve's trails to be too wet, muddy, and at risk of being damaged. When seasonal closures are deemed necessary, trails leading into the closure area should be closed or appropriately signed so that users are well informed and are not surprised when they encounter a closure

sign.

Restricting access can be applied in multiple ways. Below is a sample list of options to consider. Options a, b and c may be implemented by Town staff as needed, but must be communicated to BOSAC. Options d and e require additional Town Council direction before being implemented.

- a. Seasonally close some or all trails
- b. Institute directional travel on select trails
- c. Close select trails to specific user types
- d. Permanently close some specific trails (e.g., Toad Alley/Peaks Connect) deemed most impactful to wildlife and the wetlands and seasonally close other trails
- e. Permanently close all trails in Preserve

5. Restrict large groups and special events from the Preserve outside of the winter season.

Due to the Preserve's heightened sensitivity during the summer season, no special events of any kind or groups larger than eight individuals are permitted. Standards for approval of all formal group activities of eight individuals or less shall be established by the Town Council.

C. Educational Efforts

Town Council Directives

- Educate adjacent residents about the Preserve's valuable natural resources and vulnerability to human impacts.
- Work with front-line lodging staff of neighboring properties to educate guests about the Preserve's valuable natural resources and vulnerability to human impacts.
- Educate the public in a way that does not attract additional recreational visitors to the Preserve.

Goals

1. The educational mission of the Preserve is to inform both visitors to, and neighbors of, the Preserve about its resource values and sensitivity to impacts and disturbances. This approach is in direct contrast to educational efforts conducted in environmental education centers where higher visitation is encouraged and the conservation areas are marketed to promote education-based visitation.
2. Educate visitors and guests to the natural importance of the Preserve without attracting more visitors to the area.
3. Focus on educating residents and visitors which reside immediately adjacent to the Preserve about the Preserve's uniqueness and ecological vulnerability.

Actions

1. **Signage should be used to inform, direct and educate visitors.**

Preserve signage should clearly inform visitors of area regulations, direct visitors along designated trails, and educate visitors about the Preserve's unique natural resource values worthy of extensive conservation efforts. Signage should be designed to be visible but also compatible with the surrounding character. All signs should fit a coherent professionally-developed pattern.



Signage in the Preserve

2. **Create an educational pamphlet to distribute to the Preserve's neighboring residents and visitors.**

Publish an easy to understand pamphlet that covers important information pertaining to the Preserve. Important highlights should include: information on the Preserve's sensitivity, the regulations for visitors, a small section highlighting the prohibition of pets and a map clearly defining the boundaries of the Preserve, area trails and notable landmarks. Pamphlets should be distributed to residents and guests of properties adjacent to the Preserve.

3. **Provide educational presentations by Open Space and Trails staff at local HOA meetings of properties adjacent to the Preserve.**

Staff should reach out to the HOA's adjacent to the Gulch and offer presentations on the Preserve at their meetings. The presentation should be designed to cover the most pressing information, instill a sense of stewardship and provide homeowners an opportunity to ask questions pertaining to the Preserve.

4. **Work with property managers and concierges of adjacent properties to inform their guests about the Preserve's ecological sensitivity and the strict management regulations.**

Staff should work with front line employees such as concierges and check-in staff to ensure these staff members are responsibly informing visitors about the fragile resources, the stringent regulations, and strict enforcement for the neighboring Preserve. Encourage concierges and check-in staff to direct visitors to trail opportunities outside of the Preserve.

5. Utilize media to spread the message of the Preserve’s ecological value and newly instituted regulations.

The Town should strategically use media resources to spread a two-part message when covering the Preserve. One message will be intended to generate public support for conservation of the Preserve’s natural resources. The second message should draw attention to the heightened management presence in the Preserve. Media opportunities and content will range from more general press releases to shorter, more targeted messages delivered through the Town’s social media accounts.

D. Development Restrictions

Town Council Directives

- Minimize disturbance to the Preserve from adjacent development.

Goals

1. Protect the Preserve’s natural resources and habitat while respecting neighboring property owners’ rights.
2. Update development regulations as needed for properties adjacent to the Preserve to ensure the protection of the Preserve’s natural resources.

Actions

1. **Continue to conduct best management practices compliance inspections on all projects adjacent to the Preserve and pursue non-compliance aggressively.**

Routine compliance inspections of development activity should be conducted by Town staff and development permit holders to ensure adjacent development is not impacting the ecological integrity of the Preserve.

2. **Periodically review Cucumber Gulch Overlay Protection District regulations to ensure continued effectiveness.**

The Overlay Protection District regulations are valuable protection measures that benefit the continued health of the Preserve. Periodic reviews of these regulations to ensure that they incorporate the latest scientific recommendations/best management practices regarding environmental protection will help ensure continued protection of Preserve’s valuable natural resources. Preventative Management Area boundaries should be extended into areas of acquired open space that previously were not included.

VI. Notes

1. Grand Lodge on Peak 7 and Crystal Peak Lodge Best Management Practices Development Conditions From Permits #2006014 and #2006015

- Applicant shall comply with all applicable aspects of the “Stormwater Management Plan, Peak 7 Breckenridge Ski Area”, Revised April 11, 2006.
- Applicant shall comply with all applicable aspects of the “Final Drainage Master Plan, Peak 7 Breckenridge Ski Area”, Revised March, 2006.
- Applicant shall submit and obtain approval from the Town Staff of a final hydrogeological report and drawings identifying all impacts to the Cucumber Gulch PMA as a result of this development. Final details of the Stormwater Management Plan/Best Management Practices (BMPs) plan shall be submitted to and approved by the Town.
- Applicant shall install construction fencing and erosion control measures at the 25 foot no-disturbance setback to streams and wetlands in a manner acceptable to the Town Engineer. An on site inspection shall be conducted.

One Ski Hill Place Best Management Practices Development Conditions From Permit #2007001

- Applicant shall submit and obtain approval from the Town Engineer of final drainage, grading, utility, and erosion control plans. These plans shall include the approved review of the revised “Ground-water Monitoring Program, Peaks 7 & 8 Base Area Development Town of Breckenridge, Summit County, Colorado” as prepared by Kenneth E. Koln, PhD of Hydrologic Systems Analysis, LLC.

Shock Hill Lodge Best Management Practices Development Conditions From Permits #2007108 and #2007109

- The properties are located on Tracts C & E, Shock Hill Subdivision. As such, the property is also within the Cucumber Gulch Overlay Protection District (but not the Cucumber Gulch Preventative Management Area), which set forth certain design criteria intended to protect the unique biological and environmental character of the Cucumber Gulch Preserve. When this project was first reviewed and approved (on January 22, 2008), the property was not subject to the Cucumber Gulch Overlay Protection District Ordinance, per a Development Agreement with Shock Hill Development, LLC, (reception #617308), approved February 15, 2000, since the Shock Hill Master Plan was vested until December 31, 2008.
- No exterior speakers or other devices for the amplification of sound are permitted on the outside of the building or on the grounds, with the exception of such devices required for emergency use.
- Applicant shall implement all appropriate provisions (as determined by the Town) of the Town’s “Cucumber Gulch Overlay Protection District Ordinance” (Ordinance 9, Series 2000).
- The spas/hot tubs shall be designed so that when these spas/hot tubs are drained, water flows into the sanitary sewer system. At no time will water from these sources be allowed to drain into the stormwater system, nor toward Cucumber Gulch.
- Applicant shall execute and record with the Summit County Clerk and Recorder a covenant and agreement running with the land, in a form acceptable to the Town Attorney, requiring all pets to be leashed or contained within enclosures when on the property, and at all times for pets to avoid disturbance of and interference with wildlife within the Cucumber Gulch area.
- Applicant shall execute and record with the Summit County Clerk and Recorder a covenant and agreement running with the land, in a form acceptable to the Town Attorney, requiring maintenance of the on-site water quality features for the property (including, but not limited to detention and retention ponds, bioswales, storm water pipes, water quality vaults, etc.) in perpetuity. The covenant shall authorize the Town of Breckenridge to inspect and perform maintenance on these water quality features, and to bill the owner or homeowners association if the Town needs to perform maintenance.

- Applicant shall revise the Tract C & E Stormwater Management Plans (Revision date November 26, 2007) to indicate that chain link fencing will be to the outside of the silt fence and hay bales. Applicant shall install construction fencing and erosion control measures according to the Tract C & E Stormwater Management Plans (Revision date November 26, 2007) and Stormwater Management Details (Revision date November 26, 2007), except as herein revised, along with the Preliminary Construction Activities Stormwater Management Plan for Shock Hill, Tracts C & E, (Revision date December 17, 2007) in a manner acceptable to the Town Engineer. An on site inspection shall be conducted and installation of erosion control measures shall be approved by the Town Engineer prior to start of construction, including tree removal.
- Applicant shall implement the final water quality monitoring plan, addressing surface and ground water. The plan shall indicate the final number and location of testing sites, testing method and frequency, and constituents to be tested. The plan shall be substantially similar to the "Shock Hill Tract C and E, Water Quality Baseline Testing Plan", submitted by Peggy Bailey of Tetra Tech, dated January 9, 2008. The final plan shall be reviewed and approved by the Town of Breckenridge's environmental consultant. The applicant and/or applicant's consultants shall meet with the Town and its consultants on site, prior to start of construction, to determine the appropriate water quality testing locations. Prior to issuance of a building permit, a minimum of six surface samples shall be collected from each collection site (a minimum of 7 days apart for each site) for both surface and ground water, in order to establish a baseline for water quality. The results of all water quality tests shall be provided to the Town of Breckenridge within three (3) business days from receipt of the results from the testing laboratory. All water quality testing shall be performed in an EPA approved facility. If the water quality testing results indicate that the project is having a negative impact on water quality, the applicant shall meet with the Town as soon as practicable to determine a proper mitigation approach. Water quality testing shall continue for one year after certificate of occupancy is issued.
- Per the approved Development Agreement dated March 13, 2007 and recorded with the Summit County Clerk and Recorder at Reception #851343, prior to issuance of a Certificate of Occupancy, applicant shall consult with the Town of Breckenridge Open Space and Trails staff, to determine if a split rail fence is needed on the downhill side of the development. If required by the Town, applicant shall install a buck and rail fence, in the locations required by the Town, to guide people toward the proper access points to existing trails and to Cucumber Gulch. Applicant shall be required to install and pay all expenses for the design, installation and maintenance of said fence(s).
- Per the approved Development Agreement dated March 13, 2007 and recorded with the Summit County Clerk and Recorder at Reception #851343, prior to issuance of a Certificate of Occupancy, applicant shall consult with the Town of Breckenridge Open Space and Trails staff on the design and content of signage, which shall be placed in locations most likely to be seen by people approaching the Town's Cucumber Gulch property from Tract C and Tract E-1. The signs shall contain information on the ecological function of the Gulch, the presence of the Boreal Toad, the prohibition of dogs in or near the Gulch, and the importance of staying on established trails. Similar signage and information shall be placed within the lobby or main entrance of the building, and within each residential unit. Applicant shall be required to install and pay all expenses for the design, installation and maintenance of said sign(s).
- Applicant shall construct all proposed trails according to the Town of Breckenridge Trail Standards and Guidelines (dated June 12, 2007). All trails disturbed during construction of this project shall be repaired by the Applicant according to the Town of Breckenridge Trail Standards and Guidelines. Prior to any trail work, Applicant shall consult with the Town of Breckenridge Open Space and Trails staff.

Breck Connect Gondola Best Management Practices Development Conditions From Permit #2004110

- This project remains subject to the findings and conditions of the Decision adopted by the Town of Breckenridge Planning Commission on April 15, 2002, and affirmed by the Town Council of the Town of Breckenridge on April 23, 2002, in connection with the Planning Commission matter PC#2000155 (Breckenridge Ski Resorts Peaks 7 and 8 Master Plan Amendment—A Variance from the Cucumber Gulch Overlay Protection District Ordinance for the Gondola) ("Decision"). The terms of the Decision, as well as all associated documents specified in it, are hereby incorporated into this permit by reference.

- *Applicant shall protect all existing trees that are specified on the site plan to be retained by erecting temporary fence barriers around the trees to prevent unnecessary root compaction during construction. Construction disturbance shall not occur within the fence barriers, and dirt and construction materials or debris shall not be placed within the fencing. The temporary fence barriers are to remain in place until issuance of the Certificate of Compliance.*
- *Applicant shall submit and obtain approval from the Town of a construction staging plan indicating the location of all construction material storage, fill and excavation material storage areas, portolet and dumpster locations, and employee vehicle parking areas. This plan shall also include, but is not limited to, methods, access, timing, erosion control and Best Management Practices. No staging is permitted within public right of way without Town permission. Any dirt tracked upon the public road shall be the applicant's responsibility to remove. Contractor parking within the public right of way is not permitted without the express permission of the Town, and cars must be moved for snow removal. A project contact person is to be selected and the name provided to the Public Works Department prior to issuance of the building permit.*

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VIII. Visual Credits

Photo credit references listed in order of appearance. All photos not listed courtesy of the Town of Breckenridge.

Cover—Nordic Skier In Preserve. Personal photograph by Carri Willbanks. 12 April 2011.

Page 1—1965 Breckenridge Ski Area Trail Map. Coloradoskihistory.com and Breckenridge Ski Area. C. 1965.

Page 2—Nordic Life Fitness Complex. Breckenridge Nordic Village Corp. C. 1979

Page 2—1982 Breckenridge Ski Area Master plan. BRW and Aspen Skiing Company. C. 1982.

Page 3—Cucumber Gulch Map. ERO Resources et. Al. July 2003.

Page 16— Moose Calving. The Outdoor Classroom Blogspot.com, 30 October 2010.



Town of Breckenridge

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Memorandum

To: BOSAC
From: Open Space and Trails Staff
Re: Cucumber Gulch Preserve Master Plan Open House Continuum Results
Date: January 9, 2012

Public Input: This memo provides input collected from the Cucumber Gulch Preserve Management Plan public process. The public process allowed participants the ability to provide input in person at an open house and through various electronic means. Interested participants had the opportunity to complete the same continuum exercise that both the Town Council and BOSAC recently completed and make general comments regarding the plan and management of the Preserve. To keep BOSAC updated on the process, staff has provided the continuum results along with all comments received through the public process in this memo.

To ensure ample opportunity for the public to provide feedback, staff set up a webpage to view the draft plan, participate in the Continuum exercise and submit general comments for individuals that could not attend the open house. Information that was received through the website and other electronic forms is included in addition to input received at the open house.

Results from the public process in addition to the Town Council and BOSAC's extensive input were used to create the attached final draft plan. Upon review of the public input and final draft plan staff is requesting BOSAC make a formal recommendation for adoption of the Cucumber Gulch Preserve Management Plan to the Town Council.

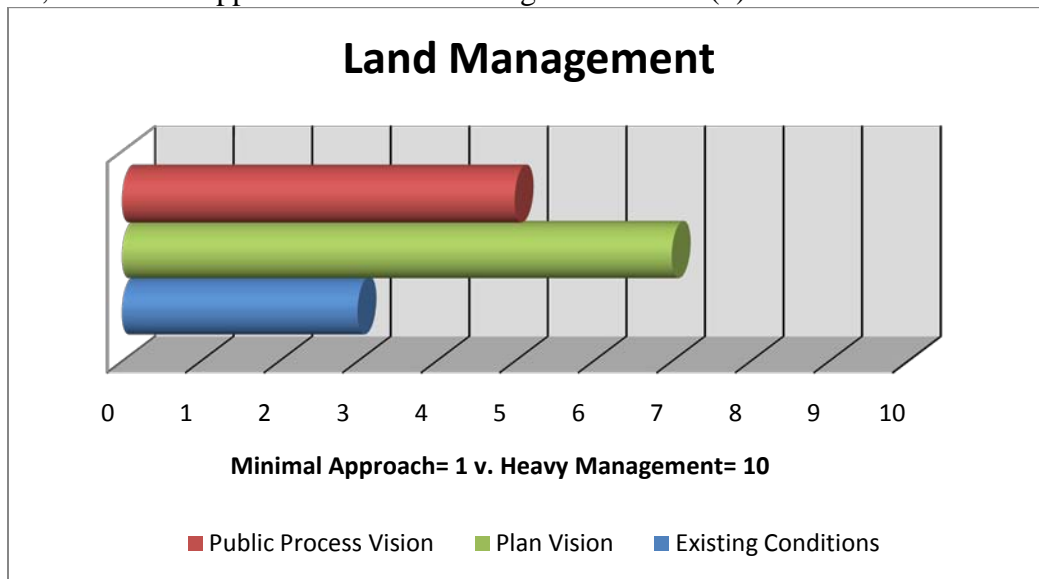
Outreach: Prior to the open house, staff contacted all HOA's in the direct vicinity of the Preserve and requested they forward our invitation to all of their property owners. All invitations included a link to the draft plan and mentioned that staff will be happy to receive comments from those unable to attend the open house. All HOA's with the exception of Vail Resort's properties (whom we contacted twice and had representatives in attendance at previous meetings), the Grand Lodge at Peak 7 (with which Councilmember Dudick is affiliated and has been involved in the plan development process) and Gold Camp II had formal HOA representatives in attendance.

To put the amount of outreach for the plan in perspective, staff attempted to contact over 400 property owners and managers. This is approximately twice as many individuals as staff attempted to directly contact for any of the Sustainable Breck public process meetings. Staff also ran ads for the open house in the Summit Daily News, something the Town has not done for open houses since the beginning of the recession. Additionally social media was utilized to solicit public input for the plan.

Continuum Results

Below are graphs representing the tabulated results from public process participants, our Plan Vision and Existing Conditions.

Land Management: The Town takes a more active role in regulating, patrolling and enforcing the rules within the Cucumber Gulch Preserve (10) or strives for a more hands-off, minimalist approach to administering the Preserve (1).

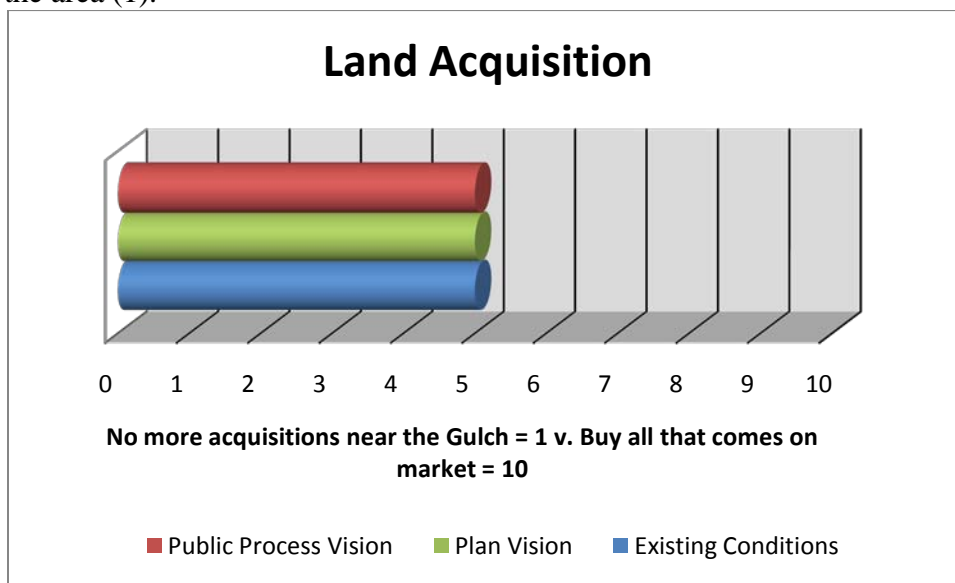


Public Process Vision – 5

Plan Vision – 7

Existing Conditions – 3

Land Acquisition: The Town should be more aggressive in acquiring land to buffer the sensitive portions of Cucumber Gulch (10) or should not pursue additional acquisitions in the area (1).

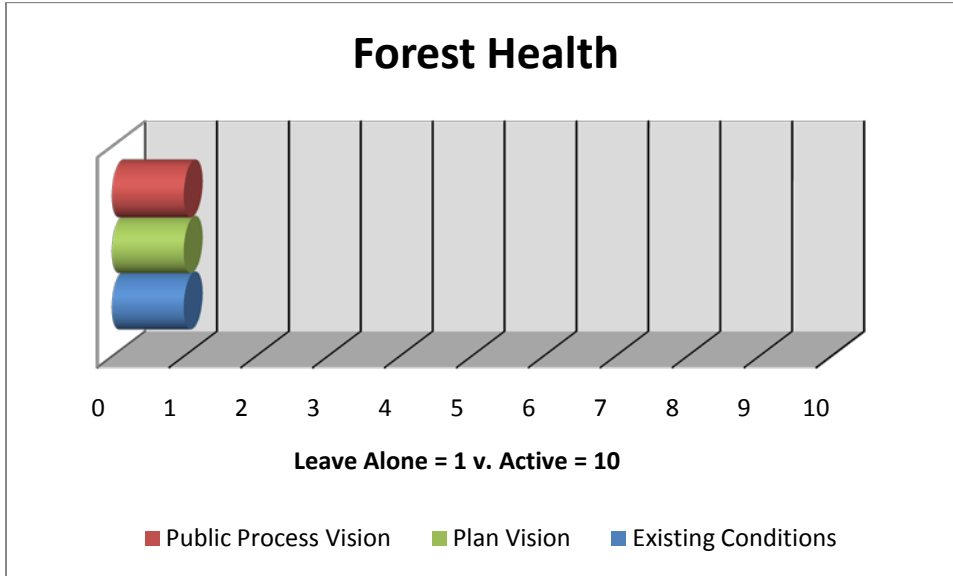


Public Process Vision – 5

Plan Vision – 5

Existing Conditions – 5

Forest Health: The Town should actively treat forest health issues such as dead and infested trees (10) or should let nature run its course within the Preserve (1).

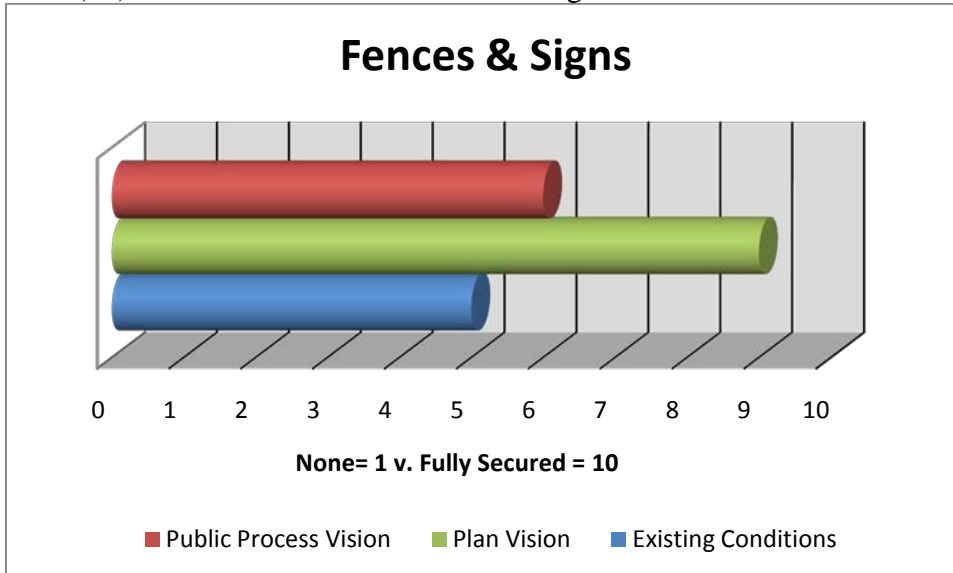


Public Process Vision – 1

Plan Vision – 1

Existing Conditions – 1

Fences and Signs: The Town should install more fencing and signs to protect sensitive areas (10) or should not utilize fences and signs to direct recreational traffic (1).

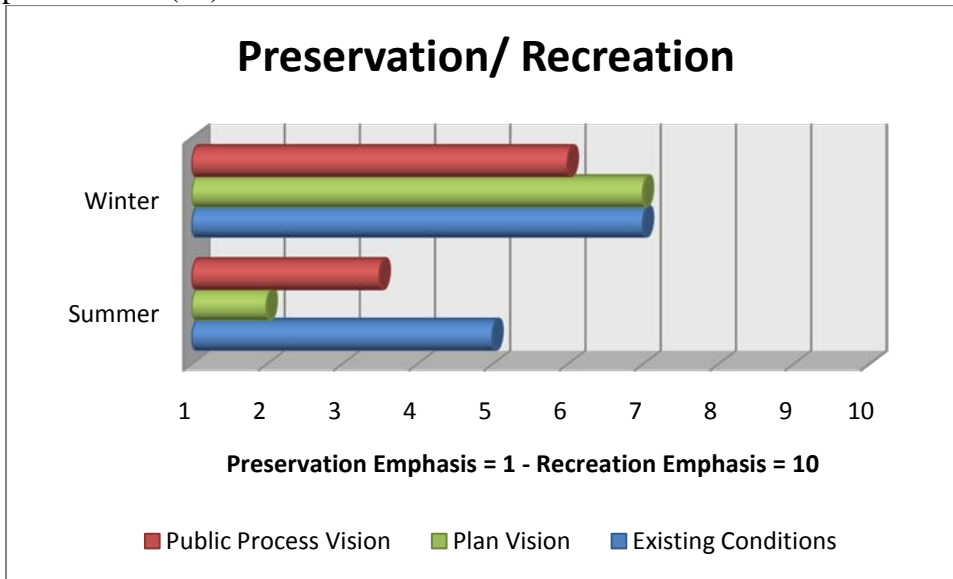


Public Process Vision – 9

Plan Vision – 6

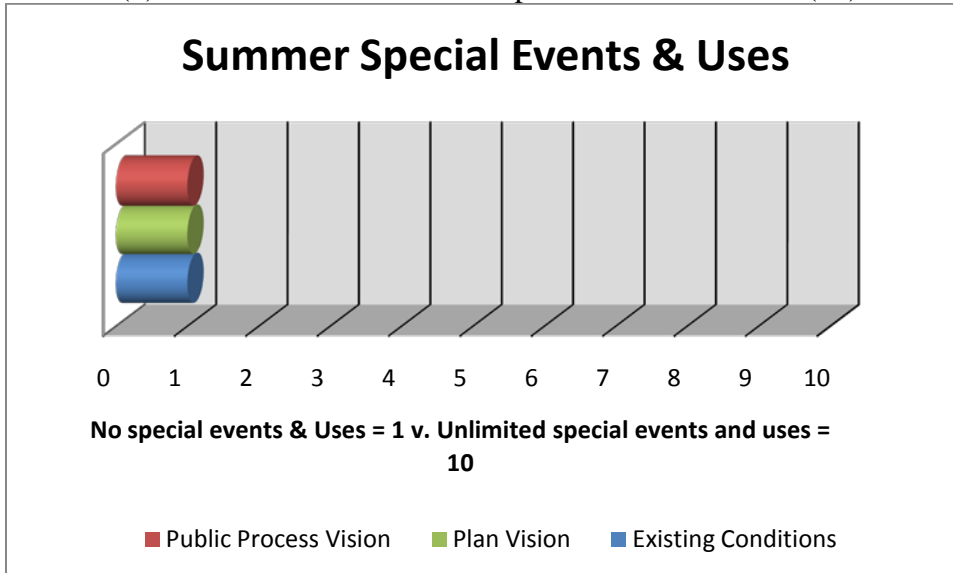
Existing Conditions – 5

Recreational Access: The Town’s management of Cucumber Gulch Preserve should prioritize preservation over management (1) or should prioritize recreation over preservation (10).



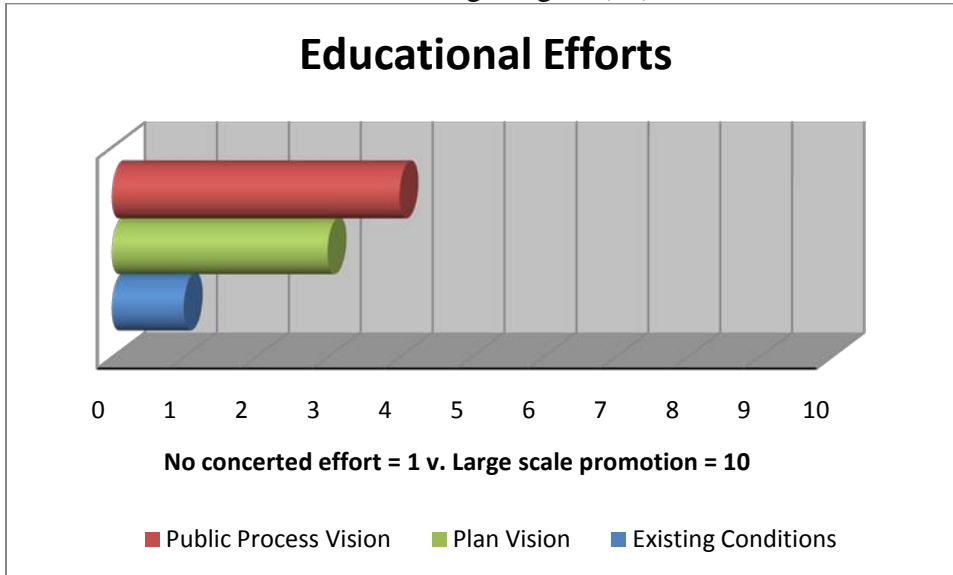
Public Process Vision – 3.5 summer, 6 winter
Plan Vision – 2 summer, 7 winter
Existing Conditions - summer 5, winter 7

Summer Special Events and Uses: The Town should prohibit summertime special events and uses (1) or should allow unlimited special events and uses (10).



Public Process Vision – 1
Plan Vision – 1
Existing Conditions – 1

Educational Efforts: The Town should not seek to educate users in the Preserve (1) or should strive to educate users to a high degree (10).

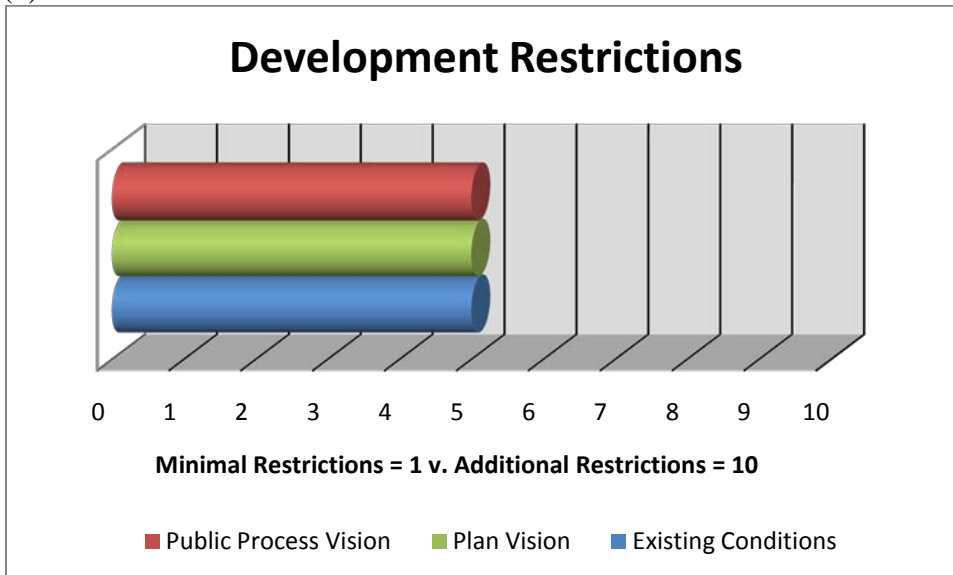


Public Process Vision – 4

Plan Vision – 3

Existing Conditions – 1

Development Restrictions: The Town should seek to increase development restrictions in and around Cucumber Gulch Preserve (10) or should have no development restrictions (1).



Open House Vision – 5

Plan Vision – 5

Existing Conditions – 5

Open House Comments

- Too many signs now
- Fences keep large wildlife out.
- No Bike Races
- I generally agree with what BOSAC & TOB are thinking, just a few minor differences. Thanks!
- Certain summer events should be allowed. With proper understanding between organizers and Town Staff. Events of the proper size and culture could operate with no detriment to the Preserve (i.e. Breck Crest)
- Replace Theobald fence
- Allow Nordic Skiing in Meadow until Dark
- Find a place for an in-Town “Dog Loop”
- Find a way to have Theobald Portion of Wetlands
- Infested trees should be removed per TOB ordinance
- Better wayfinding signage (same style as existing) needed.
- Overview at portals location specific within Gulch (Similar to today)
- It would be better to heat Josie’s with clean natural gas (which is 90’ away) than wood.
- Should allow more than 8 people by special permit
- The idea of “patrols” in the forest is a gross mis-use of Town resources
- Public property is managed much more sustainably than private property. I applaud all land acquisitions.
- 1 for fences 8 for signs
- The Gulch and surrounding areas, are far too developed!
- As a usual trail & open space user I think that the availability of Brecks open space is exceptional and if this small portion of it needs a little more protection, I have no problem using other areas within similar proximity.
- Recommend not bending on rule of use 1 hr after sunrise to 1 hr before sunset.

Email Comments

- I am very encouraged by your plan and agree with you on the necessity of a single resource document. The history of the Reserve and the various developmental activity over such a broad period highlights the need to consolidate information. Your group’s plan is a big time step in the right direction in my opinion.
- As a resident living adjacent to the Reserve (1116 Highwood Circle) at one of the entrances (end of Highwood Circle) we fully appreciate the need for certain improvements and the goals you have outlined. From our 15 years of residing at this location we have observed a significant increase in people traffic and while

page 5 of the plan denotes winter recreation as the biggest draw to the area we are experiencing the summer draw to be increasing quite rapidly. Unfortunately we are encountering more and more visitors who are entering the Reserve at our nearby entrance who are bringing unleashed dogs into the Reserve. In White Wolf all of our residents are well informed of the "no dogs" into the Reserve ordinance and as no pets are allowed under the various rental agreements we have a firm view of who are the violators of this ordinance. On average during the July through Sept period we observe approximately 6 unleashed dogs per day and to date very little enforcement of the violations. On about 20 occasions each year when we have approached the violators to remind them of the sign and the reasons and need to abide by the ordinance we are almost always blown away with the comment by these folks with "Yes we have read the sign but do not agree with the restriction and could care less about the impact". Based on my experience these visitors are from 2 areas Gold Camp and Peak 8 Village. They appear to be either renters or owners friends in for a quick visit who have an attitude of total disregard for the Reserve. The solution unfortunately would seem to be increased enforcement, monitoring and stiff \$\$ penalties. About 5 years ago a few of these penalties did make an impression but with visitors coming and going most of the recent visitors are clueless about penalties.

- During meetings on Sustainable Breck one of my concerns expressed on Open Space acquisitions is to provide adequate maintenance budget on these properties. In past correspondence with Scott Reid, I realize there is a balancing process of \$ and priorities. The reference on page 15 of the 2007 study with comment of "no forest health intervention" gives me some concerns. The Reserve in my nearby vicinity has a significant number of standing dead timber that is a safety concern as the dead timber is in many places near trail traffic. Basically an accident waiting to happen. During high wind periods I have on several occasions had to saw the downed timber to allow for bicycle and foot traffic to have access to the trail. I have often waited several weeks for the Town to conduct inspections and address the problem but see very limited appearances. In the future I may need to increase the volume of communications to obtain action. The key issue on this subject as I see it is a more balanced approach to maintenance where needed and not to go to the extreme of leaving the forest in its natural state when proper ongoing maintenance is warranted.
- Keep up the GOOD WORK and our HOA remains willing and able to participate in Reserve Preservation.

Facebook Comments

- Please work on providing concierges of Peak 7 and 8 with not just "encouragement" but maps and good written directions on alternate trails other than the Gulch. The folks that do this job need BOSAC's help on where to direct people - and preferably not always the Peaks Trail, but onto the ski resort trails...
- Also - I'm not sure where it's at with this issue, but in the past we had discussed closing the access point from Peak 7/Peaks TH down into the gulch or at least

making it closed to downhill access? Just curious. And lastly-on page 3 - this isn't a big deal at all and not worth correcting, but it isn't "speculation" that BOSAC was started to preserve the Gulch - that is a fact. That's what motivated myself and others - to save the Gulch for nordic skiing and summer hiking. I first went to the Rounds Family and asked them to donate some of their land - they refused - and that's what motivated the half percent tax. And it was also the Boreal Toad....

- AND THANKS!! I know how much work this took. Thanks BOSAC...
- Please DO NOT eliminate downhill access. I love you ..., but we may have to thumb wrestle over that one. Maybe eliminate uphill access? Oh-ho! You don't like that, now do you?!
- I'm really worried that now bikes are allowed on the gondola that this western entrance into the gulch will become the best descent route from Vista Haus back to your car. Right now the trail through that zone is super wet and this is the wild (moose, elk etc) side of the gulch. So I think this deserves some monitoring and some kind of restrictions - maybe not full on closure. Maybe Vail Resorts needs to help out with this. And sure-if it means uphill restrictions as well - that's fine - especially if that trail is as wet as it was for much of last summer. There could be a more sustainable way to drop into the gulch if you just head a little ways north or south on Ski Hill Rd.
- And I didn't mean to single out downhill bike traffic because it's even more of an issue with all the folks staying at Peak 7 and 8 - so many people in Cuke Gulch last summer - we just need VR to help steer them somewhere else. (... - it's not so much the impact from an occasional bike race that concerns me, and lucky for you I have a feeling I'm the minority on this one.)
- It was mentioned at the open house that restricting certain uses and or directions is always on the table. The main priority in this case is to find ways to minimize our future impact on the area. The trail system into town from Peaks Trail needs quite a bit of fine tuning to say the least, but we'll get there, and it will be a fun way to get down. The Gulch has a special place in everyone's hearts for different reasons, some biking some not... but mostly biking. As fun as it is to ride through there, up AND down, it doesn't necessarily mean that we should. Time will tell the fate of those trails uses, I know no matter what everyone won't be happy, but hopefully everyone will understand.
- Let's hear it for the folks at Breck's Open Space Committee and the awesome work they're doing. Dennis Kuhn, Jeff Cospolich, Jeff Carlson, Devon O'Neil, Scott Yule, and Erin Hunter. And Scott Reid, who kicks butt always, doing the right thing.

<http://allmountainmedia.squarespace.com/blog/2011/12/14/cucumber-gulch-bosac-hard-work.html>



MEMORANDUM

TO: BOSAC and Town Council
FROM: Tony Overlock, Lead Trails Technician
Scott Reid, Open Space and Trails Planner
DATE: January 9, 2012
SUBJECT: 2011 Trail Crew Field Season Report

The Town of Breckenridge Trail Crew is a four person seasonal crew whose main responsibilities include: 1) Designing and maintaining natural surface trails; 1) Protecting historical sites and sensitive habitats; and 3) Overseeing the Friends of Breckenridge Trails volunteer program. In its seventh year, the trail crew accomplished a wide variety of projects while partnering with multiple volunteers and organizations. With every project, the crew's goal is to produce a product that is sustainably designed, is constructed with the highest quality workmanship, and provides an enjoyable experience for trail users.

2011 Highlights

- **Total Volunteers and Hours:** 296 volunteers donated a total of 1,251 hours, with a value of almost **\$27,000 to the Town.**
- **Realigned and Constructed** over **8,100 feet** of new trail.
- **Extensive trail maintenance** to over 18 miles of natural surface trails.

Project Details

- **River Trail:** In conjunction with Higher Ground Earthworks, constructed and improved over 5,200 feet of trail.
- **Discovery Hill Trail Extension:** Constructed 1,200 feet of new trail in cooperation with: Fat Tire Society, Babes in the Backcountry, and Make a Difference Day volunteers.
- **Illinois Creek Trail:** Constructed 1,200ft of new trail, improved 2,000 feet of existing trail and closed 600 feet of trail, in cooperation with Volunteers for Outdoor Colorado (VOC) and Summit County Government.
- **Cucumber Gulch**
 - Volunteers targeted the removal of false chamomile, coastal tarweed, and Canadian thistle.
 - Installed 1,300 feet of buck and rail fencing.
 - Armored 100 feet of trail with geo-mat and redefined 900 feet of trail.
 - Continued traffic use studies.

- **Reforestation Efforts:** In cooperation with Bristlecone Foundation's Legacy Forest Program and Make a Difference Day volunteers, planted 300 trees and spread 300 pounds of native grass seed on recently cleared Town open space parcels.
- **Tombstone Trail:** Constructed 400 feet of new trail in collaboration with Breckenridge Resort Chamber volunteers.
- **Sawmill Trail:** Restored 500 feet of trail with visually impaired youth from the Breckenridge Outdoor Education Center.
- **Interpretive Trail Dredge Parking Area:** Constructed three bridges (16, 32, and 33 foot long) in cooperation with Summit County Open Space and Rocky Mountain Youth Core.
- **Vista Point:** Installed 14 tons of crusher fines on trail and conducted extensive drainage work.

The 2011 season was a challenging year due to considerable snow run off and heavy precipitation. Staff is looking forward to the 2012 field season with an emphasis on overseeing the Galena Ditch VOC project, realigning a section of the Barney Ford trail, increasing volunteer numbers, and continuing work on the Town's extensive trail network.