

OPEN SPACE BOARD OF TRUSTEES
Wednesday, December 14, 2016
Council Chambers, 1777 Broadway

MEETING AGENDA
(Please note that times are approximate.)

- 6:00 I. Approval of Minutes**
- 6:05 II. *Public Participation for Items Not Identified for Public Hearing**
- 6:15 III. *Boulder Valley Comprehensive Plan Update – Proposed Revisions to Trails policy in Sec. 8 and the Trails Map; Sec. 3 (Natural Environment); Sec. 9 (Agriculture and Food), and Updates to the Land Use and Planning Area maps to reflect changes to city Open Space and Mountain Parks lands.**
- 8:30 IV. Matters from the Department**
- 8:40 V. Matters from the Board**
A. Finalize response for Council Retreat
- 9:00 VI. Adjournment**

* Public hearing

Open Space Board of Trustees
2016/2017 Tentative Board Items Calendar
(updated Dec. 2, 2016)

December 14	January 11, 2017	February 8
<p>Action Items:</p> <ul style="list-style-type: none"> • BVCP – 1) Trails Map 2) Trails, Nat. Env & Food/Ag Policies Rev & Rec to CC; 3) BVCP – Updates to the Land Use and Planning Area Maps Rev & Rec to CC <p>Matters from the Department:</p> <p>Matters from Board:</p> <ul style="list-style-type: none"> • Finalize response for Council Retreat 	<p>Action Items:</p> <ul style="list-style-type: none"> • BVCP - CU South – Possible Rev & Rec to CC <u>OR</u> Verbal Update • 311 Mapleton Land Use Designation (or Feb) <p>Matters from the Department:</p> <ul style="list-style-type: none"> • Prairie Dog Working Group • Boulder Creek Restoration Update (info in Oct. packet) <p>Matters from Board:</p> <ul style="list-style-type: none"> • CAMP Update • 50th Anniversary 	<p>Action Items:</p> <ul style="list-style-type: none"> • NCWCD pipeline easement (disposal) <p>Matters from the Department:</p> <ul style="list-style-type: none"> • Review of Ag Plan • Community Ranger Program <p>Matters from Board</p> <ul style="list-style-type: none"> • 50th Anniversary <p><i>Potential Joint Boards meeting in month of February re Chautauqua access plan?</i></p>
March 8	April 12	May 10
<p>Action Items:</p> <ul style="list-style-type: none"> • Ag Plan review and recommendation to City Council (Council consideration in Apr) • Pending acquisition <p>Matters from the Department:</p> <ul style="list-style-type: none"> • Prairie Dog Working Group • Resident Survey <p>Matters from Board</p> <ul style="list-style-type: none"> • CAMP Update 	<p>Action Items:</p> <ul style="list-style-type: none"> • Prairie Dog Working Group results? • Pending acquisition • Volunteer Services summary & proclamation <p>Matters from the Department:</p> <ul style="list-style-type: none"> • Budget - CIP Background info • Disposal Procedures • Confluence Area trail projects <p>Matters from Board</p> <ul style="list-style-type: none"> • 50th Anniversary 	<p>Action Items:</p> <ul style="list-style-type: none"> • Confluence Area Trail projects • Pending acquisition <p>Matters from the Department:</p> <ul style="list-style-type: none"> • Draft CIP <p>Matters from the Board:</p>

OPEN SPACE BOARD OF TRUSTEES

Action Minutes

Meeting Date November 9, 2016

Video recording of this meeting can be found on the [City of Boulder's Channel 8 Website](#). (Video start times are listed below next to each agenda item.)

BOARD MEMBERS PRESENT

Frances Hartogh Molly Davis Kevin Bracy Knight Tom Isaacson Curt Brown

STAFF MEMBERS PRESENT

Tracy Winfree John Potter Jim Reeder Brian Anacker Steve Armstead
Mark Gershman Keri Davies Leah Case Alycia Alexander

GUESTS

Lesli Ellis, Comprehensive Planning Manager, PH&S

CALL TO ORDER

The meeting was called to order at 6:02 p.m.

AGENDA ITEM 1 – Approval of the Minutes (15:40)

Tom Isaacson moved that the Open Space Board of Trustees approve the minutes from Oct. 26, 2016. Curt Brown seconded. This motion passed unanimously.

AGENDA ITEM 2 – Public Participation for Items not Identified for Public Hearing (16:37)

Karen Hollweg, Friends of Boulder Open Space (FOBOS), asked if the 2010 maps shown in the Boulder Valley Comprehensive Plan (BVCP) will be updated in the final memo for the Board in December. Lesli Ellis responded that these will likely not be updated by December, however staff is working to collect the data necessary to update these maps in the future.

AGENDA ITEM 3 – Matters from Staff

Jim Reeder, Trails and Facilities Manager, gave an update on the 2013 Flood Recovery. (18:30)

Mark Gershman, Environmental Planning Supervisor, gave an update on the Boulder Valley Comprehensive Plan: Proposed updates to the Land Use and Planning Area Maps reflecting Open Space Board of Trustees and City Council approved changes from 2011 to the present. (54:06)

AGENDA ITEM 4 – Matters from the Board

The Board had a discussion regarding Board and Commission Feedback for the January 2017 City Council Retreat. (1:28:45)

Curt Brown gave a presentation on the Chautauqua Access Management Plan (CAMP). (1:52:31)

ADJOURNMENT – The meeting adjourned at 8:17 p.m.

These draft minutes were prepared by Leah Case.



**CITY OF BOULDER
OPEN SPACE BOARD OF TRUSTEES AGENDA ITEM**

MEETING DATE: December 14, 2016

AGENDA TITLE: Boulder Valley Comprehensive Plan Update – Proposed Revisions to Trails policy in Sec. 8 and the Trails Map; Sec. 3 (Natural Environment); Sec. 9 (Agriculture and Food), and Updates to the Land Use and Planning Area maps to reflect changes to city Open Space and Mountain Parks lands.

PRESENTER/S

Open Space and Mountain Parks (OSMP) Department:

Tracy Winfree, Director
Mark Davison, Community Connections and Partnership Manager
John Potter, Resource and Stewardship Manager
Brian Anacker, Science Officer
Andy Pelster, Resources Supervisor
Don Damico, Ecological Systems Supervisor
Mark Gershman, Environmental Planning Supervisor
Steve Armstead, Environmental Planner

Planning Housing & Sustainability (PH&S) Department:

Susan Richstone, Deputy Director
Lesli Ellis, Comprehensive Planning Manager
Jean Gatza, Senior Planner
Tanya Ariowitsch, Senior GIS Specialist

EXECUTIVE SUMMARY

The Boulder Valley Comprehensive Plan (BVCP) is the community's plan for the future. Its policies maps and policies are intended to guide decisions for a longterm horizon (15-years). It is updated every five years to respond to changed circumstances or evolving community needs and priorities. The city and county are in the midst of a major update that will conclude in 2017.

The purpose of this item is to seek recommendations on the revised draft sections of the Boulder Valley Comprehensive Plan including the following:

1. Trail map and memo and revised trail policy in Sec. 8 (**Attachments A1 through A-9**)
2. Sec. 3 Revised Natural Environment policies (**Attachments B-1 and B-2**)
3. Sec. 9 Revised Agriculture and Food policies (**Attachments C-1 and C-2**)
4. Land Use and Planning Area Map updates (**Attachments D-1 through D-5**)

These items are the relevant sections pertaining to OSMP and form part of a larger set of policies and sections of the BVCP that will be ultimately recommended for approval. The Open Space Board of Trustees (OSBT) has discussed these items at the following previous Board meetings in 2016:

- Aug. 10 (Sec. 3, Natural Environment)
- Sept. 14 (Sec. 9, Agriculture and Food and trails map)
- Oct. 26 (trails map and map description)
- Nov. 9 (Land Use and Planning Area map updates to show edits for Open Space Mountain Parks (OSMP) lands. Discussed the process for updating the Environmental Resources Element of the BVCP).

Under the provisions of the City Charter [Article XII, Section 175 (e)], the OSBT is required to review and make recommendations on all open space related changes to the BVCP. As such, the OSBT plays an advisory role to the four decision making bodies who ultimately approve the BVCP. The Board's recommendation and other feedback will be carried to the four bodies that will be asked to approve the BVCP update—City Council, Planning Board, and County Board of Commissioners and Planning Commission.

STAFF RECOMMENDATION(S)

Open Space and Mountain Parks staff requests that the OSBT recommend to Planning Board and City Council approval of each of the following items:

- (1) The proposed BVCP Trails Map changes relating to city Open Space and Mountain Parks lands, policy changes in Chapter 1, Sec. 8 Community Well-being) and the BVCP Trails Map Description
- (2) The proposed policy changes set forth in Chapter 1, Sec. 3 Natural Environment
- (3) The proposed policy changes set forth in Chapter 1, Sec. 9 Agriculture and Food
- (4) The proposed changes to the Land Use Map and Planning Area maps relating to city Open Space and Mountain Parks lands

COMMUNITY SUSTAINABILITY ASSESSMENTS AND IMPACTS

- Economic – The BVCP contains long-range planning policy that supports the development and sustainability of city programs that are fiscally sound, represent good governance and encourage an economically vital community. Aspects of the plan that affect city open space are integral in creating an environment that attracts and retains employers and employees.
- Environmental – The BVCP includes guiding policy that reflects and supports programs and services encouraging Boulder to be an environmentally sustainable community. The policies which affect the management of open space lands by the city and county encourage the development and long-term environmental sustainability of the Boulder Valley.
- Social – Connections with nature and agricultural lands provide opportunities such as recreation activities, education, volunteering and the knowledge that the city and county have been working to preserve habitats for plants and animals have been identified as important factors for sustaining healthy, socially thriving and livable community by the people living in the Boulder Valley. BVCP policies describing nature access, enjoyment and connections with public land support the growth and expansion of these community services.

OTHER IMPACTS

- Fiscal - The recommended changes are consistent with and drawn from past direction of the OSBT and City Council. The proposed updates to the BVCP are not anticipated to create significant additional fiscal demands upon the Open Space Fund.
- Staff time – Staff time spent on the development of the proposed update items and on implementing actions consistent with the policy direction are part of normally allocated staff time for OSMP staff.

PUBLIC COMMENT AND PROCESS

The draft policy sections of the plan were made available for public review from Aug. 24 through Oct. 11, and the city and county received numerous comments as noted in the attached, summarized below. Community members with natural environment and soil health knowledge as well as outdoor recreation interests met with staff from the city or county to describe suggested updates, and formally submitted input to the plan update process. Additionally, the Planning Board, County Planning Commission, and OSBT have provided comments that have helped shape the current recommended updates.

OSMP and PH&S staff have provided updates on the materials being presented in this memo over the course of 2016 as shown in the table below. Although the Trails Map and accompanying language in the implementation section of the BVCP have been the topic of previous updates, policy updates relevant to trails (Section 8: Community Well-being) were identified late in the process and mentioned only briefly at past meetings with the OSBT.

BVCP Element	Aug	Sep	Oct	Nov	Dec	Jan
Policies	Staff Update	Staff Update	--	--	Action Item	--
CU South Campus	Staff Update	Staff Update	--	--	--	TBD
Trails Map Update	--	Staff Update	Staff Update	--	Action Item	--
Open Space Map Updates	--	--	--	Staff Update	Action Item	--

ANALYSIS

Following over a year of staff research, inventory, and analysis, as well as community engagement and input, the current BVCP update is nearing completion for updated policies and map changes. In early 2017, PH&S will share recommendations for key policies with the four approval bodies and following that discussion staff will begin preparing a draft plan for consideration and adoption, a process that will include additional opportunities for public review and input. The webpage for the BVCP contains up-to-date information about all aspects of the project and draft products and summaries of engagement: www.bouldervalleycompplan.net.

During 2015 and 2016, OSBT has reviewed and provided feedback on drafts of the Natural Environment, the Agriculture and Food, and trails policies and map changes for the Trails Map, Land Use Map, and Planning Areas Map. Following input from OSBT, the city staff team prepared the Aug. 24, 2016 drafts for public review. Based on further feedback from OSBT and additional input from Planning Commission, county staff, and members of the community, the planning team has compiled the currently attached of each of the sections. These precede other draft sections of the BVCP that will be prepared in early 2017; however, staff does not anticipate these sections having significant effects upon city open space lands.

A. Trails Map, Map-Description and Policy

Trails Map and Associated Description

The BVCP Trails Map is a comprehensive guide for existing and previously approved proposed trails and trail connections for the entire Boulder Valley. It shows proposed trails, including grade separated trail underpasses that have been planned through departmental master planning, or area planning processes, as well as trail connections that are important links in the Boulder Valley and regional trails systems.

The update includes the proposed changes to the BVCP Trails Map related to OSMP-managed lands reflecting plans that have already been reviewed and approved by the OSBT and City Council. The categories of changes are:

- New proposed trails
- Modifications to proposed trails
- Changes from ‘proposed’ to ‘existing’ to reflect newly constructed trails
- Deletions of proposed and existing trails
- Map corrections

A list of OSMP changes to the BVCP Trails Map are described in **Attachment A-1** and shown on the OSMP map in **Attachment A-2**. A summary of *all* proposed changes to the BVCP Trails Map are described in **Attachment A-3** and shown on the draft map in **Attachment A-4**. The current (2010) BVCP Trails Map is available in **Attachment A-5** for comparison.

At the Sept. 14 meeting, one suggestion recommended by Board members was to consider ways to make the “Conceptual Connection” arrow representing the proposed regional connection between Eldorado Canyon State Park and Walker Ranch less definitive. Staff recommended that the implementation section of the BVCP, which includes a description of the BVCP Trails Map and map symbols, be expanded to include an explanation of conceptual connection arrows.

During the Oct. 26 meeting, the Board shared additional feedback on the BVCP Trails Map and had suggestions for enhancing information available on the map. These suggestions included:

- Adding information to help clarify the purpose of the map;
- An explanation on where additional trail and map description approval information is available;
- Explanations for the proposed trail, conceptual connection and conceptual trail alignment map symbols; and
- Adding and modifying conceptual connections.

The staff team reviewing proposed changes to the Trails Map assessed the OSBT’s suggested map improvements and revisions. See **Attachment A-6** for a summary of the OSBT’s comments and subsequent revisions. Proposed revisions to the Trails Map Description in the Implementation Section of the BVCP are included in **Attachment A-7**.

Trail-related Policies

Staff received various suggested revisions and feedback on trails policies from members of the public and county staff. A list of feedback with analysis and recommendations is documented in **Attachment A-8** and proposed changes to trails policies can be found in **Attachment A-9**.

Proposed changes to trails policies include:

- Policy 8.12 Trail Functions and Location
 - Include introductory sentence reflecting positive functions of connectivity

- Design to include enjoyable visitor experience
- Encourage trail designs that promote on-trail travel
- Design for long-term sustainability
- Look for opportunities to enhance habitat connectivity along trail corridors
- Policy 8.13 Trails Network
 - Support for trails system connectivity and identify relationship with regional trails systems beyond the BVCP area.

Additional comments from the Board will be either incorporated as changes to the map, or noted and submitted with the map for consideration during adoption.

STAFF RECOMMENDATION

Open Space and Mountain Parks staff requests that the OSBT recommend to Planning Board and City Council approval of the proposed:

- BVCP Trails Map changes relating to city Open Space and Mountain Parks lands as shown in Attachment A-4,
- BVCP Trails Map Description as shown in Attachment A-7, and
- Trails-related policy changes as shown in Attachment A-9.

B. Sec. 3 Natural Environment

This section focuses on policies related to the natural environment including incorporation of ecological systems into planning, adaptive management approach, protection of natural lands, management of wildlife, water conservation, flood management, and air quality. The changes to this chapter reflect updated plans and work since the 2010 Plan and strengthened policies related to existing plans and numerous other updates to clarify and strengthen policies related to these topics. **Attachment B-1** summarizes the change to this section. **Attachment B-2** includes the edited section. The section has had quite a few changes since the August draft that reflect county staff, Parks and Open Space Advisory Committee, Planning Commission and input from groups of community members with particular open space, environment, and soil health knowledge. Additional input and review from city OSMP staff and from other departments are also included and all documented in the attachment.

The section now includes a more extensive and descriptive preamble to call out features of the natural environment including the differences between policies as attributed to publicly owned versus private lands and lands in the urban context versus those that are part of the city and county open space surrounding the city. It also includes new language and policies related to climate change and resilience. In general, the policies maintain or increase levels of protection and clarity about this section's relationship to

other master plans and the city's and county's respective roles in environmental protection.

STAFF RECOMMENDATION

Open Space and Mountain Parks staff requests that the OSBT recommend to Planning Board and City Council approval of the proposed policy changes set forth in Chapter 1, Sec. 3 Natural Environment as described in **Attachment B-2**.

C. Sec. 9 Agriculture and Food

This section focuses on agriculture, food, sustainable practices, and access to food for the community. The city and county have made significant contributions to the preservation of lands for agricultural production and the water needed to use these areas for agriculture such that most agricultural production in the Boulder Valley now occurs on city and county open space. **Attachment C-1 summarizes the changes to Section 9.**

Attachment C-2 shows the edited section. The changes to this chapter reflect updated plans and work since the 2010 Plan as well as a new proposed policy regarding soil health and soil sequestration that has been updated and modified based on recent input from community members and OSMP staff.

STAFF RECOMMENDATION

Open Space and Mountain Parks staff requests that the OSBT recommend to Planning Board and City Council approval of the proposed policy changes set forth in Chapter 1, Sec. 9 Agriculture and Food as shown in **Attachment C-2**.

D. Land Use and Planning Area Map Update

Land Use Map

The BVCP includes a land use map (see **Attachment D-1**) which is a sketch plan of the desired land use pattern in the Boulder Valley. Land use categories include residential, business, industrial, public/semi-public, open space and park use. Staff is not proposing any changes to the land use designation descriptions as part of this update.

The Land Use Map updates that staff requests the OSBT to recommend to City Council reflect changes in the land use designation of properties to address the following actions which have been previously approved by the OSBT and City Council:

- Acquisition of open space either in fee or through a conservation easement.
- Exchanges of open space land.
- Disposals of open space land.

Attachment D-2 contains the proposed updates to the Land Use Map for acquisitions and exchanges. Because of their small size, it is difficult to show both the location/context and extent of each of the disposals on a single map. The disposals along with other properties for which changes are being proposed are listed in **Attachment D-3**. In response to OSBT comment, the list has been updated to include the disposals related to concrete and asphalt paths where electric bikes are allowed.

Planning Area Map

The BVCP defines several “Areas” that indicate the location and extent of urban development in the Boulder Valley (**Attachment D-4**). Area I is that portion of the BVCP planning area annexed to the city where the city provides urban services. Area II is the portion of the planning area where the city intends to provide urban services at some point in the future. Area III is divided into two categories, the Rural Preservation Area (RPA) and the Planning Reserve. The RPA contains the majority of Area III and represents the part of the comprehensive planning area where the city and county have agreed that no additional urban services will be provided. The Planning Reserve is the portion of Area III that the city and county have agreed could be moved into Area II and eventually annexed to the city with urban services.

There are also portions of Area III that have been annexed for a variety of reasons—most recently to support potential municipalization of the electrical utility. Although these areas are within the corporate limits of the City of Boulder, they fall outside the area the city intends to provide urban services. Much of the land in this category “Area III-Annexed” is comprised of city Open Space.

The BVCP allows for the external boundaries of the planning area to be expanded. Such expansions of Area III’s RPA have been approved when the city acquires open space lands outside but adjacent to the Area III boundary. Properties affecting the expansion of the planning area are listed in **Attachment D-3** under “Planning Area Map Updates” and are shown on **Attachment D-5**.

In consultation with PH&S staff, it was determined that several acquisitions would not be recommended for addition to the planning area for a variety of reasons including impact on private property owners, consistency with intergovernmental agreements, and lack of contiguity with the current planning area boundary.

STAFF RECOMMENDATION

Open Space and Mountain Parks staff requests that the OSBT recommend to Planning Board and City Council approval of the proposed changes to the BVCP:

- Land Use Map as shown in **Attachments D-2 and D-3** and
- Planning Area map as shown in **Attachment D-5**

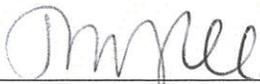
NEXT STEPS

Dec. 15, 2016 Planning Board review of Sections 3 and 9 including OSBT recommendation

Jan. 11, 2017 OSBT Discussion of BVCP - CU South Land Use

Jan. 24, 2017 Joint Study Session of the City Council and Planning Board regarding the BVCP

Submitted by:



Tracy Winfree, Director

Attachments

A-1: Description of Changes to BVCP Trails Map (OSMP)

A-2: Map of BVCP Trails Map Changes (OSMP)

A-3: Summary of Proposed Changes to BVCP Trails Map (All)

A-4: Map of BVCP Trails Map Changes (All)

A-5: 2010 BVCP Trails Map

A-6: OSBT Proposed Trails Map Revisions and Staff Responses

A-7: Revised BVCP Trails Map Description

A-8: Documentation and Assessment of Feedback on Trails Policies

A-9: Proposed Changes to BVCP Trails-related Policies

B-1: Summary of Changes to BVCP Chapter 1, Section 3: Natural Environment

B-2: Proposed Changes to BVCP Chapter 1, Section 3: Natural Environment

C-1: Summary of Changes to BVCP Chapter 1, Section 9: Food and Agriculture

C-2: Proposed Changes to BVCP Chapter 1, Section 9: Food and Agriculture

D-1: 2010 BVCP Land Use Map

D-2: Map of changes proposed to BVCP Land Use Map (OSMP)

D-3: List of proposed changes to BVCP Land Use and Planning Area Maps (OSMP)

D-4: 2010 BVCP Planning Area Map

D-5: Map of changes proposed to BVCP Planning Area Map

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ATTACHMENT A-1: OSMP Trail Changes for the BVCP Trails Map

The changes proposed relative to OSMP trails are primarily associated with the completion of trail projects or trail recommendations approved in Trail Study Area (TSA) Plans. The proposed changes include new trails, newly proposed trails, and new conceptual alignments on OSMP lands since the 2010 map. Map corrections are also proposed and trails that need to be removed because they are no longer designated or present on the ground. Trail changes specific to OSMP lands are described below and highlighted on the map in **Attachment A-2**. These changes have been integrated into the draft BVCP Trails Map. All changes approved in the draft map will be incorporated into the updated BVCP Trails Map so that the final map shows only existing trails, proposed trails, conceptual trail alignments and conceptual connections.

New Proposed Trails, Conceptual Alignments and Conceptual Connections

New proposed trails include upgrades to pedestrian and multi-use paths and proposed connections to trails or other paths identified in the Visitor Master Plan or TSA Plans.

New proposed trails and conceptual alignments:

North TSA

- Antler Loop – Soft surface pedestrian trail west of Wonderland Lake creating a loop from Wonderland Lake Trail to Foothills Trail/Old Kiln Trail. (#27)
- Wonderland Lake – Designate a parallel hard surface multi-use path on north side of Wonderland Lake. (#29)
- Hang Glider Trail – A soft surface pedestrian trail connecting into Antler Loop from Foothills Trail. (#44)
- Antler Loop Spur – A short soft surface pedestrian trail connecting an access point on Spring Valley Road to Antler Loop. (#28)
- North Sky Trail – A soft surface multi-use trail connecting Foothills Trail to Joder Ranch Trail. (#9)
- Mahogany Loop – A soft surface multi-use loop on Joder Ranch Trail. (#8)
- Joder Ranch Trail to Buckingham Park – A short multi-use trail along Olde Stage Road connecting the Joder Ranch Trail to Buckingham Park. (#5)
- Coyote Trailhead to Joder Ranch Trail – A short soft surface multi-use trail connecting the proposed Coyote Trailhead to Joder Ranch Trail. (#7)
- Foothills Trail to Degge – A short soft surface multi-use trail connecting Foothills Trailhead to the start of the Degge Trail. (#12)
- Shale Trail – A soft surface pedestrian trail between Boulder Valley Ranch Trailhead and the Eagle Trail. (#39)
- Wrangler Trail – A soft surface multi-use trail connecting Hidden Valley Trail to an access point on Kelso Road. (# 11)
- Talon Trail – A soft surface multi-use trail from Boulder Reservoir trails to Niwot Road along N. 55th Street. (#40)
- Neighborhood Access to Lefthand Trail – Designate an existing undesignated trail as a soft surface multi-use trail connecting the Lake Valley/North Rim neighborhood to Lefthand Trail. (#41)

- Area III Future Park Site to OSMP (#45) – *(change from 10-26-2016 map)- conceptual connection arrow changed to conceptual alignment*

West TSA

- Skunk Canyon – Proposed new soft surface pedestrian trail west of Hollyberry Lane and Deer Valley Road that connects neighborhood to NCAR Skunk Canyon Trail. (#2)
- Homestead Trail – Proposed new soft surface trail connection for Homestead and Towhee trails off of Mesa Trail resulting from West TSA Plan and modifications needed in response to 2013 Flood damage. (#3)

New proposed conceptual connections:

North TSA

- Joder Ranch to Heil Valley Ranch (#4)

West TSA

- Boulder Canyon Trail extension (#51) – *(change from 10-26-2016 map) - added conceptual connection arrow*

Modifications to Proposed Trails

Modifications to proposed trails reflect areas where better information about the proposed alignment is available or where alignments have been modified from the previously adopted BVCP Trails Map.

West TSA

- Anemone Trail – Changed conceptual alignment to a more detailed proposed alignment (#1)

Modifications to Existing Trails

Modifications to existing trails occurred due to flood impacts, reconstruction and implementing TSAs. These are highlighted in yellow on the OSMP trail change map (**Attachment D**).

Constructed Trails (Constructed/Modified)

Trails that have been constructed/designated since the 2010 update.

West TSA

- Chapman Drive –Chapman Drive Trail was extended along the existing road to connect to Boulder Canyon and changed from a pedestrian to a multi-use trail. (#24) and (#26)
- Old Mesa – Designated a previously undesignated trail south of Shadow Canyon Trail. (#13)
- Greenbriar Connector – Constructed new soft surface pedestrian trail connecting Lower Big Bluestem Trail to Greenbriar Boulevard. (#15)
- Fern Meadow/Cragmoor – Construct new trail and designate previously undesignated trail north of Cragmoor Road. (#16)

- Sunshine Canyon – Designated sections of an existing social trail and constructed other sections to create a new soft surface pedestrian trail parallel to Sunshine Canyon west of Centennial Trailhead. (#17)
- Hollyberry and Skunk Connector – Constructed two of three proposed soft surface pedestrian trails in replacement of existing undesignated trails west of Hollyberry Lane and Deer Valley Road that connect neighborhood to Skunk Canyon Trail. (#18) and (#19)
- Lion's Lair and Spur – Constructed new soft surface pedestrian trail connecting Mount Sanitas Trail to Sunshine Canyon Drive. (#20)
- NIST Service Road Connector – Constructed new soft surface trail connecting bike path to NIST Service Road (Kusch Road) north of Hollyberry Lane. (#21)
- Meadow – Constructed new soft surface pedestrian trail to replaced undesignated trail south and parallel with Baseline Trail in Chautauqua Meadow. (#22)
- 6th Street Connector – Constructed new soft surface pedestrian trail and designate previously undesignated trail connecting 6th Street to Bluebell Road. (#23)

North TSA

- Joder Ranch (North TSA) – Constructed a new soft surface multi-use trail on the Joder Ranch property connecting Hwy 36 to Olde Stage Road. (#25)

East TSA

- Dry Creek (East TSA)– Designated a previously undesignated shortcut trail section providing a parallel alternative path. (#30)

Removal of Proposed and Existing Trails

Proposed trails or conceptual alignments recommended for removal from the BVCP Trails Map:

West TSA

- Sunshine Trail Loop – Removed the proposed conceptual loop alignment on the western end of the Sunshine Trail. Deletion of the conceptual loop occurred in a subsequent planning process following the West TSA Plan. (#49)
- Chapman Drive – Removed conceptual alignment due to the designation and extension of the Chapman Drive Trail. (#6)

North TSA

- North Rim to Lefthand Connector – Removed conceptual alignment based on recommendations from the North TSA Plan. (#46)
- Axelson to North Rim Connector – Removed conceptual alignment based on North TSA Plan and future collaboration with Parks and Recreation for a soft surface multi-use trail around west side of Boulder Reservoir. (#47)
- Boulder Feeder Canal Boulder Reservoir to Niwot Road – Removed conceptual alignment along the Boulder Feeder Canal in preference for the proposed Talon Trail. (#48)

Sections of the following existing trails are proposed for closure and removal:

North TSA

- Old Kiln Trail – The northern loop of Old Kiln Trail is proposed to be closed due to extensive flood damage. (#43)
- Old Mill Trail – This trail will be replaced with a new multi-use and rerouted Cobalt Trail. (#42)
- Mesa Reservoir Trail – The western part of this trail will be replaced with a new multi-use and rerouted Degge Trail. (#10)
- Degge Trail – The Degge Trail will be rerouted and a single trail will replace the existing west end of the Degge and Eagle trails. (#14)

Previously existing trails that have been removed due to flood recovery or that had been identified through TSA planning processes:

West TSA

- Southern Quarry – Quarry access closed off of Sanitas East Ridge Trail. (#31)
- Baseline – Trail removed and replaced with a new parallel trail located to the south that connects to the Meadow Trail and removes undesignated trails. (#33)
- Skunk Canyon – Short segment of trail removed that connected bike path to NIST Service Road. (#34) Trail replaced with new NIST Service Road Connector (#21).
- Homestead – West end of trail removed and replaced with a new connection to Mesa Trail. (#35)
- Homestead & Spur – Southern trail connection to Mesa Trail removed and replaced with a new and relocated trail junction. (#36)

Marshall Valley/Southern Grasslands TSA

- Greenbelt Plateau Spur – Trail removed and connection replaced with the construction and addition of the Hwy 93 underpass for Community Ditch Trail. (#37)
- Marshall Valley – Alternative trailhead access removed due to unstable ground slumping/site conditions resulting from old coal mines. (#38)

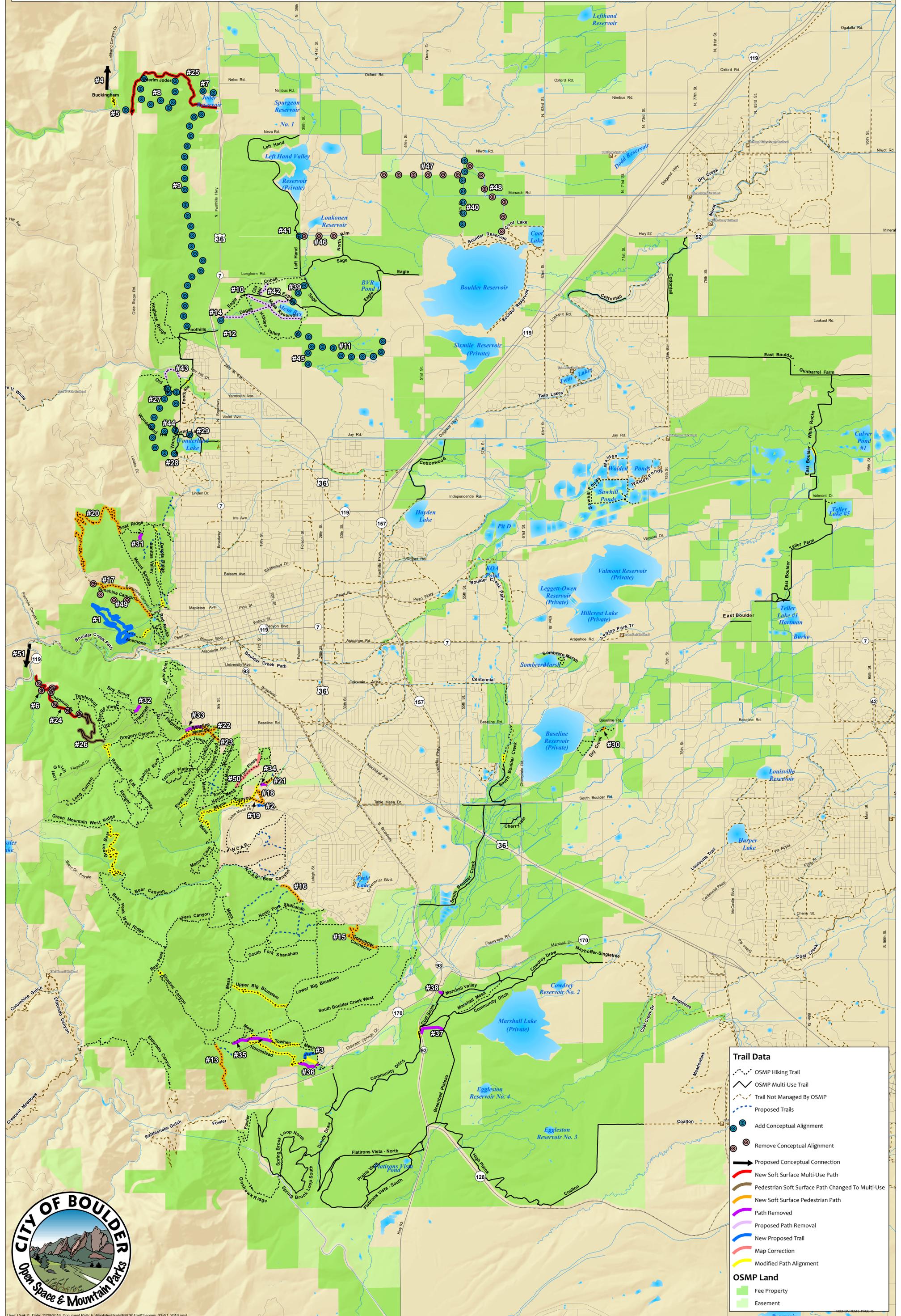
Map Corrections

Map corrections are trails that are included in the TMP, TSA, or other Planning process, and appear to have been inadvertently left off from the 2010 version of the map.

- Plains Overlook – Trail removal resulted from the Sunshine Amphitheater restoration and the addition of an ADA access. (#32)
- Four Pines Trail – Added as an existing trail. This trail was included on OSMP maps as an existing trail and shown as proposed on 2010 BVCP Trails Map. (#50)

ATTACHMENT A-2: Proposed Updates (OSMP)

Boulder Valley Comprehensive Plan Trails Map

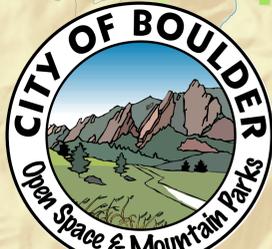


Trail Data

- OSMP Hiking Trail
- OSMP Multi-Use Trail
- Trail Not Managed By OSMP
- Proposed Trails
- Add Conceptual Alignment
- Remove Conceptual Alignment
- Proposed Conceptual Connection
- New Soft Surface Multi-Use Path
- Pedestrian Soft Surface Path Changed To Multi-Use
- New Soft Surface Pedestrian Path
- Path Removed
- Proposed Path Removal
- New Proposed Trail
- Map Path Alignment
- Modified Path Alignment

OSMP Land

- Fee Property
- Easement



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ATTACHMENT A-3: Brief Summary of Changes to the BVCP Trails Map

PROPOSED CHANGES

The proposed changes to the BVCP Trails map include:

- Addition of descriptive language on the map (*purpose of map, definitions of proposed trails, conceptual trail alignments and conceptual connections, and where to get more information*)
- New proposed trails and new conceptual alignment for proposed trails
- Modifications to proposed trails
- Changes from 'proposed' to 'existing' to reflect newly constructed trails.
- Removal (deletion) of proposed trails and proposed rerouting / removal of existing trails
- Map corrections

New Proposed Trails:

New proposed trails are highlighted in purple (circles and lines). These include upgrades to multi-use paths and proposed connections to trails or other paths identified in the Transportation Master Plan (TMP), West and North Trail Study Area Plans, or the Boulder Reservoir Master Plan.

- Newly identified trails in the North Trail Study Area Plan (2016):
 - Antler Loop – west of Wonderland Lake
 - Wonderland Lake– Designate parallel path on north side of Wonderland Lake
 - North Sky Trail – Foothills Trail connection to Joder Ranch Trail
 - Mahogany Loop – loop on Joder Ranch Trail
 - Connection from Joder Ranch Trail to Buckingham Park
 - Connection from proposed Coyote Trailhead to Joder Ranch Trail
 - Connection from Foothills Trail to Degge / Eagle trails
 - Shale Trail – Boulder Valley Ranch Trailhead to Eagle Trail
 - Wrangler Trail – Hidden Valley Trail to Kelso Road
 - Talon Trail – Boulder Reservoir to Niwot Road
 - Area III Future Park Site to OSMP – *conceptual connection*
- Boulder Reservoir (2012): conceptual alignment around the west side of the reservoir and a trail along the north side of the reservoir
- Diagonal to IBM – From TMP
- Various small connections added in the Transportation Master Plan Update (2014)
 - Lehigh to Bear Creek Elementary School
 - Hanover – Broadway east to Summit Middle School
 - Dartmouth – Broadway east to Martin Park / Creekside Elementary School
 - Sioux Dr. at EBRC
 - Greenways connection 38th St. alignment – north of E Aurora at BCSIS/High Peaks
 - CU east – Discovery to Foothills
 - CU east – Potts field across Boulder Creek
 - CU – Boulder Creek connection to Recreation Center
 - Iris south to Hawthorn (near 22nd St.)
 - Utica connection to OSMP north of Wonderland Lake
 - US 36 connection to Vine Pl.

Modifications to Proposed Trails:

Modifications to proposed trails are highlighted in blue and reflect areas where better information about the proposed alignment is available or where alignments have been modified from the previously adopted BVCP Trails Map.

- Trail alignment planned from Airport Rd to Andrus Rd - TMP
- Diagonal – to Pleasantville Fields, Clarified in the TMP
- Anemone Trail – WTSA – conceptual alignment to refined alignment

Modifications to Existing Trails:

Modifications to existing trails occurred in various places on Open Space properties due to flood impacts and reconstruction. These are highlighted in yellow.

Constructed Trails (Constructed/Modified)

Trails that have been constructed since the 2010 update are highlighted in green.

- US36 at Table Mesa east to planning area boundary
- Baseline – Broadway to 36th St.
- CU – Cockerell Dr.
- CU – 28th St. (Baseline to Colorado)
- CU – Boulder Creek to Arapahoe (near 22nd St)
- Arapahoe – Folsom to 30th St. north and south side
- Arapahoe – Cherryvale east to Westview Dr. on south and east to 75th on north
- Boulder Creek path to 48th St. (north of hospital)
- 30th – Arapahoe to Walnut
- Walnut – 29th -30th
- Pearl and 30th (NW and SE)
- Pearl – 30th to Foothills north side
- Foothills Hwy (west side – Goose Creek path to Valmont
- Valmont Rd. north side at Valmont Park
- Valmont and Airport Rd NW
- Iris Ave and Broadway at Boulder County campus
- Crestview Park
- Fourmile Creek Path – Broadway to Violet
- Fourmile Creek Path – 26th to 28th
- Arrows removed: Chapman Dr. built; US36 multi-use path built

Deletion of Trails:

Proposed trails that are recommended for removal from the BVCP Trails Map are shown in orange. These reflect TMP or TSA planning processes and adopted plans.

- Airport Rd. to Independence Rd (east of Hayden Lake): 2014 TMP, removed due to difficulty to construct and limited connectivity and need
- Hwy 93 to Greenbriar: 2014 TMP, connection determined not necessary
- Gunbarrel west of 63rd Street and Twin Lakes; Gunbarrel Ave north to proposed trail and Spine Rd at Lookout Rd south to proposed trail; 2014 TMP- difficult to construct in drainageway and provides little connectivity.
- 27th St./Mapleton to Goose Creek (west of 28th St):

- Elmers Twomile creek path connections between Glenwood and Iris: 2014 TMP- difficult to construct due to buildings, not needed
- 28th and Iris – connection to Diagonal Hwy: trails reconfigured with Diagonal reconstruction
- Foothills Hwy west side connection to Wonderland Creek: different alignment
- *Southern section of Sunshine Trail – removed in WTSA process*
- Various small connections identified through TMP connections planning (*some need to be changed on the North Boulder Subcommunity Plan*)
 - Connection Greenbriar to Broadway
 - Table Mesa – Vassar to Broadway
 - Skunk Creek – 27th Way to US36 ramp
 - CU Pleasant St. to stadium
 - Mapleton – Goose Creek (west of 30th St.)
 - Boulder Junction to RR
 - 28th St. west to Wonderland creek path
 - Kalmia to Linden at 23rd St.
 - Linden 19th to 21st
 - 9th Street – Iris to Jasmine
 - Poplar – 17th to 19th
 - 19th St. north of Yarmouth to US36

Removal of Existing Trails

Through the North Trail Study Area Plan sections of the following existing trails are recommended for closure and removal: Old Kiln Trail, Old Mill Trail, Mesa Reservoir Trail, and Degge Trail.

Previously existing trails that have been removed due to flood recovery or that had been identified through planning processes are shown in grey.

Map Corrections:

Map corrections are highlighted in pink, and are trails that are included in the TMP, TSA, or other Planning process, and appear to have been inadvertently left off from the 2010 version of the map.

- Four Pines Trail – exists, not previously shown on map
- West of 71st Street by Walden Ponds – exists, not previously shown on map
- East of Twin Lakes - exists, not previously shown on map
- Around Coot Lake - exists, not previously shown on map

Revisions to the BVCP Trails Map Description

Minor revisions are proposed to the descriptions of proposed trails and conceptual trail alignments. Arrows indicating conceptual connections outside the planning boundary have been modified to be consistent in size. Additionally, revisions are proposed to the implementation section and BVCP Trails Map Description.

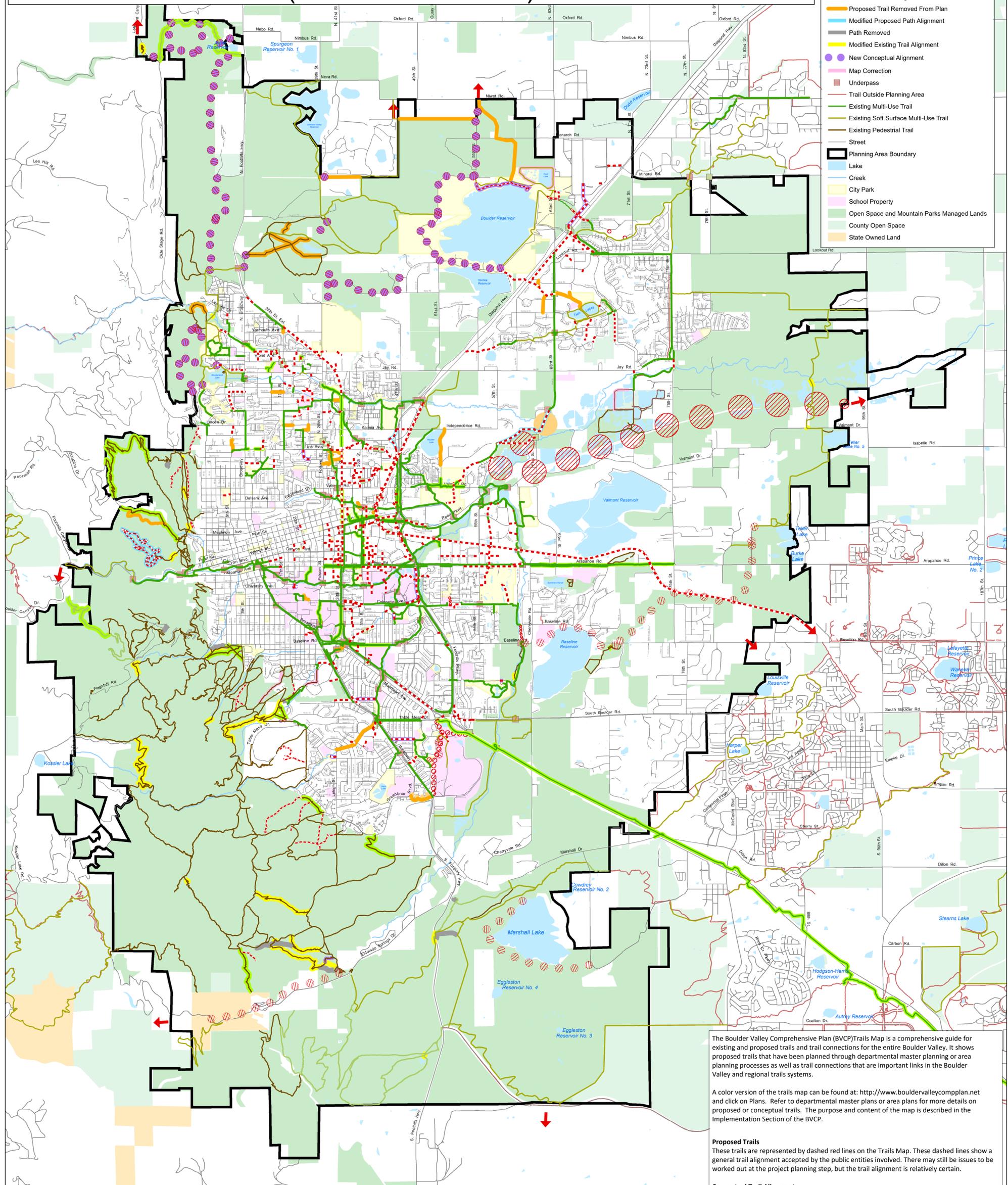
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ATTACHMENT A-4: Proposed Updates (all)

Boulder Valley Comprehensive Plan Trails Map

(draft of 12/5/2016)

- Legend**
- Proposed Trail
 - Conceptual Connection
 - Conceptual Alignment
 - Remove Conceptual Alignment
 - New Proposed Trail
 - Constructed or Designated Trail
 - Proposed Trail Removed From Plan
 - Modified Proposed Path Alignment
 - Path Removed
 - Modified Existing Trail Alignment
 - New Conceptual Alignment
 - Map Correction
 - Underpass
 - Trail Outside Planning Area
 - Existing Multi-Use Trail
 - Existing Soft Surface Multi-Use Trail
 - Existing Pedestrial Trail
 - Street
 - Planning Area Boundary
 - Lake
 - Creek
 - City Park
 - School Property
 - Open Space and Mountain Parks Managed Lands
 - County Open Space
 - State Owned Land



The Boulder Valley Comprehensive Plan (BVCP) Trails Map is a comprehensive guide for existing and proposed trails and trail connections for the entire Boulder Valley. It shows proposed trails that have been planned through departmental master planning or area planning processes as well as trail connections that are important links in the Boulder Valley and regional trails systems.

A color version of the trails map can be found at: <http://www.bouldervalleycompplan.net> and click on Plans. Refer to departmental master plans or area plans for more details on proposed or conceptual trails. The purpose and content of the map is described in the Implementation Section of the BVCP.

Proposed Trails
These trails are represented by dashed red lines on the Trails Map. These dashed lines show a general trail alignment accepted by the public entities involved. There may still be issues to be worked out at the project planning step, but the trail alignment is relatively certain.

Conceptual Trail Alignments
These trails are represented by circles on the Trails Map. These circles show the recommendations for the trail located as a conceptual trail corridor, as determined through planning processes. The specific alignment has not yet been selected, but the possible area of the trail is indicated by the location of the circles.

Conceptual Connections
Conceptual connections between trails within the BVCP Planning Area to trails or destinations outside the planning area are shown with an arrow pointing from an existing or proposed trail toward an area outside the Planning Area Boundary. These arrows indicate a general direction for potential connecting trails but not a specific alignment or trail corridor.

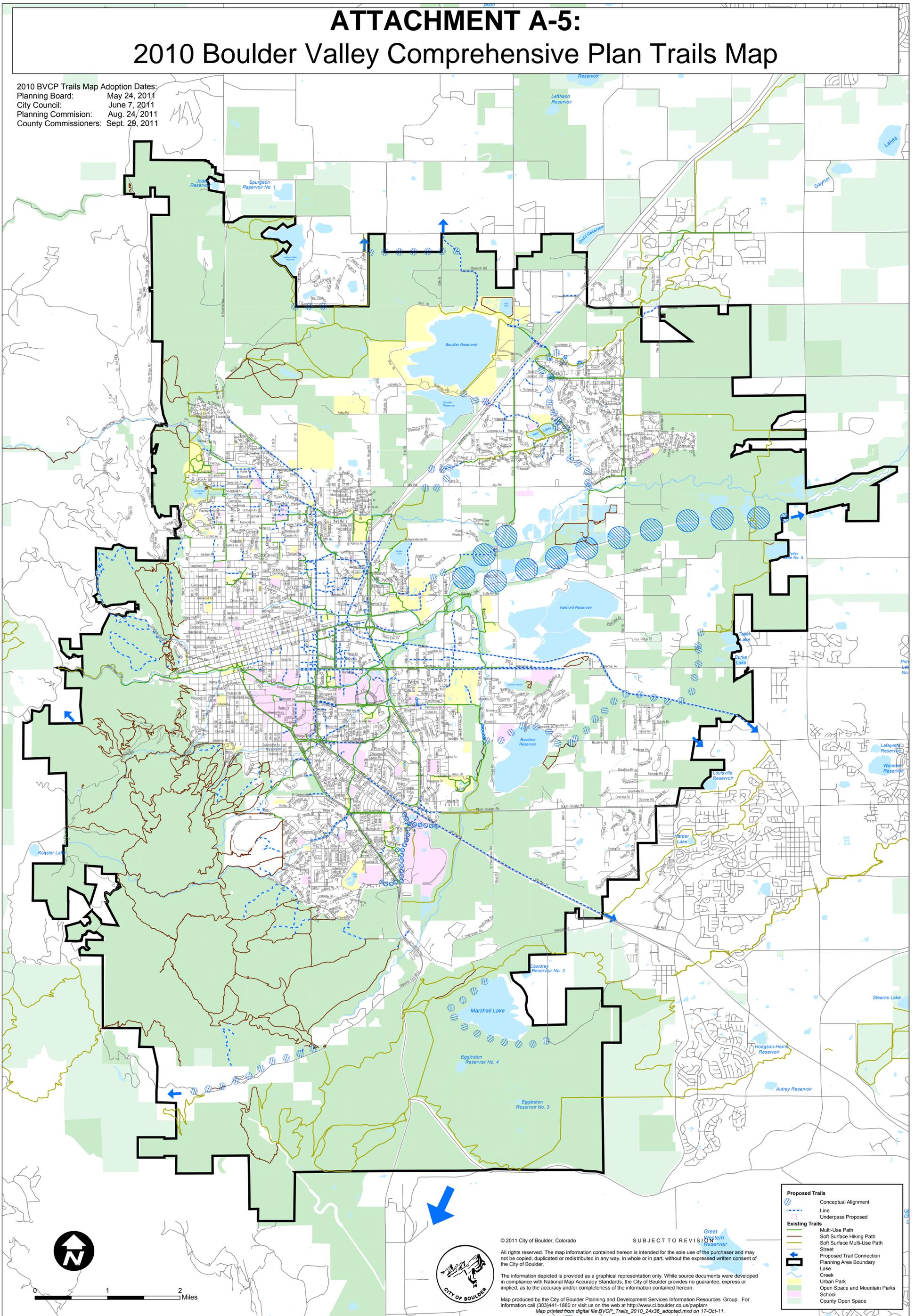
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 Map printed from digital file BVSDTrailsMap_FinalDraft20161128.mxd on 28-Nov-16.



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ATTACHMENT A-5: 2010 Boulder Valley Comprehensive Plan Trails Map

2010 BVCP Trails Map Adoption Dates:
 Planning Board: May 24, 2011
 City Council: June 7, 2011
 Planning Commission: Aug. 24, 2011
 County Commissioners: Sept. 29, 2011



Proposed Trails	
	Conceptual Alignment
	Line
	Underpass Proposed
Existing Trails	
	Multi-Use Path
	Soft Surface Hiking Path
	Soft Surface Multi-Use Path
	Street
	Proposed Trail Connection
	Planning Area Boundary
	Lake
	Creek
	Urban Park
	Open Space and Mountain Parks
	County Open Space

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 Map printed from digital file BVCP_Trails_2010_24x36_adapted.mxd on 17-Oct-11.



SUBJECT TO REVISION

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ATTACHMENT A-6 OSBT Proposed Trails Map Revisions

#	Proposed Revision	Assessment	BVCP Map Revision
1	It would be helpful to look at the map and better understand legend symbols without needing to reference the Trails Map description in the Implementation Section of the plan to know what is intended with the symbols. There's a lot of white space, use space to add descriptions. Include on the map as much language as possible.	Could include additional symbol descriptions and clarifying information on the map.	Add symbol descriptions and clarifying information on the map. See Attachment A-4 for recommended text additions.
2	Make type more user friendly and larger. Make the key easier to understand and larger	Primary use of map is for online viewing; could include additional notes on map for clarification.	Same as for #1
3	Clarify on the ground changes versus just map changes.	Comment mainly related to draft maps rather than final Trails Map	No change
4	It would help to not have to refer to a separate description document to more fully understand legend symbols when looking at the map. Make map as comprehensive as possible.	Could include additional descriptions for clarification.	Same as for #1
5	Place a note on the map to inform people that there is a section in the plan document that describes map content.	Could include a note that map content is further explained in the BVCP.	Add to the map. See Attachment A-4 for recommended text additions.
6	Include on the map where people can go to get more information/details about proposed trails. On map add language to refer to planning documents for more details.	Could include a note on the map that additional information about trails available in department master and area plans.	Add to the map. See Attachment A-4 for recommended text additions.

#	Proposed Revision	Assessment	BVCP Map Revision
7	<p>All Conceptual Connection arrows on the map should clearly point to an area outside the BVCP boundary and arrows should be located outside the boundary. All arrows should be the same size.</p> <ol style="list-style-type: none"> 1. Relocate the arrow near the Buckingham property/Lefthand Canyon outside the BVCP boundary. 2. The arrow near Boulder Valley Ranch pointing to the Area III Planning Reserve should be a different symbol as this is within the BVCP boundary and not a proposed external connection. 3. Add arrow for the planned Boulder Canyon Trail extension. 	<ol style="list-style-type: none"> 1. Conceptual Connection arrow should be moved. 2. Replace arrow symbol with a different symbol. 3. Conceptual Connection arrow is missing. 	<ol style="list-style-type: none"> 1. Move Conceptual Connection arrow 2. Replace arrow with a Conceptual Alignment circle. 3. Add Conceptual Connection arrow
9	<p>The use of the Constructed Trail symbol on trails that were previously existing roads (Chapman Drive) or social trails (Sunshine) and were designated more than constructed is not accurate.</p>	<p>Could be clarified.</p>	<p>Change legend symbol from “Constructed Trail” to “Constructed or Designated Trail”</p>
10	<p>For conceptual trail alignments make all circles/bubbles the same size unless there is a clear basis for different sizes and that basis is explained in the accompanying map description in the BVCP.</p>	<p>Describing the symbols as circles or bubbles is confusing. Could include additional explanation about conceptual trail alignments.</p>	<p>Conceptual Trail Alignments will consistently be referred to as “circles” and not “circles or bubbles.” See Attachment A-4 for recommended text additions to map to clarify conceptual alignments.</p>

Attachment A-7 Revised Trails Map Description – BVCP Implementation Section

Trails Map

The Boulder Valley Comprehensive Plan Trails Map is a comprehensive guide for existing and proposed trails and trail connections for the entire Boulder Valley. It shows proposed trails that have been planned through departmental master planning or area planning processes as well as trail connections that are important links in the Boulder Valley and regional trails systems.

A color version of the trails map can be found at: <http://www.bouldervalleycompplan.net> and click on Plans.

Trails planning in the Boulder Valley involves balancing environmental, community, and mobility goals as well as resolving or mitigating trail impacts. The following Boulder Valley Comprehensive Plan policies guide trails planning:

- Policy 2.~~30~~20 Boulder Creek and its Tributaries as Important Urban Design Features
- Policy 2.~~32~~23 Trail Corridors / Linkages
- Policy 8.12 Trail Functions and Locations
- Policy 8.13 Trails Network

The Trails Map shows existing and proposed trails in the Boulder Valley that are or will be administered by the city of Boulder Planning Department, Parks and Recreation Department, Open Space and Mountain Parks Department, Transportation Division, the Greenways Program and Boulder County Parks and Open Space and Transportation Departments. This map is used by the city, the county, Boulder Valley citizens and other concerned parties to understand, maintain and advance the network of trails that the city, the county, and other public agencies now provide and hope to provide in the future and should be used as a system planning tool.

Each department generates more detailed maps to meet their own needs and those of trails users. Other maps (such as those in departmental master plans or specific area plans) are used to show complete systems.

The Trails Map includes designated unpaved off-street paths, paved off-street paths, multi-use paths that are paved and separated from but parallel to a road, and short, paved off-street paths that connect to a larger trail or bike network and are part of an adopted pedestrian or bike system plan. It does not include sidewalks, on-street bike lanes or bike routes, paved road shoulders or low volume streets serving as bike lanes, routes, or internal walkways.

Trails planning and implementation occur at several steps that get progressively more detailed. The first step is to identify a need or desire for a trail or trail connection, a step that usually occurs as part of departmental master plans. Interdepartmental coordination on trails and trail connections occur as part of the master planning process. Proposed

trails may be further refined through other detailed planning processes, such as the Capital Improvements Program (CIP), Trail Study Area (TSA) or Community and Environmental Assessment Process (CEAP). Two kinds of trail designations are included on the Trail Map—conceptual trail alignments and proposed trails. The primary difference relates to the degree that the trail has been studied and whether or not a specific trail alignment has been worked out.

Specific definitions include:

Proposed Trails

These trails are represented by ~~dashed solid red~~ dashed lines on the Trails Map. These dashed lines show a general the trail ~~need or desire, but they also show a more definite trail~~ alignment accepted by the public entities involved. There may still be issues to be worked out at the project planning step, but the trail alignment is relatively more certain.

Conceptual Trail Alignments

These trails are represented by ~~bubbles (or circles)~~ bubbles on the Trails Map. These circles/bubbles show the ~~need or desire~~ recommendations for the trail located ~~in as~~ as determined through planning processes a conceptual trail corridor, often because there are still issues that need to be resolved. These issues may involve the need for further study or public process and usually require resolution of environmental, ownership, neighborhood, or other concerns. However, the concept for the trail is supported by the signatories of the Boulder Valley Comprehensive Plan.

Conceptual Connections

In some cases, a planning process has identified an intention to connect trails within the BVCP area to trails or destinations outside the planning area. In such cases, the Trails Map shows an arrow pointing from an existing or proposed trail toward an area outside the Planning Area Boundary. These arrows indicate a general direction for potential connecting trails but not a specific alignment or trail corridor.

Process for Changes to the Trails Map

At each mid-term or major update to the Boulder Valley Comprehensive Plan, an interdepartmental staff group will assess the need to update the Trails Map. If changes are warranted, staff will analyze the map and compile a list of recommended changes to be included in the Comprehensive Plan update process. Changes to the map may occur when there has been new information or changed circumstances regarding a proposed trail or when an alternatives analysis and public process have occurred at the master planning or area planning level and new trails plans have been adopted. Minor changes can be incorporated into the Trails Map at any time without board adoption. These minor map changes are limited to changes in factual information, which include map corrections and

changes in designation from proposed to existing trails (i.e., built). These minor map changes will be identified for the boards at the Comprehensive Plan update process.

Any member of the public may propose changes to the Trails Map at a mid-term or major update to the Comprehensive Plan. These requests should be made in the application process established for the update. Staff will analyze these proposals and a recommendation will be presented to the four adopting bodies along with other applications.

Changes to the Trails Map will be forwarded to the following advisory boards for review and comment: Open Space and Mountain Parks Board of Trustees, Greenways Advisory Committee, Transportation Advisory Board, Parks and Recreation Advisory Board, and the County Parks and Open Space Advisory Committee. Changes to the Trails Map may also be forwarded to other advisory boards depending on issues associated with a trail proposal. Recommendations and comments will be forwarded to the adopting bodies. Changes to the Trails Map must be adopted by the city Planning Board, City Council, the County Planning Commission, and the County Commissioners. All recommendations for changes to the Trails Map will be evaluated by each of the departments involved. Agreement by affected departments on the suitability of the trail and trail alignment will be sought as part of the interdepartmental review.

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ATTACHMENT A-8 Documentation and Assessment of Feedback on Trails Policies

Policy revisions aim to:

- Provide policy language, not background, supporting information or rationale unless essential to understanding and implementing the policy.
- Decrease redundancy throughout the section, with other sections or other policies.
- Simplify the language and eliminate jargon
- Provide appropriate policy level for broad application at the comprehensive plan level. (Detail appropriate to specific areas and circumstances should be developed in master or area plans).

Policy 8.12 Trail Functions and Locations provides guidance for:

	Current concepts	Additions
Function	Exercise, recreation, transportation, education, and environmental protection	Trails serve many functions: accessibility and connecting humans and natural setting
Design	Designed to minimize conflicts among users. Formal trails should be well-designed. Discourage and eliminate informal trails, widening of trails, off-trail use.	Design for safe and enjoyable visitor experience Encourage on-trail travel and sign formal trails Design for physical and environmental sustainability
Management	Trails should be monitored and adequately maintained.	
Location	Avoid environmentally sensitive areas and minimize environmental impacts Trailheads located so they are convenient and safe for those arriving by car, transit, bike or walking.	Look for opportunities to enhance habitat connectivity widely accessible

Documentation and Assessment of Feedback

Suggested Revision	Themes	Assessment
<p>8.12 Trail Functions and Location</p> <p><i>Karen Hollweg, et.al, comments to trails policies that were included with other extensive suggestions for the Natural Environment section:</i></p> <p>The following revisions are needed to update the sections regarding Trail Functions and Locations and Trails Networks:</p> <ul style="list-style-type: none"> • Designated and undesignated trails should not further fragment intact open space natural areas • Social / undesignated trails should be eliminated and measures should be taken to strongly discourage fragmentation by off-trail use • Add “signed” i.e. ensuring that formal trails are well-designed, signed 	<ol style="list-style-type: none"> 1. Trails should not further fragment intact open space natural areas. 2. Social / undesignated trails should be eliminated and measures should be taken to strongly discourage fragmentation by off-trail use 3. Add “signed” to design 	<ol style="list-style-type: none"> 1. Add concept “look for opportunities to enhance habitat connectivity” 2. Addressed in revisions about informal or social trails 3. Add “signed”

Suggested Revision	Themes	Assessment
<p>8.12 Trail Functions and Location</p> <p><i>The following suggestions were made by community member Jason Vogel</i></p> <p>Trails are central to the character and identity of Boulder County’s people, towns, and landscape. Trails are infrastructure critical to enjoyment of, recreation in, and conservation of open space. The trails in Boulder County support the healthy lifestyle that draws residents and tourists alike and are a necessary resource for developing a land ethic in the next generation of Boulder citizens. As important infrastructure, trails deserve the same level of professional expertise in planning, design, construction, and maintenance as would be given to other facilities such as libraries, schools, parks, and recreation centers. Current best practices blend four inter-related components of sustainability: ecological, physical, social, and managerial.</p>	<ol style="list-style-type: none"> 1. Central to character of Boulder Valley 2. Critical to enjoyment of recreation and conservation of open space 3. Support healthy lifestyle for residents and visitors/tourists 4. Necessary for developing land ethic for next generation 5. Need professional expertise in planning, design, construction and maintenance 6. Best practices blend inter-related components of sustainability: ecological, physical, social and managerial 	<ol style="list-style-type: none"> 1. Descriptive – reflect in to section intro language to be revised. 2. Descriptive – not broadly applicable (more than OSMP trails). 3. Addressed generally in list of functions 4. Descriptive, not policy 5. Implementation – not appropriate comp plan policy level 6. Add design for physical and environmental sustainability
<p>Trails are more than lines on a map; they are an experience in nature. Trail planning and design efforts must explicitly consider and provide for the enjoyment and fun that trails provide the community. The fun and enjoyment of trails is directly linked to youth spending time outdoors to develop a conservation ethic and healthy lifestyle in an era monopolized by digital screens and convenience foods.</p>	<ol style="list-style-type: none"> 1. Planning and design must consider and provide for enjoyment and fun 2. Fun and enjoyment linked to youth spending time outdoors, conservation ethic and healthy lifestyle 	<ol style="list-style-type: none"> 1. Addressed - Add concept “enjoyable visitor experience” 2. Descriptive, not policy

Suggested Revision	Themes	Assessment
<p>8.12 Trail Functions and Location</p> <p>Within the context of public lands, trails are a useful tool in helping manage visitors to accomplish other open space goals. Trails guide visitors through open space, taking them to places with high quality recreation experiences such as viewpoints and unique land features and leading them away from critical or imperiled natural resources, thus minimizing impacts. Trails should be routed with careful attention to popular destinations—both within, and outside of open space areas—to provide loops of varying length, and quickly disperse visitors near access points. Use modern trail design to cue on trail compliance and curb trail braiding, short-cutting switchbacks and off-trail travel. Understanding and meeting visitor needs helps to minimize the creation of social trails, reduce user conflict, and ultimately moderate ecological impacts. While respecting environmental constraints, trails should be designed to integrate humans with nature rather than separate them.</p>	<ol style="list-style-type: none"> 1. Trails useful tool to help manage visitors 2. Guide visitors through open space to take people to viewpoints, unique land features and popular destination 3. Lead people away from critical or imperiled natural resources, minimizing impacts. 4. Use design to curb trail braiding, short cutting, and off-trail travel. 5. Understanding visitor needs to minimize social trails, reduce user conflict and ecological impacts 6. Designed to integrate humans with nature 	<ol style="list-style-type: none"> 1. Not applicable to all trails, “useful tool to achieve many goals” concept included in proposed change 2. Not applicable to all trails (outside OSMP) 3. Detailed – high-level concept addressed in design. 4. “ “ 5. Addressed in discouragement of social trails 6. Addressed in concepts for design. 7. Add intro “trails as important tool.. connect humans and natural environment”.

Suggested Revision	Themes	Assessment
<p>8.12 Trail Functions and Location</p> <p>Visitor experience and enjoyment are influenced by the setting, scenery, trail character, challenge, and other subtle factors that should be understood and considered. One key influence is the interaction with other visitors. Contemporary knowledge in trail planning and design offers approaches—ranging from specific tread to full trail system scales—to shape positive visitor interactions and minimize conflict. At a trail system scale: provide loops, disperse visitors near access points, intentionally offer variety of character and difficulty, and serve the suite of non-motorized visitors. At a specific trail scale: encourage on-trail compliance with engaging design, interesting trailside anchors, playful character, vistas, and destinations. Design away visitor conflict by reducing speed differentials, balancing sight-lines, and limiting intersections. Avoid design pitfalls, unnecessary restrictions, or inflammatory signage that may counterproductively increase perceived visitor conflict.</p>	<ol style="list-style-type: none"> 1. Visitor experience influenced by setting, trail character and challenge 2. Trail planning and design can shape positive visitor interactions and minimize conflict by reducing speed differentials, balancing sight-lines and limiting intersections 3. Encourage on-trail compliance with engaging design 	<ol style="list-style-type: none"> 1. Descriptive, not policy 2. Detailed, generally addressed 3. Concept generally addressed in “sustainably-designed”

Suggested Revision	Themes	Assessment
<p>8.12 Trail Functions and Location</p> <p>Multiple use and shared use trails should be the mainstay because they serve the greatest number of people, are inherently most equitable, and reduce ecological impact. However, to enhance one user group’s experience or address high use or high conflict situations, sparingly consider single use, alternating use, or directional use policies or purpose-built trails developed to increase trail system functionality. Such management practices should take the least restrictive successful approach, be equitable and fair, be transparent to the public, and be developed collaboratively with the various visitor groups affected.</p>	<ol style="list-style-type: none"> 1. Shared use (multiple use) trails serve greatest number of people and most equitable, reduce ecological impacts 2. To enhance a particular group’s experiences or address high use or high conflict situations, sparingly consider single-use, alternating use, or directional uses or purpose-built trails. 3. Take least restrictive successful approach, be equitable and fair, transparent and develop collaboratively with visitor groups affected 	<ol style="list-style-type: none"> 1. Descriptive and position statement, not policy 2. Too detailed for comp plan, general application possibly at master plan or area plan level 3. Detailed trail design and management process. General application possibly at master plan or area plan level.

Suggested Revision	Themes	Assessment
8.12 Trail Functions and Location		
<p>Trails should be designed and critiqued with physical sustainability in mind—each trail should remain stable in its intended condition. Modern trail design includes techniques (such as rolling grade dips, grade reversals, meander, climbing turns) to minimize erosion and decrease sedimentation while minimizing long-term maintenance needs. Trail condition monitoring, mud closures, and communications to the public are critical to reduce tread damage while respecting citizens’ outdoor lifestyle.</p>	<ol style="list-style-type: none"> 1. Trails designed with physical sustainability in mind 2. Apply trail design techniques to minimize erosion and decrease sedimentation and minimize long-term maintenance needs 3. Condition monitoring, mud closures, and communications to the public are critical to reduce tread damage 	<ol style="list-style-type: none"> 1. Addressed in new language about sustainable design 2. “ “ 3. Detailed, general application possibly at master plan or area plan level.
<p>Informal social trails and off-trail travel—whether in core open space or private connections—should be discouraged by ensuring that formal trails are well designed, monitored, adequately maintained, and truly address visitor desires. Trailheads should be located so they are convenient and safe for those arriving by alternate modes of transportation as well as automobiles. Increasing focus should be placed on public transit stops associated with trailheads as well as parking for bicycles. Trail and trailhead locations and alignments should avoid environmentally sensitive areas and minimize environmental impacts to the fullest extent reasonable.</p>	<ol style="list-style-type: none"> 1. Informal social trails and off-trail travel should be discouraged through design, monitoring, maintenance and addressing visitor desires 2. Trailheads located for convenience and safe for those arriving by alternate modes and automobiles. 3. Focus for locations on public transit stops and provide parking for bicycles 4. Locate trails and trailheads to avoid environmentally sensitive areas and minimize environmental impacts to the fullest extent reasonable 	<ol style="list-style-type: none"> 1. Generally addressed in revisions, with less detail 2. Addressed in existing language (moved) “Trailheads should be located so they are convenient and safe for those arriving by alternate modes as well as automobiles. 3. Too detailed, not broad application 4. Concept addressed in this policy and 3.08

Suggested Revision	Themes	Assessment
8.12 Trail Functions and Location		
<p>Using a thorough understanding of trails and visitor dynamics will yield decisions and designs that offer the greatest good and begin to reverse the unnecessary polarization of conservation and recreation.</p>	<ol style="list-style-type: none"> Trail knowledge and visitor dynamics to yield decisions and designs that offer greatest good and reduce polarization of conservation and recreation. 	<p>Process, not function/design. More appropriate for process of master or area planning</p>

Policy 8.13 Trails Network provides guidance for:

	Current concepts	Additions
Coordination	City and county coordinate with other trail providers in trail system planning	
Connections	Trail connections should enhance overall function of trail network and be compatible with environmental goals	Enhance local access to trails Strive to connect trail systems and enhance regional connectivity

Suggested Revision	Themes	Recommended policy addition/revision:
8.13 Trails Network		
<p><i>The following suggestions were made by community member Jason Vogel</i></p> <p>Trails do not exist in isolation. Each is part of a trail system, and good management should consider the role of each trail within the greater trail network or community. Regional connectivity of parks, greenways, open spaces, and residential areas is increasingly important to reduce parking demand, increase accessibility, disperse use, reduce traffic congestion, and reduce global warming and other air pollution. Regional trail connectivity leverages the assets of any one trail system by connecting it to other trail systems, thus creating a larger overall trail network. Local access to multi-use trails systems removes barriers for youth and positions trail access points as an overwhelmingly positive neighborhood amenity. The practical effect of</p>	<ol style="list-style-type: none"> 1. Consider role of each trail within the greater trail network 2. Regional connectivity is important to reduce parking demand, increase accessibility, disperse use, reduce traffic congestion, reduce global warming and other air pollution 3. Regional connectivity leverages the assets of one system by creating a larger overall network 4. Local access to trail systems removes barriers for youth and positions trail access as a positive neighborhood amenity 5. Encourages alternative modes of transportation to trail system; reduces parking demand and impacts of parking facilities; disperse trail use, enhances long distance recreation experiences. 	<ol style="list-style-type: none"> 1. More appropriate for process of master or area planning 2. Add regional connectivity 3. “ ” 4. Descriptive, not policy 5. Descriptive, not policy

Suggested Revision	Themes	Recommended policy addition/revision:
<p>this is to encourage non-automobile modes of transportation to trail systems; to reduce parking demand and the impacts of large parking facilities; to disperse trail use across trail systems; to reduce crowding impacts on users, neighborhoods, and ecosystems; and to enhance opportunities for long distance recreation experiences.</p>		
<p>Land management agencies in Boulder County should strive to work across jurisdictional boundaries, including working with private land owners, to network existing open space trail systems with community bike and pedestrian paths, greenways, and public parks. It is important, however, to recognize the different contexts of different regional trails. Some regional trails operate primarily as transportation corridors and should be designed with transportation accessibility and function in mind. Other regional trails function as connectors between existing recreational trail systems and should be designed to enhance the recreational value of the overall trail network. In some cases, “redundant” connections should be provided to allow for loop circulation or seasonal variances. The city and county should coordinate with other trail providers and private landowners in trail system planning, construction, management, and maintenance. Where compatible with environmental protection goals and conservation easement agreements, trail connections will be developed to enhance the overall functioning of the trails network.</p>	<ol style="list-style-type: none"> 1. Strive to work across jurisdictional boundaries, including working with private land owners, to network existing open space trail systems with community bike and pedestrian paths, greenways, and public parks. 2. Coordinate with other trail providers and private landowners in trail system planning, construction, management, and maintenance. 3. Recognize the contexts of different regional trails, some as transportation corridors, others as connectors between existing recreational trail systems. 4. In some cases, “redundant” connections should be provided to allow for loop circulation or seasonal variances. 5. Where compatible with environmental protection goals and conservation easement agreements, trail connections will be developed to enhance the overall functioning of the trails network. 	<ol style="list-style-type: none"> 1. Addressed in 8.13 2. Addressed in 8.13 3. Design details appropriate at process for master or area planning 4. Too detailed for comp plan, possibly appropriate at process for master or area planning 5. Addressed in 8.13
<p>Trail systems should:</p>	<p>Trail systems should:</p>	<ol style="list-style-type: none"> 1. Generally covered in 8.12

Suggested Revision	Themes	Recommended policy addition/revision:
<ul style="list-style-type: none"> o be accessible from nearby neighborhoods o accommodate the local spectrum of non-motorized visitors in an equitable fashion o offer a variety of trail character, loop length, and challenge in each system o provide a sense of place showcasing unique topography, biomes, and viewsheds 	<ol style="list-style-type: none"> 1. be accessible from nearby neighborhoods 2. accommodate the local spectrum of non-motorized visitors in an equitable fashion 3. offer a variety of trail character, loop length, and challenge in each system 4. provide a sense of place showcasing unique topography, biomes, and viewsheds 	<ol style="list-style-type: none"> 2. Too detailed for comp plan, appropriate to be determined area planning level 3. More appropriate for process of master or area planning 4. Generally addressed in 8.12

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ATTACHMENT A-9: Proposed changes to Trail Policies

Red text represents text additions or deletions.

Green double underlined text has been relocated from elsewhere

Parks, Open Space and Trails

8.12 Trail Functions and Locations

The city and county recognize that trails are an important tool to achieve accessibility goals and connect humans and the natural environment. Trails serve a variety of functions such as exercise, recreation, transportation, education and/or environmental protection. Trails should be designed to provide a safe and enjoyable experience and managed to minimize conflicts among trail users. ~~Trailheads should be located so they are convenient and safe for those arriving by alternate modes of transportation as well as automobiles.~~ Trails should be designed for physical and environmental sustainability, signed, monitored and adequately maintained to encourage on-trail travel. Informal trails, the widening of trails by users, and off-trail use should be discouraged and/or eliminated. ; In order to provide environmental protection, informal trails and user widening of trails should be discouraged by ensuring that formal trails are well designed, monitored and adequately maintained. Trail and trailhead locations and alignments should avoid environmentally sensitive areas, ~~and~~ minimize environmental impacts and look for opportunities to enhance habitat connectivity. Trailheads should be located so they are widely accessible, convenient and safe for those arriving by alternate modes of transportation as well as automobiles.

8.13 Trails Network

The city and county will coordinate with other trail providers and private landowners in trail system planning, construction, management and maintenance. In consideration, ~~Where compatible~~ with environmental protection goals and ~~conservation~~ easement agreements, trail connections will be developed to enhance the local access to trails and the overall functioning of the trails network. The city and county strive to connect trails systems and expand connections to adjacent trails systems to further regional connectivity.

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Attachment B-1: Summary of proposed changes to Natural Environment Section

3. Natural Environment– Summary of Proposed Changes

Draft – Dec. 5, 2016

This section focuses on policies related to the natural environment including incorporation of ecological systems into planning, adaptive management approach, protection of natural lands, management of wildlife, water conservation, flood management, and air quality. The changes to this chapter reflect updated plans and work since the 2010 Plan and strengthening policies related to existing plans including:

- Ongoing updates to city's Integrated Pest Management policy, Urban Forest Strategic Plan, and Climate Commitment and the county's policy on Genetically Modified Organisms
- Boulder's Resilience Strategy (2016)
- The Bee Safe Resolution (2015) banning the use of neonicotinoids on city property and a Bear Protection Ordinance to secure waste from bears (2014)
- The county's resolution to reduce and eliminate pesticide use to protect both people and pollinators (2015).
- Environmental Resources Element of the Boulder County Comprehensive Plan (2016)
- Boulder County analysis of local oil and gas regulations, and policy updates to the Fourmile Canyon Creek Watershed Master Plan (2015), Boulder Creek Watershed Master Plan (Urban Drainage and Flood Control District, 2015), and Consortium of Cities Water Stewardship Task Force Final Report (2013).
- OSMP Grasslands Ecosystem Management Plan, Forest Ecosystem Plan, Visitor Management Plan.

Additional and extensive changes since the Aug. 24 draft reflect input from the community and county staff with additional review and input by city staff from open space, planning, forestry, and utilities. ***A further round of minor editing to reduce redundancies will occur as necessary.*** Other changes are noted below.

Introduction/Preamble:

- This section will remain as a stand-alone chapter rather than be combined with others as initially proposed.
- Open Space Board of Trustees (OSBT) in particular asked for clarification about how this section of policies apply to the urban versus wildlands area and to OSMP lands versus other lands. A lot of the added preamble language is intended to provide such clarification.

- A group of community members with an active role in open space management, environmental issues, and soil health collaborated to provide comments on this chapter. They provided a comprehensive mark up of this section and suggested a number of minor text edits to align the language as well as new larger ideas. The group suggested describing the ecosystem continuum (which may later be expressed as a graphic), addressing the overall planning and management strategy that incorporates an understanding of natural ecosystems and the four overall strategies for protecting the natural environment.
- Added “recreation, relaxation, and connection with nature” as requested.

Policy 3.01 Incorporating Ecological Systems into Planning

- Added “Bioregions,” at the request of community members.

Policy 3.02 Adaptive Management Approach

- Expanded the definition of adaptive management, at the request of community members.
- While it was requested to add precautionary language to this policy, the technical detail is too high for the BVPC. OSMP suggested that if the precautionary principle be added that it include language to consider “least practically restrictive.” Since this approach is still being discussed in OSMP, the issues should be addressed in the OSMP master plan.

Policy 3.03 Native Ecosystems

- Modifies the title from “Natural” to “Native” to be consistent with policy language.
- Adds reference to Habitat Conservation Areas and references OSMP plans.
- Adds features identified in the Boulder County Comprehensive Plan Environmental Resources Element at the request of the county.

Policy 3.04 Ecosystem Connections and Buffers

- Removes “Undeveloped” lands so the policy is more universally applicable to “preservation” or “restoration” of any lands.
- Adds emphasis on buffers and corridors and value for natural movement of organisms including wildlife generally, as requested by community members including in and along the edges of the urban environment. Additional language recommended by county and city staff to clarify that these areas may need further planning to identify priorities for future action.

(Note: Suggest cross referencing and adding new policy language to the “Built Environment chapter” to address conservation and design of open space connections and buffers in urban areas, recognizing that urban lands can also be important for supporting biodiversity and maintaining wildlife habitat.)

Policy 3.05 Maintain and Restore Ecological Processes and Natural Disturbances

- Adds “natural disturbances” to title, as disturbances (i.e., fire, flood) are referenced in the policy.
- Includes minor edit: “mimicked” changed to “replicated”.

Policy 3.06 Wetland and Riparian Protection

- Adds language about wetlands’ value to reducing the impacts of flooding, and adding “education” to the public about the value of wetlands

Policy 3.07 Invasive Species Management

- New language reflects input from community members, OSMP staff, the city’s IPM coordinator, and the county. It clarifies interagency cooperation and partnerships, and reflects that details are available in relevant city and county plans.
- Adds a new section to be consistent with city IPM policy to explain that management of native and non-local native species will be based on weighing impacts versus benefits and account for changing species composition due to climate change and other human impacts based on best available science. This reflects current practice in OSMP and city.

Policy 3.08 Public Access to Public Lands – no change

New Policy Climate Change Preparation and Adaption and Resilience

- Included language to be consistent with city’s Climate Commitment document, resilience strategy and OSMP management practices, and modified it somewhat to reflect public input regarding a science-based approach to newly adapting plants and wildlife.

Policy 3.09 Management of Wildlife-Human Conflicts

- Added language about wildland-urban interface context.
- Added the “county” at the request of county staff.

Policy 3.10 Urban Environmental Quality

- Deleted reference to “agriculture” in this policy that is intended for urban areas, as requested by county staff.
- Changed language to say that the quality of the urban environment will be “maintained” and may improve instead of “will not worsen,” and be improved at the request of community members. Saying areas will improve would be a new policy direction.

Policy 3.11 Urban Forests

- Adds language about important role of the urban canopy in ameliorating effects of climate change and management policies at request of community members.

Policy 3.12 Water Conservation

- Adds reference to “efficient water usage rather than xeriscape, as requested by community members. (Note: xeriscape could have damaging consequences for wetlands and trees.)

Policy 3.13 Integrated Pest Management

- Changed language to be consistent with the city’s Integrated Pest Management (IPM) policy and reflects best practices to integrate IPM into an ecological approach to land management.
- County approach is a little different as noted in the language, and staff have noted concerns about being unable to “discourage” the use of pesticides given requirements to follow state weed law and county agricultural program. The County Planning Commission also suggested stronger language.

New Policy: Soil Carbon Sequestration

- Adds new language to recognize soil sequestration as having potential benefits. It reflects input from community members and has been modified with suggestions from OSMP staff. This policy cross references Sec. 3, Agriculture and Food, where soil health and carbon sequestration could apply and be better suited to tilled agricultural lands.

Policy 3.14 Unique Geological Features

- Adds reference to “public land management” as a means of protection.

Policy 3.15 Mineral Deposits

- Clarifies that the intent of the policy is to balance relevant community values with the use of mineral deposits.
- Notes that the use of non-renewable resources will be considered only when conservation and recycling is not a feasible alternative and impacts of resource use will be balanced with other community values and priorities as suggested by community and staff.

Policy 3.16 Hazardous Areas – no changes

Policy 3.17 Erosive Slopes and Hillside Protection

- Added to the title: “Erosive Slopes”.

- Added a clause about the risk of earth movement and development of trails and the base of hillsides at the request of community members.

Policy 3.18 Wildfire Protection and Management

- Adds context statement about the likely warming and drying of the climate making wildfire increasingly common.

Policy 3.19 Preservation of Floodplains – no changes

Policy 3.20 Flood Management

- Adds recognition about multiple hazards relationship and increased potential for flooding.

Policy 3.21 Non-Structural Approach – no change

Policy 3.22 Protection of High Hazard Areas

- Suggested adding reference to the county by community members, however the county does not reference nor use the same designation for High Hazard.

Policy 3.23 Larger Flooding Events

- Adds “county”
- Critical facilities are a specific term used by the city. That is clarified.

Policy 3.24 Protection of Water Quality

- Reflects broader Boulder Valley watersheds rather than focusing exclusively on Boulder Creek, per county staff suggestion.

Policy 3.25 Water Resource Planning and Acquisition

- New language suggested by water utilities to address requests about changing language regarding acquiring “additional municipal water supply”. OSMP notes that the existing policy guidance of acquiring water resources strategically is supported by City Charter.

Policy 3.26 Drinking Water – no change

Policy 3.27 In-Stream Flow Program

- “Minimum” Flow Program changed to “In-stream” in title to be consistent with policy language.

Policy 3.28 Surface and Groundwater

- Adds “drilling” and “mining” to list of potential impacts to resources.

Note: Groundwater is a complex issue that may need future discussion. The current policy (3.24, and 3.28) is to protect groundwater resources and prevent dewatering. However, high water tables in new development can be seen as a challenge, and there has been some discussion of limiting subsurface structures, but such an approach needs further study. This policy as currently written is consistent with utility plans.

Policy 3.29 Wastewater – no change

Policy 3.30 Protection of Air Quality

- Added language regarding “contributing to climate change” as part of negative effects of pollutants.

Note: OSBT suggested also adding language about the role of trees and plantings to help reduce exposure to air pollutants at the street level. This should be addressed in the “Built Environment” chapter – highlighting the important role of street trees and vegetative plantings in mitigating air quality and reducing exposure to pollutants at the street level.

New section added to reference all relevant master plans

ATTACHMENT B-2: Proposed changes to Natural Environment Section

Red text represents text additions or ~~deletions~~.

3. Natural Environment

Draft – Dec. 5, 2016

In this section, the “natural environment” includes the city and county owned open space lands as well as environmental components (like air, water, geological features) and remnants of the natural environment within the urban area. Preservation and protection of the natural environment that characterizes the Boulder Valley is a core community value that has defined Boulder since the end of 19th century. Within the Boulder Valley’s complex ecological system, there are inextricable links among the natural environment, plants and animals, the built environment, the economy and community livability. Changes to the natural ecosystems within the Boulder Valley can have a profound effect on ecosystem viability and the quality of life desired by Boulder Valley residents.

A mixture of wildlands and urban lands exist throughout the Boulder Valley in a continuum often referred to as the “urban wildland” interface. High quality ecosystems containing primarily native plants and animals occupy one end of the natural environment gradient. Land that is not dominated by native species but that is in a natural condition without buildings or development is found further along the gradient. On the other end of the gradient are lands that contain mostly non-native plants and animals and are used primarily for developed recreation, transportation or other purposes (e.g., parks, greenways) in an urban environment. These lands are often managed differently for different purposes.

Over many decades, with the initiative and financial support of local citizens, the city and county have actively protected and managed open space around the urban area, and existing city and county open space plans and policies apply to those public lands acquired and managed as habitat conservation areas, natural areas, recreational areas, and agricultural areas.

As in the rest of the world, the Boulder Valley climate is experiencing local and regional climate change within the larger global climate regimes. Anticipated further changes and intensified weather events and warming heighten the need for the city and county to proactively reduce risk and protect resources.

Boulder has been at the forefront of environmental protection and preservation for many years. Sixty-three percent (63%) of the Boulder Valley Comprehensive Plan area has been protected by the city and county as open space for critical habitat for native plants and animals, agricultural productivity, and ~~The vast amount of natural land protected by the city and county~~ contributes to the high quality of life for residents for recreation, relaxation, and connection with nature. The community’s historic and on-going emphasis on clean air and water, and preservation of natural habitats has resulted in significant progress toward a sustainable, resilient and healthy urban environment.

The city ~~and county places strong emphasis on being a leader and role model to other communities for its exemplary environmental protection practices and accomplishments.~~ The city will continue to identify and develop and implement state-of-the-art environmental policies both community wide ~~and within the city government organization~~ to further its natural environmental sustainability goals.

The policies in this section support the following city and county goals related to the conservation and preservation of land, water, air resources and pollution prevention and resilience:

- Protecting Native Ecosystems and Biodiversity ~~and Native Ecosystems~~
- Enhancing Urban Environmental Quality
- Protecting Geologic Resources and Reducing Risks from Natural Hazards
- Sustaining and Improving Water and Air Quality

Reaching these goals requires an overall planning and management strategy that incorporates an understanding of ecological systems and implements adaptive management principles for monitoring and course corrections.

3.01 Incorporating Ecological Systems into Planning

The city and county will approach planning and policy decisions in the Boulder Valley through an ecosystem framework in which natural regions like bioregions, airsheds and watersheds are considered and incorporated into planning.

3.02 Adaptive Management Approach

~~The city will employ an adaptive management approach to resource protection and enhancement.~~ An adaptive management approach to resource protection and enhancement involves establishing objectives, conducting ongoing monitoring of resource conditions, assessment of the effectiveness of management actions, revision of management actions based on new information from research, and learning from experience what works and what does not. The city and county will employ this approach.

Protecting Native Ecosystems and Biodiversity

3.03 Natural Native Ecosystems

The city and county will protect and restore significant native ecosystems on public and private lands through land use planning, development review, conservation easements, acquisition and public land management practices. The protection and enhancement of biological diversity and habitat for state and federal endangered and threatened species and state, as well as county-critical wildlife habitats/migration corridors, environmental conservation areas, high biodiversity areas, rare plant areas, and significant natural communities and county and local species of concern will be emphasized. Degraded habitat may be restored and selected extirpated species may be reintroduced as a means of enhancing native flora and fauna in the Boulder Valley. Important guidance and strategies for protection and restoration are in city and county plans listed at the end of this section.

3.04 Ecosystem Connections and Buffers

The city and county recognize the importance of preserving large habitat areas ~~of unfragmented habitat~~ in supporting the biodiversity of its natural lands and viable habitat for native species. The city and county will work together to preserve, enhance, restore and maintain undeveloped lands identified as critical and having significant ecological value for providing ecosystem connections (e.g., wildlife corridors) and buffers to support the natural movement of native organisms between ecosystems. Connected corridors of habitat may extend through or along the edges of the urban environment and often serve as vital links between natural areas for both wildlife and humans. They are often at the greatest risk of degradation and thus should be identified for planning and where appropriate for acquisition, restoration, and/or management.

3.05 Maintain and Restore Natural Ecological Processes and Natural Disturbances

Recognizing that natural ecological processes, such as wildfire and flooding, are integral to the productivity and health of natural ecosystems, the city and county will work to ensure that, when appropriate precautions have been taken for human safety and welfare, ecological processes will be maintained or mimicked-replicated in the management of natural lands.

3.06 Wetland and Riparian Protection

Natural and human-made wetlands and riparian areas are valuable for their ecological and, where appropriate, recreational functions, including their ability to enhance water and air quality and reduce the impacts of flooding. Wetlands and riparian areas also function as important wildlife habitat, especially for rare, threatened and endangered plants, fish and wildlife. Because they have historically been so scarce in the Front Range and because of continued degradation, ~~t~~The city and county will continue to support and develop programs to protect, ~~and~~ enhance, and educate the public about the value of wetlands and riparian areas in the Boulder Valley. The city will strive for no net loss of wetlands and riparian areas by discouraging their destruction, ~~or~~ requiring the creation and restoration of wetland and riparian areas in the rare cases when development is permitted and the filling of wetlands or destruction of riparian areas cannot be avoided. Management of wetland and riparian areas on city open space lands is described in the OSMP Grasslands Ecosystems Management Plan.

3.07 Invasive Species Management

The city and county will cooperate and promote efforts, both public and private, to prevent the introduction and spread of invasive and non-native plant and animal species ~~and seek to control their spread~~. High priority will be given to managing invasive species that have, or potentially could have, a substantial impact on city and county resources or ecosystem function. City and county resource management plans will provide direction and guidance for identifying -priorities for management and control of invasive non-native species. Management decisions should also take into account changing species composition due to climate change and other human impacts as well as the role in the ecosystem provided by each organism based on the best available science.

3.08 Public Access to Public Lands

Certain city and county-owned or managed lands provide a means for educating users on the importance of the natural environment. These pPublic lands may include areas for recreation and

preservation of agricultural use, unique natural features, and wildlife and plant habitat. Public access to natural lands will be provided for, except where closure is necessary to protect areas from unacceptable degradation or impacts to agriculture, habitat or wildlife, for public safety, or limits on access necessary to preserve the quality of the visitor experience.

New Policy: Climate Change Mitigation and Adaptation and Resilience

The city and county are working to mitigate climate change and recognize that adaptation to climate change will be necessary as well. Preserving ecological reserves enhances the resilience of native ecosystems, and reduces the loss of native biodiversity, ecological processes, and ecosystems. Additionally, to prepare open space lands and natural areas for climate change, the city and county will use an adaptive approach to assess potential impacts from changes in the local climate. The city and county will consider allowing or facilitating ecosystems' transition to new states in some sites and increasing the stability and resiliency of the natural environment elsewhere. Open space master plans guide other topics related to climate change, such as visitor experiences to open space. Overall strategies may include:

1. A continued integrated approach to actively managing aspects of the local ecosystems;
2. Protection of the reserves of open space land to support the long-term viability of native plants and animals;
3. Conducting restoration projects using arid-adapted ecotypes or species;:-
4. On-going attention on the interface between the natural and urban environments to better manage natural resources and human-wildlife interactions and to reduce the potential for wildfire; and
5. Improve understanding of actions necessary to maintain or restore the ecological functions of natural systems under a changing climate.

Enhancing Urban Environmental Quality

3.09 Management of Wildlife-Human Conflicts

The Boulder Valley sits within a wildland-urban interface, and tThe city and county recognizes the intrinsic value of wildlife in both itsthe urban and rural settingareas. The city and county will promote wildlife and land use management practices to minimize conflicts with residents and urban land uses while identifying, preserving and restoring appropriate habitat for wildlife species in the urban area. When a wildlife species is determined to be a nuisance or a public health hazard, a full range of alternative wildlife and land use management techniques will be considered by the city and county in order to mitigate the problem in a manner that is humane, effective, economical and ecologically responsible.

(Note: move this policy to after 3.12 in final draft.)

3.10 Urban Environmental Quality

To the extent possible, the city and county will seek to protect the environmental quality of areas under significant human and urban influence ~~such as agricultural and urban lands~~ and will balance human needs and public safety with environmental protection. The city will develop community-wide programs and standards for new development and redevelopment so that negative environmental impacts will be mitigated and overall environmental quality of the urban environment will ~~not worsen and may improve~~ be maintained and improved.

3.11 Urban Forests

The city will support, promote and, in some cases, regulate the protection of healthy existing trees and the long-term health and vitality of the urban forest in the planning and design of public improvements and private development. Urban canopy plays an important role in ameliorating the effects/role of climate change; therefore, the city will guide short- and long-term urban forest management that encourages overall species diversity and native and low water demand tree species where appropriate.

3.12 Water Conservation

The city and county will promote the conservation of water resources through water quality protection, public education, monitoring and policies that promote appropriate water usage such as water conserving landscaping. The city will endeavor to minimize water waste and reduce water use during peak demand periods. New development and redevelopment designed to conserve water will be encouraged.

3.13 Integrated Pest Management

The city and county policies differ slightly in management approach. The city and county aims encourage efforts to reduce and eliminate, where possible, the use of pesticides and synthetic, inorganic fertilizers on public properties and also provides outreach and education to encourage the public to use a similar approach on private property. ~~In its own~~ The city's practices carefully consider when pest management actions are necessary and focus on creating healthy and thriving ecosystems to lower pest pressure by natural processes. When pest management is necessary, the city commits to the use of ecologically-based integrated pest management principles, which emphasizes the selection of the most environmentally sound approach to pest management and the overall goal of reducing or eliminating the dependence on using non-chemical pest-control strategies. When public or environmental health risks are identified, the city and county will balance the impacts and risks to the residents and the environment when choosing management/control measures. The county will strive to reduce the use of pesticides and synthetic, inorganic fertilizers where use does occur.

(Note: For the next draft of this chapter, this policy will be moved to right before 3.07 in the "Native Ecosystems and Biodiversity" subsection, since invasive species are managed using IPM. It helps frame the issue there, and it is not just an urban environmental quality issue.)

New Policy: Soil Carbon Sequestration

The city and county recognize that soil carbon sequestration may have a range of potential benefits, including water retention, soil health and soil stabilization. Soil health is especially important for both the natural environment and agricultural lands. Section 9 (Food and Agriculture) includes a description of soil sequestration policy for tilled agricultural lands.

For the natural environment, the current capacity of native grasslands and forests to sequester carbon will be important in city and county soil carbon sequestration efforts. Native grasslands and forests will be maintained and protected following resource management plans. Opportunities to manage soil carbon levels in such areas if and when appropriate need to be consistent with adopted plans and policies.

Protecting Geologic Resources and Reducing Risks from Natural Hazards

3.14 Unique Geological Features

Due to its location at the interface of the Great Plains and the Rocky Mountains, the Boulder Valley has a number of significant or unique geological and paleontological features. The city and county will attempt to protect these features from alteration or destruction through a variety of means, such as public acquisition, public land management, land use planning and regulation, and density transfer within a particular site.

3.15 Mineral Deposits

Deposits of sand, gravel, coal and similar finite resource areas will be delineated and managed according to state and federal laws and local government regulations. ~~Mineral deposits and other non-renewable resources will be used with the greatest practical efficiency and the least possible disturbance to existing natural and cultural resources.~~ The use of non-renewable mineral resources will be considered only when conservation and recycling is not a feasible alternative. The impacts of such resource use will be balanced against other community values and priorities, including environmental and cultural resource protection, health concerns and carbon emission reduction. The city and county will work together to acquire mineral rights as appropriate.

3.16 Hazardous Areas

Hazardous areas that present a danger to life and property from flood, forest fire, steep slopes, erosion, unstable soil, subsidence or similar geological development constraints will be delineated, and development in such areas will be carefully controlled or prohibited.

3.17 Erosive Slopes and Hillside Protection

Hillside and ridge-line development will be carried out in a manner that, to the extent possible, avoids both negative environmental consequences to the immediate and surrounding area and the degradation of views and vistas from and of public areas. Due to the risk of earth movement and/or mud slides, special attention needs to be paid to soil types and underlying geological strata before and during planning, design and construction of any development on or at the base of hillsides.

3.18 Wildfire Protection and Management

As Boulder County's climate changes, wildfire may become increasingly common. The city and county will require on-site and off-site measures to guard against the danger of fire in developments adjacent to natural lands and consistent with forest and grassland ecosystem management principles and practices. Recognizing that fire is a widely accepted means of managing ecosystems, the city and county will integrate ecosystem management principles with wildfire hazard mitigation planning and urban design.

3.19 Preservation of Floodplains

Undeveloped floodplains will be preserved or restored where possible through public land acquisition of high hazard properties, private land dedication and multiple program coordination. Comprehensive planning and management of floodplain lands will promote the preservation of natural and beneficial functions of floodplains whenever possible.

3.20 Flood Management

The city and county will protect the public and property from the impacts of flooding in a timely and cost-effective manner while balancing community interests with public safety needs. The city and county will manage the potential for floods by implementing the following guiding principles: a) Preserve floodplains; b) Be prepared for floods; c) Help people protect themselves from flood hazards; d) Prevent unwise uses and adverse impacts in the floodplain; and e) Seek to accommodate floods, not control them. The city seeks to manage flood recovery by protecting critical facilities in the 500-year floodplain and implementing multi-hazard mitigation and flood response and recovery plans. The city and county recognize that multiple hazard risks are closely linked, such as the role of fire damaged slopes and increased risk of flooding.

3.21 Non-Structural Approach to Flood Management

The city and county will seek to preserve the natural and beneficial functions of floodplains by emphasizing and balancing the use of non-structural measures with structural mitigation. Where drainageway improvements are proposed, a non-structural approach should be applied wherever possible to preserve the natural values of local waterways while balancing private property interests and associated cost to the city.

3.22 Protection of High Hazard Areas

The city will prevent redevelopment of significantly flood-damaged properties in high hazard areas. The city will prepare a plan for property acquisition and other forms of mitigation for flood-damaged and undeveloped land in high-hazard flood areas. Undeveloped high hazard flood areas will be retained in their natural state whenever possible. To reduce risk and loss, Compatible uses of riparian corridors, such as riparian corridors, natural ecosystems, wildlife habitat and wetlands will be encouraged protected wherever appropriate. Trails or other open recreational facilities may be feasible in certain areas.

3.23 Larger Flooding Events

The city and county recognizes that floods larger than the 100-year event will occur resulting in greater risks and flood damage that will affect even improvements constructed with standard flood protection measures. The city will seek to better understand the impact of larger flood events and consider necessary floodplain management strategies, including the protection of critical facilities, as defined by the city.

Sustaining and Improving Water and Air Quality

3.24 Protection of Water Quality

Water quality is a critical health, economic and aesthetic concern. The city and county have been protecting, maintaining and improving water quality and overall health within ~~the~~ Boulder Creek Valley watersheds as a necessary component of existing ecosystems and as a critical resource for the human community. The city and county will continue seek to reduce point and nonpoint sources of pollutants, protect and restore natural water systems, and conserve water resources. Special emphasis will be placed on regional efforts, such as watershed planning, and priority will be placed on pollution prevention over treatment.

3.25 Water Resource Planning and Acquisition

Water resource planning efforts will be regional in nature and incorporate the goals of water quality protection, ~~and as well as~~ surface and ground-water conservation. The city will continue to obtain additional ~~municipal~~ water ~~supplies~~ resources as needed to ~~e~~nsure adequate drinking water, maintain instream flows and preserve agricultural uses. The city will seek to minimize or mitigate the environmental, agricultural and economic impacts to other jurisdictions in its acquisition of additional municipal water supply to further the goals of maintaining instream flows and preventing the permanent removal of land from agricultural production elsewhere in the state.

3.26 Drinking Water

The city and county will continually seek to improve the quality of drinking water and work with other water and land use interests as needed to assure the integrity and quality of its drinking water supplies. The city and county will employ a system-wide approach to protect drinking water quality from sources ~~s~~ waters to the water treatment plant and throughout the water distribution system.

3.27 In-stream ~~Minimum~~ Flow Program

The city will pursue expansion of the existing in-stream flow program consistent with applicable law and manage stream flows to protect riparian and aquatic ecosystems within the Boulder Creek watershed.

3.28 Surface and Groundw-Water

Surface and groundwater resources will be managed to prevent their degradation and to protect and enhance aquatic, wetland and riparian ecosystems. Land use and development planning and public land management practices will consider the interdependency of surface and groundwater and potential impacts to these resources from pollutant sources, changes in hydrology, drilling, mining, and dewatering activities.

3.29 Wastewater

The city will pursue sustainable wastewater treatment processes to achieve water quality improvements with greater energy efficiency and minimal chemical use. Pollution prevention and proactive maintenance strategies will be incorporated in wastewater collection system management. The county will discourage the installation of private on-site wastewater systems where municipal collection systems are available or where a potential pollution or health hazard would be created.

3.30 Protection of Air Quality

Air quality is a critical health, economic and aesthetic concern. The city and county will seek to reduce stationary and mobile source emissions of pollutants. Special emphasis will be placed on local and regional efforts to reduce pollutants, which cause adverse health effects, ~~and~~ impair visibility and contribute to climate change.

Relevant Master Plans include:

- Grasslands Ecosystem Management Plan, OSMP
- Forest Ecosystem Plan, OSMP
- Boulder County Comprehensive Plan Environmental Resources Element (2016)

- Visitor Master Plan, OSMP
- Water Utility Master Plan
- Water Efficiency Plan
- Boulder's Climate Commitment
- City of Boulder Resilience Strategy
- Greenways Master Plan
- Integrated Pest Management Policy

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ATTACHMENT C-1: Summary of proposed changes to Food and Agriculture section

Section 9. Agriculture and Food – Summary of Proposed Changes

Dec. 5, 2016

This section focuses on agriculture, food, sustainable practices, and access to food for the community. The city and county have made significant contributions to the preservation of lands for agricultural production and the water needed to use these areas for agriculture. Most agricultural production in the Boulder Valley occurs on city and county open space. The changes to this chapter reflect updated plans and work since the 2010 Plan including:

- Agriculture Resources Management Plan (in progress)
- City of Boulder Water Efficiency Plan (2016)
- HR&A's Recommendations for Resilience Integration (2016)
- 2015 State of Colorado Water Plan (2015)
- Boulder County Environmental Element (2014)
- Parks and Recreation Master Plan (2012)
- City of Boulder Source Water Master Plan (2009)
- Ordinances and policy changes to promote local food sales
- Boulder County Cropland Policy (2011)

Additional changes since the Aug. 24 draft reflect input from the community and county staff. They include:

Introduction/Preamble:

- This chapter will stand alone as its own chapter rather than be combined with others as initially proposed.
- The second paragraph has new definitions of "agricultural lands" as requested by a member of the public. While more extensive language was suggested to define soil health, staff did not recommend including it in the BVCP, because the topic is really too detailed for the BVCP, and probably should be addressed in an upcoming Open Space Master Plan or other plans that address agricultural operations.

Policy 9.01 Support for Agriculture

- Added language to be consistent with current practice.

Policy 9.02 Urban Gardening and Food Production

- This policy was moved from former Policy 9.05 and slightly modified.

Policy 9.03 Sustainable Food Production and Agricultural Practices

- Title has been changed back to include Sustainable "Agricultural" Practices along with "Food Production" to reflect that some but not all agriculture is food production and to recognize the value of animal feel, range, and pasture systems.

- County staff also requested a note recognizing conventional agriculture as a significant share of agricultural operations and that shifting to sustainable agriculture could take some time. This note seems out of place in a policy but could go in the introduction or in the Agricultural Resources Management Plan or other master plans.
- Notes that the city and county will seek opportunities to gather and share data to inform future decision making.
- Includes cross reference to pesticide and invasive species policies in Sec. 3.

New Policy 9.04 Soil Health and Soil Carbon Sequestration

- New policy is based on a request from a member of the public. It was originally suggested for the Natural Environment section, but because of its relationship to soil health and tilled lands it is most appropriate in this section.
- OSMP staff suggested modifying the original prescriptive language that required certain actions prior to knowledge about the tool and its appropriateness. This policy suggests a phased and research-based approach.

Updated Policy 9.05 Access to Healthy Food

- Adds “county.”
- This updated policy reflects cooperative efforts to establish markets and facilities and increase access to healthy food. It replaces some outdated language in former policy 9.06.

Policy 9.06 Regional Efforts to Enhance the Food System – no changes

ATTACHMENT C-2: Proposed changes to Agriculture and Food Section

Red text represents text additions or deletions.

Green double underlined text has been relocated from elsewhere

9. Agriculture and Food

Draft – Dec. 5, 2016

~~A strong local food system can positively impact the resiliency, health, economy and environment of the Boulder Valley and surrounding region.~~ Food choices and their agricultural method of production represent one of the most significant impacts that humans have on the quality of our lives~~world around us.~~ A strong local food system can positively impact the resiliency, health, economy and environment of the Boulder Valley and its surrounding areas. Sustainable rural and urban agricultural practices and efficient short distances to transport of food can help reduce energy used to feed the community. Access to healthysafe food, including locally grown food for all Boulder residents, is a top priority for our community. It is important that such~~healthy~~ food be available to individuals and families in all neighborhoods, regardless of economic situation and location.

~~Roots in progressive food movements run deep in Boulder County and have contributed to the dynamic and thriving natural foods industry. Many local restaurants specialize in providing local ingredients in their food, garden to table processes have been developed in local schools, and the desire for a year-round farmers market are all indications of people's growing interest and demand for locally produced food.~~

The city and county have made significant contributions to the preservation of lands suitable for agricultural production, and the water needed to use these areas for agriculture. Most agricultural production in the Boulder Valley occurs on city and county open space. Agricultural lands in the Boulder Valley included tilled cropland, irrigated fields, hay fields, grazed fields, orchards, tree farms, and urban plots.

The following policies on agriculturalle and ~~access to local~~ food systems guide public policy and decision-making in to move our community, ~~toward a more robust agricultural economy and ensuring everyone has access to food.~~

- Support for Agriculture
- ~~Local Food Production~~
- Sustainable Food Production~~Agricultural~~ Practices
- Soil Health and Soil Carbon Sequestration
- Regional Efforts to Enhance the Food System
- Urban Gardening and Food Production
- Access to ~~Locally Produced~~ Healthy Food

9.01 Support for Agriculture

The city and county ~~will~~ encourage the preservation of working agricultural lands, and sustainable production of food on them ~~use of agricultural lands as a current and renewable~~

~~source of food and feed and for their contribution to the degree they provide~~ cultural, environmental, ~~and economic diversity and resilience~~ benefits to the community. These ~~uses~~ areas are important for preserving the rural character ~~and agriculture~~ of Area III. The success of agriculture on these lands is vitally dependent on their water supplies. The city and county will demonstrate and encourage the protection of significant agricultural areas and related water supplies and facilities, including the historic and existing ditch systems, through a variety of means, which may include public acquisition, land use planning, and sale or lease of water for agricultural use. The city and county will support farmers and ranchers in this area as they negotiate the challenges of operating in a semi-arid environment that is often near residential areas.

9.025 Urban Gardening and Food Production

The city encourages community and private gardens to be integrated in the city. City incentives include allowing flexibility and/or helping to remove restrictions for food production and sales on private lands and in shared open spaces and public areas, and encouraging rooftop gardens and composting and planting edible fruit and vegetable plants where appropriate.

9.02 Local Food Production

~~The city and county will encourage and support local food production to improve the availability and accessibility of healthy foods and to provide other educational, economic and social benefits. The city and county support increased growth, sales, distribution and consumption of foods that are healthy, sustainably produced and locally grown for all Boulder Valley residents with an emphasis on affordable access to food for everyone and long-term availability of food.~~

9.03 Sustainable Food Production and Agriculture Practices

The city and county will promote sustainable food production and agricultural practices on publicly- owned lands and will encourage them on private lands. Sustainable practices include food production methods that ~~are healthy, have low environmental impact, integrate ecological conservation objectives, enhance soil health, responsibly use water and protect its quality, provide for pollinator and beneficial insect habitat,~~ are respectful to workers, are humane to animals, provide fair wages to farmers, integrate whole farm planning and support farming communities. These can include a range of production types that take into account land suitability, water availability, invasive species, energy use and labor and capital needs. The city and county will also promote sustainable agriculture by recognizing the critical importance of delivering irrigation -water to agricultural lands.

New Policy 9.04: Soil Health and Soil Carbon Sequestration

The city and county may consider strategies to enhance soil health and sequester soil carbon on certain agricultural lands. They city and county recognize that there is baseline work to be done, such as conducting research and literature reviews, identifying relevant information gaps, and determining if and how Open Space Mountain Parks (OSMP) and county Parks and Open Space tilled lands best offer opportunities to address carbon sequestration,- beginning with limited experimentation in tilled lands.

9.05 Access to Healthy Food

The city and county will support cooperative efforts to establish community markets throughout the community and region. Such efforts include working to identify a location or develop facilities to allow one or more year-round farmers' markets, supporting sales of produce from small community gardens and working with local partners on food programs. The city and county support increased growth, sales, distribution and consumption of foods that are healthy,

sustainably produced and locally grown for all Boulder Valley residents with an emphasis on affordable access to food and long term availability of food.

9.064 Regional Efforts to Enhance the Food System

The city and county will participate in regional agricultural efforts and implement recommendations at a local level to the extent appropriate and possible.

~~9.05 Urban Gardening and Food Production~~

~~The city will encourage community and private gardens to be integrated in the city. This may include allowing flexibility and/or helping to remove restrictions for food production in shared open spaces and public areas, encouraging rooftop gardens and composting and planting edible fruit and vegetable plants where appropriate.~~

~~9.06 Access to Locally Produced Food~~

~~The city will support cooperative efforts to establish community markets throughout the community and region. Such efforts include working to identify a location or develop facilities to allow a year round farmers market and support sales of produce from small community gardens.~~

Relevant Master Plans include:

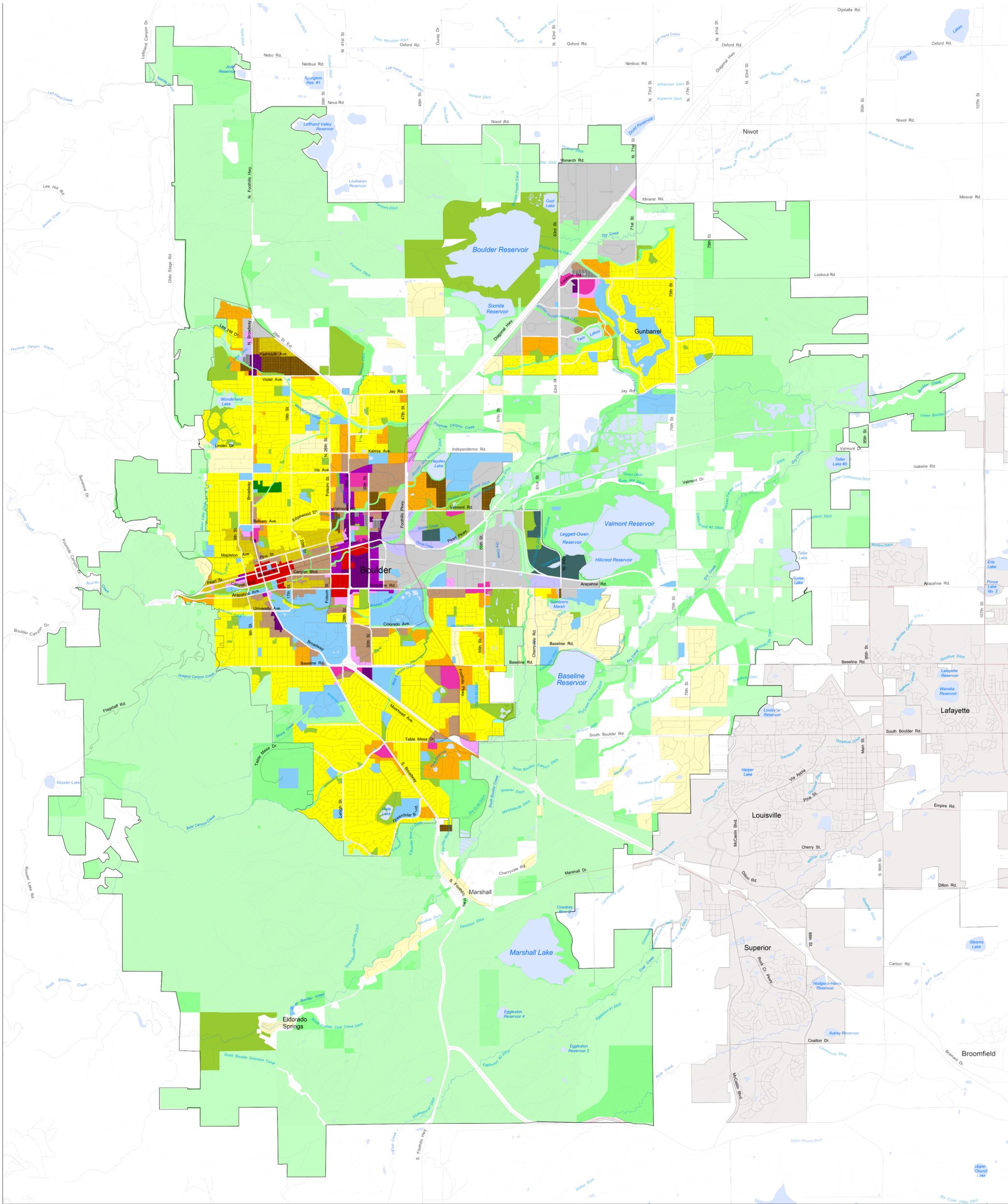
- Agriculture Resources Management Plan (in progress)
- City of Boulder Water Efficiency Plan (2016)
- HR&A's Recommendations for Resilience Integration (2016)
- 2015 State of Colorado Water Plan (2015)
- Boulder County Environmental Element (2014)
- Parks and Recreation Master Plan (2012)
- Boulder County Cropland Policy (2011)
- City of Boulder Source Water Master Plan (2009)

Final draft plan will include links to relevant policies in the Built Environment, Natural Environment, Energy and Climate, and Community Well-Being chapters

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ATTACHMENT D-1: Existing Mapping

2010 Boulder Valley Comprehensive Plan Land Use Designation Map



Legend

Land Use	Business	General Industrial	Open Space and Mountain Parks	Area II Boundary
Very Low Density Residential	Community Business	Light Industrial	Open Space, Acquired	Area III Boundary
Low Density Residential	General Business	Performance Industrial	Open Space, Development Rights	Natural Ecosystem Overlay
Manufactured Housing	Service Commercial	Mixed Use	Open Space, Other	Other City Limits
Medium Density Residential	Transitional Business	Mixed Use Business	Other	Highway
Mixed Density Residential	Regional Business	Mixed Use Industrial	Agricultural	Major Road, Minor Road
High Density Residential	Industrial	Mixed Use Residential	Park, Urban and Other	Local Street
	Community Industrial		Public	Creek
			Environmental Preservation	Intermittent Creek
				Ditch
				Lakes

Scale: 1:25,000

Miles

0 1 2

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CITY OF BOULDER

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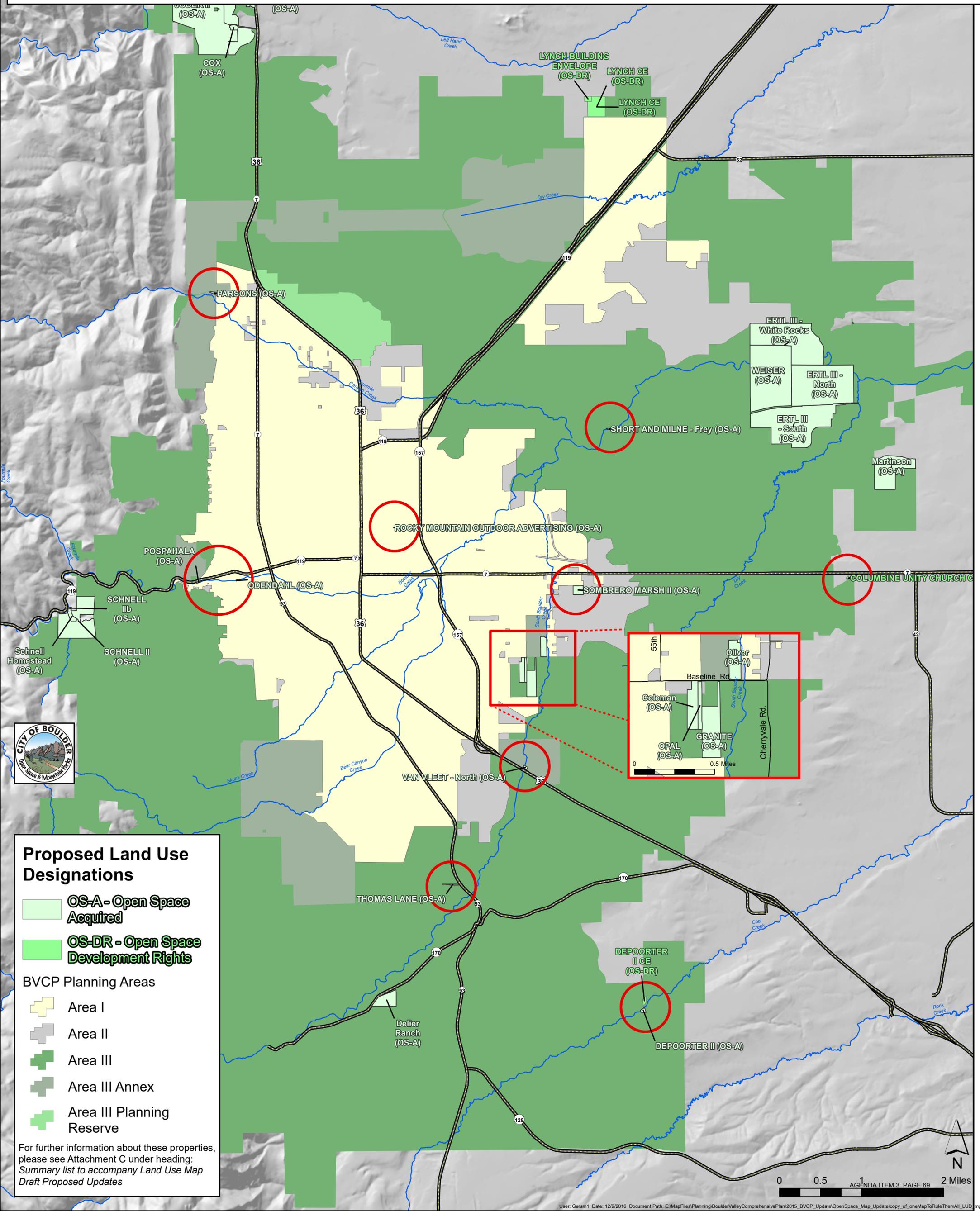
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AGENDA ITEM 3 PAGE 67

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ATTACHMENT D- 2: Proposed Updates

Boulder Valley comprehensive Plan: Land Use Designation Map



Proposed Land Use Designations

- OS-A - Open Space Acquired**
- OS-DR - Open Space Development Rights**

BVCP Planning Areas

- Area I
- Area II
- Area III
- Area III Annex
- Area III Planning Reserve

For further information about these properties, please see Attachment C under heading: *Summary list to accompany Land Use Map Draft Proposed Updates*

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ATTACHMENT D-3: Property Lists for Updates to BVCP Land Use and Planning Area Maps

Land Use Designation Map Updates

For corresponding draft map please see Attachment D-X

Newly Acquired Fee Interests Open Space

Open Space-Acquired

Coleman	Ertl III - White Rocks	Schnell Ila
Cox	Granite	Schnell IIb*
Dagle II	Joder II	Sombrero Marsh II
Delier Ranch	Martinson	VanVleet-North
Depoorter II **	Oliver	Weiser
Ertl III – North	Opal	
Ertl III – South	Schnell Homestead	<u>Open Space Development Rights</u>
	Schnell II	DePoorter II CE **

**Property trade (swaps Depoorter OS-DR and OS-A)

Corrections

Changes missed in previous updates.

Open Space Acquired

Odendahl	Rocky Mtn Outdoor Advertising
Parsons	Short & Milne - Frey
Pospahala	Thomas Lane

Open Space Development Rights

Columbine Unity Church CE
Lynch BE (Building Envelope)
Lynch CE

Property Disposal: Remove Open Space Designation

Inset table summarizes disposal information

Property	To Whom	Reason
Belgrove	CDOT	Colorado Highway 119
Nu-West	CDOT	Colorado Highway 119
West Rudd	Rocky Mountain Fire	Fire Station
Dawson - Open Space	Boulder County Trans	Niwot Road
Johnson - North	Boulder County Trans	Niwot Road
Stratton	Purchaser	Residence
Woodley	Purchaser	Residence
Gallucci	CDOT	US36
Jirkovsky	CDOT	US36
Van Vleet - East	CDOT	US36
Van Vleet - North	CDOT	US36
Van Vleet - South	CDOT	US36
Yunker – East	CDOT	US36
Yunker – North	CDOT	US36
Yunker - South	CDOT	US36
Yunker – West	CDOT	US36
11 Hard Surface Trail Segments	City of Boulder Transportation	Electric Bike (motorized) Use

Description (Receipient)	Acres
Col Hwy 119 (CDOT)	0.53
Fire Station (Rocky Mt Fire)	2.55
Disposal of Residence and adjacnet land	11.29
Niwot Road (Boulder County)	1.61
US 36 (CDOT)	8.59
Grand Total	24.57
<i>CDOT= Colorado Dept. of Transportation</i>	

Summary information to accompany Draft Proposed Updates to Land Use Map (Attachment D-X)

Name	Fee/CE	Year Closed	Acres	Current LUD	Proposed LUD
Coleman	Fee	2015	12	NONE	OS-A
Columbine Unity Church CE	CE	2004	0.79	NONE	OS-DR
Cox	Fee	2013	3.47	OS-DR	OS-A
Dagle II	Fee	2014	9.14	NONE	OS-A
Dagle II	Fee	2014	4.97	NONE	OS-A
Delier Ranch	Fee	2016	24.6	OS-O	OS-A
DePoorter II CE	CE	2012	1.91	OS-A	OS-DR
DePoorter II	Fee	2012	1.65	OS-DR	OS-A
Ertl III- North	Fee	2013	232	OS-DR	OS-A
Ertl III- South	Fee	2013	227	OS-DR	OS-A
Ertl III- White Rocks	Fee	2013	196	OS-DR	OS-A
Granite	Fee	2013	24.8	NONE	OS-A
Joder II	Fee	2013	36.1	OS-DR	OS-A
Joder II	Fee	2013	36	OS-DR	OS-A
Joder II	Fee	2013	259	OS-DR	OS-A
Lynch BE	CE	2005	3.54	NONE	OS-DR
Lynch CE	CE	2005	31.2	NONE	OS-DR
Martinson	Fee	2014	83.6	NONE	OS-A
Odendahl	Fee	1987	0.15	OS-O	OS-A
Oliver	Fee	2015	11.5	OS-O; VLR	OS-A
Opal	Fee	2013	4.68	NONE; LR	OS-A
Parsons	Fee	1976	1.26	OS-O	OS-A
Pospahala	Fee	1981	0.34	PK-U/O	OS-A
Rocky Mtn Outdoor Advertising	Fee	1974	0.06	OS-O	OS-A
Schnell Homestead	Fee	2015	5.52	NONE	OS-A
Schnell II	Fee	2012	104	NONE	OS-A
SCHNELL III	Fee	2012	0.61	NONE	OS-A
Short and Milne - Frey	Fee	1971	0.45	OS-O	OS-A
Sombrero Marsh II	Fee	2014	8.48	OS-O	OS-A
Thomas Lane	Fee	1994	1.02	OS-O	OS-A
Van Vleet - North	Fee	2013	1.01	OS-O	OS-A
Weiser	Fee	2011	243	OS-DR	OS-A

*CE=Conservation Easement; LUD=Land Use Designation; LR=Low Density Residential; PK-U/O= Park, Urban and Other; OS-A= Open Space Acquired; OS-DR= Open Space Development Rights; VLR=Very Low Density Residential
TBD=Pending review by Planning Department about inclusion in the Planning Area.*

Planning Area Map Updates

For corresponding draft map, please see Attachment D-X

Property Name	Type of Ownership	Planning Area Map Change
Columbine Unity Church CE	Conservation Easement	Outside BVCPA to Area III RPA
Dagle II	Fee Property	Proposed for addition to Area III RPA
Dagle II	Fee Property	Proposed for addition to Area III RPA
Ertl III - North East	Fee Property	Proposed for addition to Area III RPA
Lynch BE	Conservation Easement	Proposed for addition to Area III RPA
Lynch CE	Conservation Easement	Proposed for addition to Area III RPA
Martinson	Fee Property	Proposed for addition to Area III RPA
Schnell Homestead	Fee Property	Proposed for addition to Area III RPA
Schnell II	Fee Property	Proposed for addition to Area III RPA
SCHNELL Iib	Fee Property	Proposed for addition to Area III RPA

BVCPA = Boulder Valley Comprehensive Planning Area

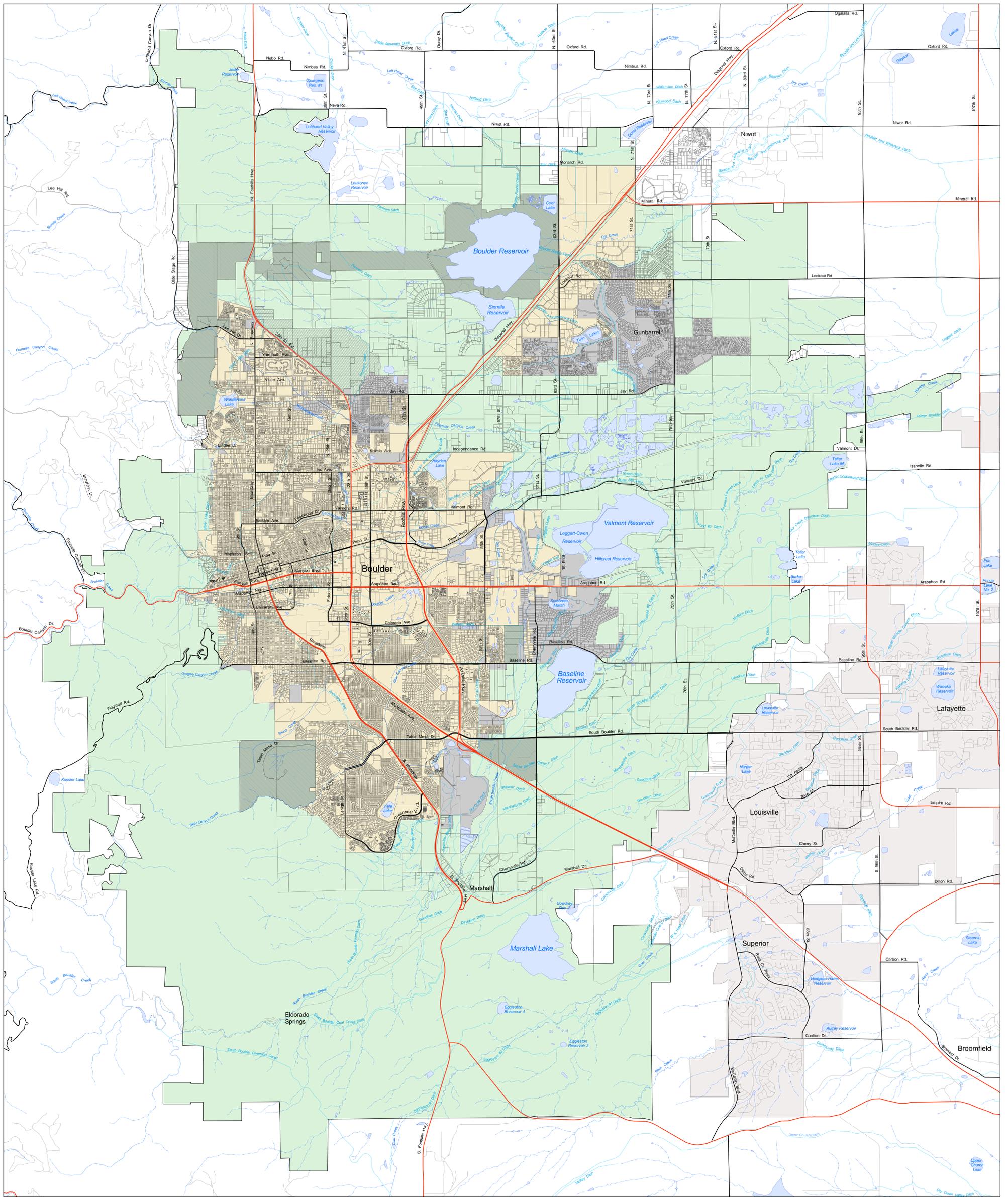
RPA=Rural Preservation Area

TBD= Pending review by Planning Department about inclusion in the Planning Area.

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ATTACHMENT D-4: Existing Mapping

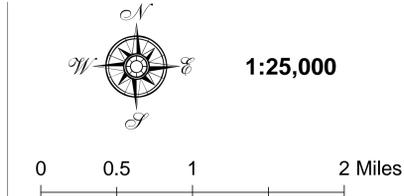
2010 Boulder Valley Comprehensive Plan Area I, Area II, Area III Map



Legend

- | | |
|-------------------------------|--|
| Area I | Area III |
| Area I - Boulder City Limits | Area III - BVCP Planning Area Boundary |
| Area II - Service Area | Area III - Rural Preservation Area |
| Area II | Area III - Planning Reserve |
| | Area III - Annexed |

- Creek
- Intermittent Creek
- Ditch
- Lakes
- Highway
- Arterial Street
- Local Street



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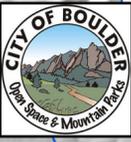
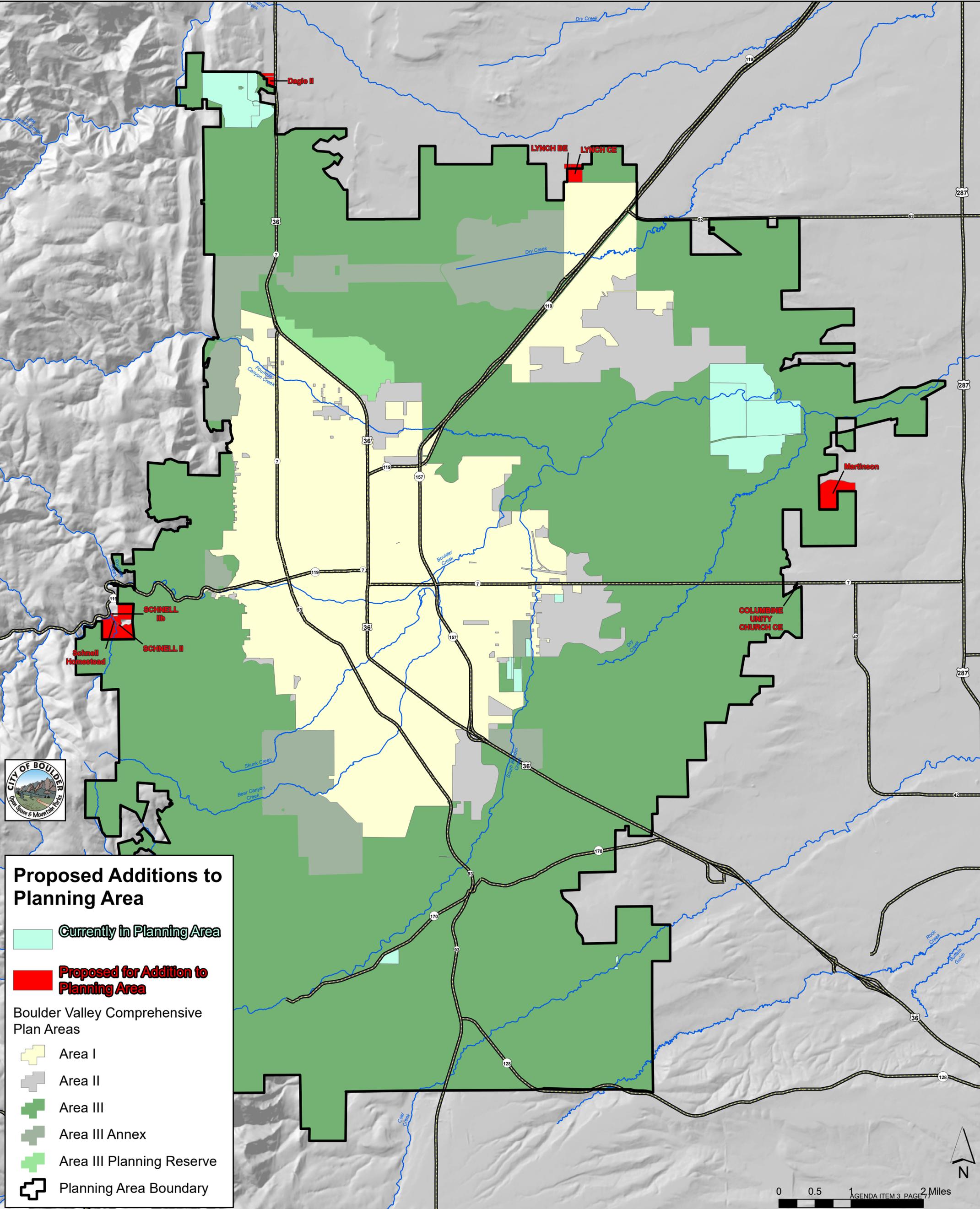
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ATTACHMENT D-5: Proposed Updates

Boulder Valley Comprehensive Plan: Planning Area Map



Proposed Additions to Planning Area

Currently in Planning Area

Proposed for Addition to Planning Area

Boulder Valley Comprehensive Plan Areas

- Area I
- Area II
- Area III
- Area III Annex
- Area III Planning Reserve
- Planning Area Boundary

0 0.5 1 2 Miles

AGENDA ITEM 3 PAGE 77

MEMORANDUM

TO: Open Space Board of Trustees

FROM: Tracy Winfree, Director, Open Space and Mountain Parks

DATE: December 14, 2016

SUBJECT: Draft OSBT Responses to Council Retreat Questions

Included are responses compiled by Frances Hartogh, Board Chair, and Kevin Bracy Knight, Board Member. This will be reviewed by the Board during its Dec. 14 Board meeting.

OSBT Responses to Council Retreat Questions: Draft for OSBT consideration (prepared by Kevin Bracy Knight & Frances Hartogh)

1.a. How do you think the City can improve its public engagement process?

The City's recent efforts to improve its public engagement process have been noticeable. We see decision making-related notices in the paper and on the City website, and receive multiple emails from the City, including through HOAs and neighborhood organizations. Council and boards should prioritize allowing the public to communicate their interests about high-public-interest items. Since our aging populace has vastly differing tech abilities, the City needs to better understand how people would like to be communicated with. To improve public engagement, our board suggested that different modes of engagement with the public may be helpful. In particular, we support a "roundtable" type discussion where our board directly engages with members of the public in a more open format. Roundtables would be conducted in meetings; the point would be for our board to come to a deeper understanding of public interest and to work towards collaboration with all parties. Finally, we also suggest reaching out to public relations professionals, possibly outside of City staff, to bring in fresh perspectives. In addition to mediation/moderation, we suggest that professionals with years of training and experience may be in the best position to advise City staff on methods to minimize conflict regarding contentious issues.

1.b. How would you recommend that Council engage with the community?

Our main interest lies in getting help from Council in doing what we cannot do for ourselves (i.e. external partnerships and using resources not available to OSMP at present). There are several avenues for partnerships we envision: First, we need to pursue opportunities to partner with County, USFS, State Parks, and even our own transportation department, so that efforts are coordinated and complimentary. Many OSMP projects that could reduce crowding, parking, and overuse involve agencies outside of OSMP. Encouraging better communication between staff and boards with respect to these larger projects would be a great benefit. Second, research partnerships with local scientists would be useful, especially long-term research partnerships. At present, Boulder offers some one to three-year research grants, but does not have an adequate plan for funding long-term studies. Given our big questions about human impacts, climate change, resilience, and management plans for species in conflict with development (e.g. prairie dogs), we need to fund research that can take a multi-year (or multi-decade) approach to understanding our changing environment.

2. What do you think the City's top three priorities should be in 2017?

a. Overarching Issues: Boulder Open Space is increasingly popular. The population of the Front Range is growing rapidly, and open space recreation opportunities cannot increase commensurately. Communities, such as Boulder, bear the recreation burden of others that lack our mountain backdrop and permitted recreational uses, such as Voice & Sight privileges for dog guardians. While OSMP offers significant recreation resources, these are finite and impacted by human use. As such, we believe addressing user volume and impact is essential. We need to better understand how Boulder residents, and visitors, use our open space

(location, time of day, frequency) as well as how to best minimize and mitigate impacts. The goal of this work should be to maintain, and in some areas restore, the natural quality (and ecosystem function) of OSMP lands while meeting, to the extent sustainable, the varied recreation goals of our users. We suggest investigating management practices in National Parks as well as other municipal open spaces outside of the Front Range area that may have decades of experience dealing with overcrowding. We encourage Council to help OSMP management prioritize drafting of the Master Plan in 2017, which is a critical starting point in the process of addressing these overarching issues.

b. Improve enforcement, maintenance, and construction: Boulder's stunning natural lands are a prime reason people visit, and live, here. However, the impact of decades of use, some of it inappropriate or illegal, is apparent. Currently, OSMP lacks the capacity to enforce Open Space regulations and maintain trails, resulting in damage to the system. Social trails, trail widening due to poor maintenance, low enforcement of Voice & Sight program, and a large backlog of new infrastructure (trails, restrooms, facilities for disabled users) are problematic. We see staffing and budget for these projects to be the major obstacle. Ranger staff has experienced significant turnover in the last 2 years, making it challenging to enforce regulations. A ranger program that attracts and retains qualified staff in adequate numbers is essential. While focus on acquiring critical pieces of open space should be maintained, we encourage a shift towards staffing enforcement and trails. Trail repairs from the 2013 flood will be ongoing through 2017, while day-to-day maintenance issues, such as trail braiding and social trails, are not addressed. In addition, we see an opportunity to better involve the public in stewardship through training for volunteer on-trail stewards and trail maintenance. While volunteer programs already exist, these could be greatly expanded.

c. Environmental Sustainability: The ecosystems of OSMP lands require constant environmental monitoring and management. Current climate models suggest rapid and radical change in decades to come here in Boulder. This, combined with continuing urbanization around OSMP lands, increasing visitation by recreational users, and the constant threat of invasive plant species describe an unpredictable and hard-to-manage future for Open Space. OSMP's capacity for field research, weed eradication, and ecosystem planning needs to be greatly improved to meet these needs. Both the Master Plan and the Agricultural Plan need to take into account sustainability of the system, especially in light of climate change.

3. What do you think will be the City's three biggest challenges over the next five years, and how should we address them?

With respect to OSMP, we feel the issues listed in Question 2, above, are also our long-term challenges. Trying to understand, manage, and improve the ecosystem, recreation, and agricultural value is a continuing process. Outside of the direct purview of OSMP, the City could focus on long-term projects that improve quality of and access to open space. While we acknowledge that Boulder's contribution to climate change is relatively minute, we often lead in action. Continuing to push the envelope of renewable energy and reduction of car-miles driven will benefit Open Space and the world. Given the continuing development in Boulder

County, the City has a fleeting opportunity to improve accessibility to Open Space by designing access that is both sustainable and provides greater non-car access, as part of any development process, while still providing ADA access at appropriate locations. As with City Council's recent trip to Portland, we encourage similar opportunities for OSMP staff to visit and engage with land managers in other open space areas around the country. As our problems become increasingly complex, fresh perspectives may invigorate our management practices. Continuing Open Space funding is also an issue of concern. We need to be sure that staff feels that they have the support of management in exercising their best professional judgment. Current overcrowding in OSMP offices, as well as planning for increased enforcement, science, and trail staff, needs to be addressed.

The Open Space Board of Trustees appreciates the opportunity to provide input on these critical questions.