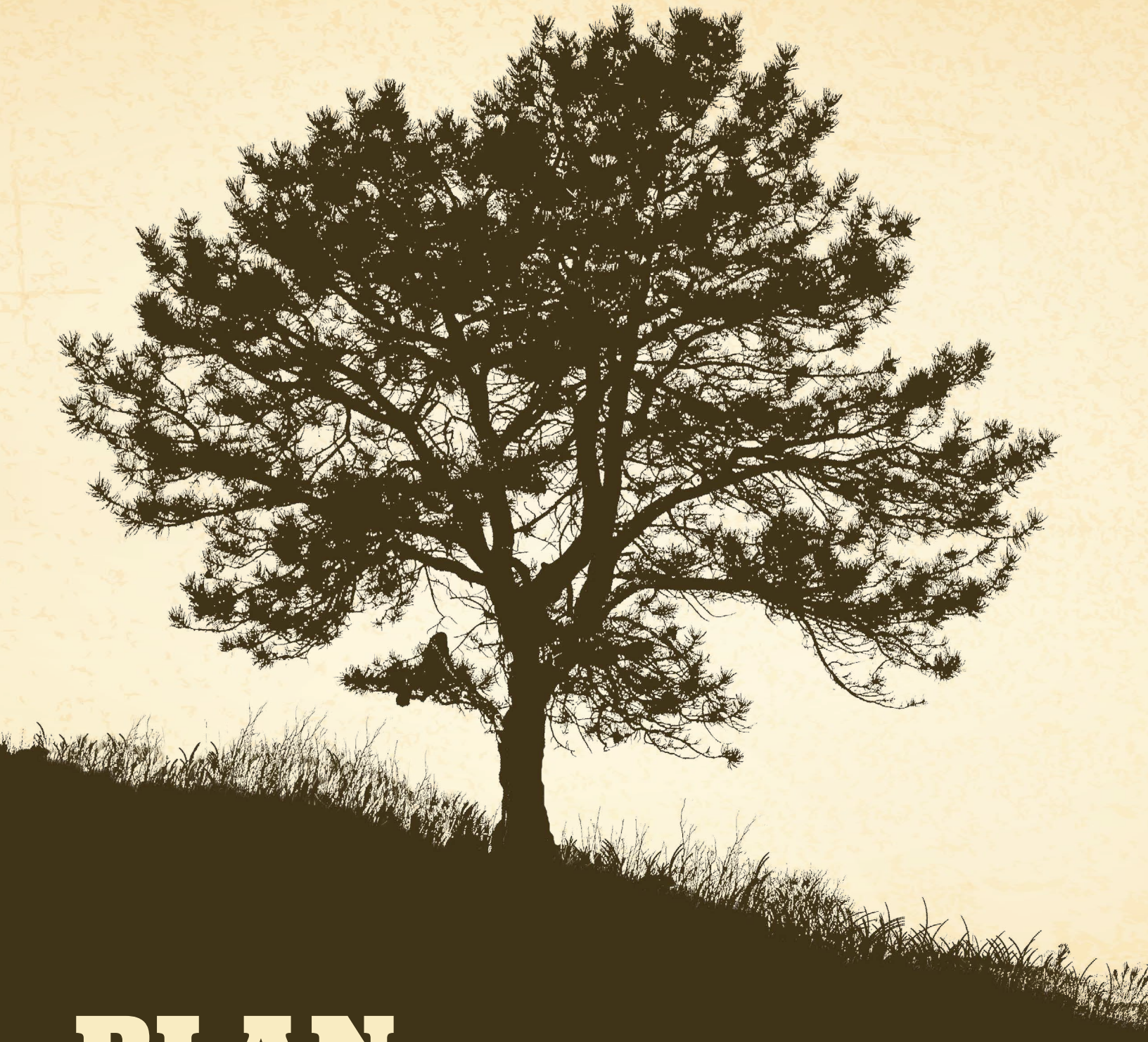
Version 3

City of Boulder Open Space and Mountain Parks

North Trail Study Area Plan



PLAN

June 2016

Thank you to our community

Open Space and Mountain Parks would like to give our sincere appreciation and thanks to the many community members who contributed their time and efforts in the development and completion of the North Trail Study Area Plan.

Acknowledgements

Boulder City Council

Suzanne Jones, *Mayor*

Mary Young, *Mayor Pro Tem*

Matthew Appelbaum

Aaron Brockett

Jan Burton

Lisa Morzel

Andrew Shoemaker

Sam Weaver

Bob Yates

Open Space Board of Trustees

Shelley Dunbar, *Chair*

Molly Davis

Frances Hartogh

Tom Isaacson

Kevin Bracy-Knight

Open Space and Mountain Parks

Tracy Winfree, *Director*

Mark Davison, *Community Connections & Partnerships Division Manager*

John Potter, *Resources and Stewardship Division Manager*

Mark Gershman, *Environmental Planning Supervisor*

Open Space and Mountain Parks' Project Team

Steve Armstead, *Environmental Planner, North TSA Project Lead*

Juliet Bonnell, *Associate Planner*

Eric Fairlee, *IPM Specialist*

Emily Garding, *GIS Analyst I*

Arian Hampel, *Ranger/Naturalist II*

Julie Johnson, *Cultural Resources Coordinator*

Annie McFarland, *Visitor Access Coordinator*

Lynn Riedel, *Plant Ecologist*

Heather Swanson, *Ph.D., Senior Wildlife Ecologist*

Gabe Wilson, *Maintenance Person III Trails*

Deryn Wagner, *Environmental Planner*

Phillip Yates, *Communications Specialist*

Jake Cseke, *GIS Analyst II*

Heather Bergman, *Peak Facilitation Consultant*

Katie Waller, *Peak Facilitation Consultant*

****Many additional OSMP staff contributed to this plan**

Table of Contents

Introduction

8 Purpose and Goals

9 The North Trail Study Area (TSA) Planning Process

10 Community Participation in the North TSA Planning Process

11 Existing Planning and Policy Guidance

12 Existing Conditions in the North TSA

14 Resilience and Sustainability

15 North TSA Interests for Plan Outcomes

16 Post-Acquisition Property Planning and Management Area Designations

Plan Recommendations: North TSA-Wide

18 Management Area Designations

20 TSA-Wide Recommendations

Plan Recommendations: North Foothills Subarea

28 Management Area Designations

30 Subarea-Wide Recommendations

34 Joder Focus Area

38 Hogback and North Sky Focus Area

42 North Foothills Habitat Conservation Area (HCA) Off-Trail Permit Recommendations

44 Trail-Based Dog Regulations

46 Bike Regulations

48 Trail-Based Horse Regulations

50 Regulatory Settings

Plan Recommendations: Boulder Valley Ranch Subarea

54 Management Area Designations

56 Subarea-Wide Recommendations

58 East Beech and Lefthand Focus Area

60 Eagle and Boulder Reservoir Focus Area

62 Degge Focus Area

64 Mesa Reservoir Focus Area

66 South Boulder Valley Ranch Focus Area

70 Trail-Based Dog Regulations

72 Bike Regulations

74 Trail-Based Horse Regulations

76 Regulatory Settings

Plan Recommendations: Wonderland Lake Subarea

80 Subarea-Wide Recommendations

82 Fourmile Canyon Creek Focus Area

84 South Foothills Focus Area

86 Wonderland Lake Backdrop Focus Area

88 Wonderland Lake Focus Area

90 Peninsula Focus Area

92 Trail-Based Dog Regulations

94 Bike Regulations

96 Trail-Based Horse Regulations

98 Regulatory Settings

Background photo: Wonderland Lake. Unless otherwise noted, all photos are courtesy of OSMP.

Plan Recommendations: Northern Properties Subarea

102 Management Area Designations

104 Subarea-Wide Recommendations

106 Regulatory Settings

Appendices

A Appendix A: TSA-Wide and Subarea Maps

B Appendix B: Open Space Board of Trustees Meetings and Summary of Community Engagement

C Appendix C: Existing Infrastructure and Recommended Improvements for Trailheads

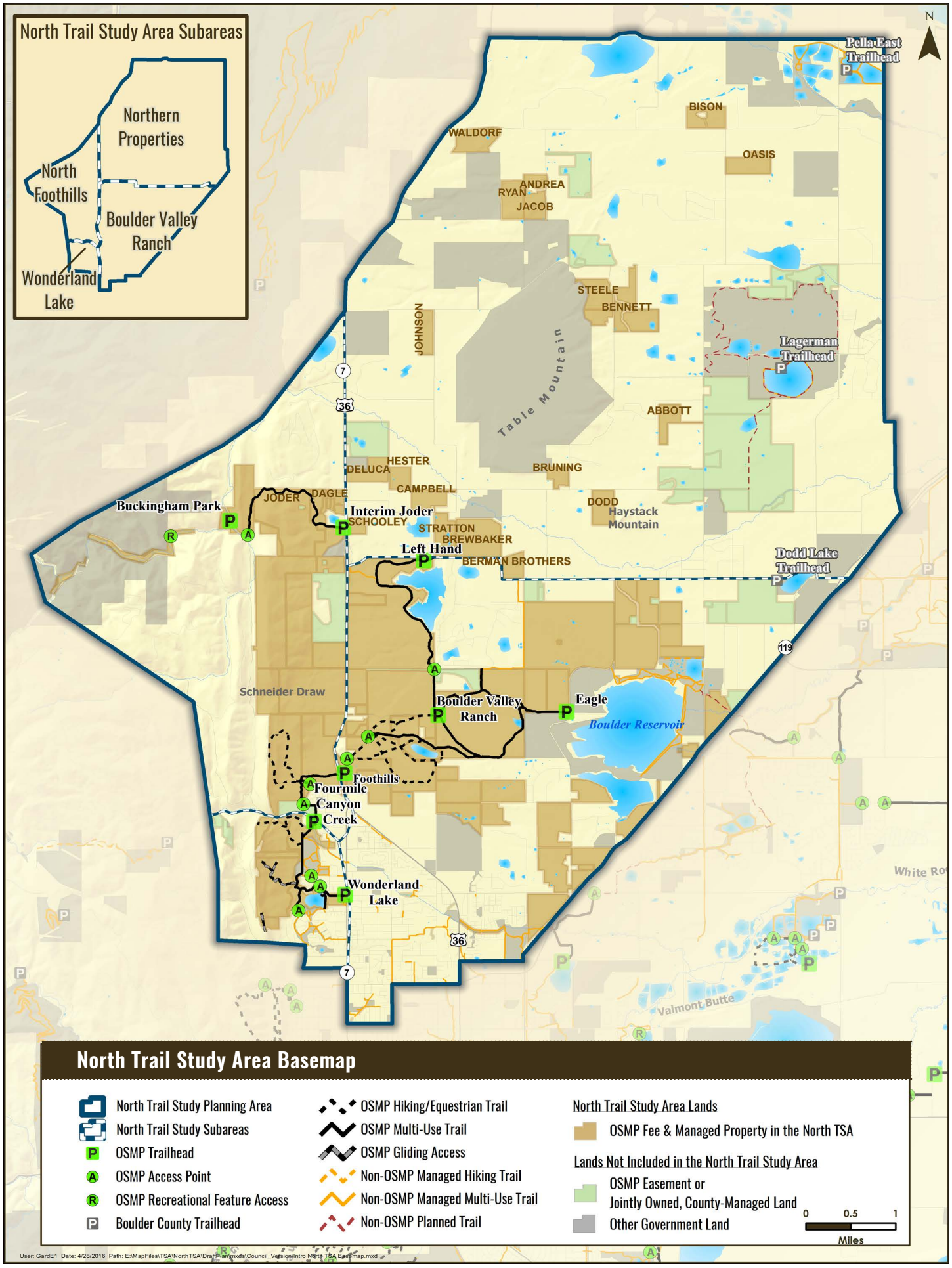
D Appendix D: Recommended Actions and Interests Table

E Appendix E: Scheduling and Estimated Costs for North TSA Projects

F Appendix F: Feedback Themes Not Included in the Plan

G Appendix G: Glossary

Fossil of a smooth oyster shell, found in a marine sedimentary rock layer in the North TSA. © Gary Stevens


North Trail Study Area Subareas
Northern Properties
North Foothills
Boulder Valley Ranch
Wonderland Lake
N
Pella East Trailhead
BISON
WALDORF
OASIS
ANDREA
RYAN
JACOB
STEELE
BENNETT
JOHNSON
Table Mountain
Lagerman Trailhead
ABBOTT
HESTER
DELUCA
BRUNING
CAMPBELL
JODER
DAGLE
DODD
Haystack Mountain
Buckingham Park
Interim Joder
SCHOOLEY
STRATTON
BREWBAKER
Left Hand
BERMAN BROTHERS
Dodd Lake Trailhead
Schneider Draw
Boulder Valley Ranch
Eagle
Boulder Reservoir
Foothills
Fourmile Canyon Creek
Wonderland Lake
White Ro
Valmont Butte
North Trail Study Area Basemap
North Trail Study Planning Area
North Trail Study Subareas
OSMP Trailhead
OSMP Access Point
OSMP Recreational Feature Access
Boulder County Trailhead
OSMP Hiking/Equestrian Trail
OSMP Multi-Use Trail
OSMP Gliding Access
Non-OSMP Managed Hiking Trail
Non-OSMP Managed Multi-Use Trail
Non-OSMP Planned Trail
North Trail Study Area Lands
OSMP Fee & Managed Property in the North TSA
Lands Not Included in the North Trail Study Area
OSMP Easement or Jointly Owned, County-Managed Land
Other Government Land
0 0.5 1
Miles
User: GardE1 Date: 4/28/2016 Path: E:\MapFiles\TSA\NorthTSA\DraftPlan\mxds\Council_Version\Intro North TSA Basemap.mxd

Purpose and Goals

A community-driven plan for the city's northern open space system

Purpose

The overall purpose of the North Trail Study Area (TSA) Plan is to provide management direction, and describe strategies and actions that will improve visitor experiences and increase the physical and environmental sustainability of trails, trailheads and visitor infrastructure in the North TSA while conserving natural, cultural and agricultural resources. The North TSA Plan will articulate the community's long-term vision and identify on-the-ground management actions directed at achieving that vision.

A view of OSMP public land from the Hogback Ridge Trail.

Description of the North Trail Study Area

The North TSA has diverse landscapes, including ponderosa pine topped hogback ridges, open grasslands, springs, creeks and small lakes. In many places, farming and ranching activities overlay these features. The TSA also includes cultural resources that tell the stories of Boulder's early inhabitants and settlers as well as its mining and agricultural past.

The rise of the Southern Rocky Mountain's foothills from the flatlands of the Central Great Plains is a continental scale environmental transition that sets the stage for high biological diversity and allows for a variety of recreational opportunities. The North TSA contains some popular and frequently visited areas such as Wonderland Lake, the Foothills Trail corridor, Boulder Valley Ranch and some more remote and less-frequented locations such as the Lefthand and Hogback Ridge trails.

The North TSA receives approximately one-fifth of the visitation to OSMP. It shares boundaries with city and county neighborhoods and is a recreation destination for many people who live nearby as well those traveling from elsewhere in the city, county and beyond.

North Trail Study Area Plan Goal

The North Trail Study Area Plan seeks to improve visitor experiences and increase the sustainability of trails and trailheads while conserving the area's natural, cultural and agricultural resources.

The Interim Joder Trail north of Boulder.

The North Trail Study Area (TSA) Planning Process

OSMP held nine public meetings to solicit feedback on the North TSA Plan.

The process for developing the North TSA Plan had four phases. The first phase was focused on collecting and compiling information about the TSA. The primary deliverable for the first phase was the North TSA Inventory and Assessment Report. The information in this report helped guide the development of plan scenarios.

The second phase identified the interests in the North TSA and its future management, as well as any specific issues that needed to be addressed in the plan. This phase resulted in a list of 10 interests and a set of desired actions that further informed the development of plan scenarios.

During the third phase, based on community and Open Space Board of Trustees (OSBT) feedback, OSMP staff developed scenarios designed to achieve planning objectives and community interests. Community and board assessment of and feedback on scenarios resulted in revisions to the scenarios. The OSBT selected which scenario should be used as a basis for the draft plan. In fairness to the process, it should be acknowledged that three OSBT members voted for the scenario while two voted against it. The main point of contention was whether a north-south connector trail should be constructed through the North Foothills HCA.

The fourth and final phase included the review of the draft plan by the community, the OSBT and recommendation and acceptance of the plan by the Boulder City Council.

Phase 1 | Inventory and Assessment

Purpose: Share knowledge about recreational, natural, cultural and agricultural resources. This phase led to the Inventory and Assessment Report.

Key Inputs:

- Community knowledge of visitor experiences, resources, what is functioning well in the North TSA and what needs improvement.
- Staff-prepared information on recreational, natural, cultural and agricultural resources.

Phase 2 | Interests and Issues

Purpose: Share knowledge about desired outcomes and topics that will guide the development and assessment of alternative scenarios and recommendations for the draft plan. This phase led to a North TSA interests and issues report documenting desired actions in scenario development.

Key Inputs:

- Community interests about desired plan outcomes and why the outcomes are wanted.
- Discussion of issues that could pose a challenge in the North TSA.
- Community dialogue about what can be implemented in the North TSA and why.

Phase 3 | Draft Plan Development

Purpose: Assess alternative scenarios and integrate recommendations into a draft plan.

Key Inputs:

- Draft alternative scenarios developed by staff to achieve and balance identified interests and objectives.
- Community and OSBT feedback on draft scenarios to inform refined scenarios and recommendations.

Phase 4 | Plan Acceptance

Purpose: Review draft plan and approve final plan.

Key Inputs:

- Community review.
- OSBT review, approval and recommendations to City Council.
- City Council review and acceptance.

OSMP held two workshops to learn about community interests for the North TSA. The department also held two workshops to learn about current conditions in the area.

Community Participation in the North TSA Planning Process

Since the City of Boulder kicked off the public process for the North TSA Plan in April of 2015, Open Space and Mountain Parks and the Open Space Board of Trustees have:

- Invited the public to two workshops to learn what the community knows about and considers to be important resources in the North TSA and to solicit feedback on plan sideboards.
- Conducted two public meetings to learn about the community interests in the North TSA.
- Hosted two informational panels where experts informed the community about visitor and natural resource management strategies that have been implemented in other areas.
- Held two workshops to unveil and refine preliminary plan scenarios.
- Hosted a workshop to unveil and continue to revise refined plan scenarios.
- Provided community members an opportunity to offer online comment about plan sideboards, their interests for the North TSA and feedback on the preliminary and refined scenarios.
- Coordinated with Growing Up Boulder to include Boulder-area youth in North TSA planning.
- Solicited community feedback at local businesses, at OSMP trails and at trailheads.
- Reached out to the Latino community to provide information and seek input about the plan.

9

Community workshops held to solicit public input on the plan.

965

Comments received from community members through Inspire Boulder, email and social media posts.

73

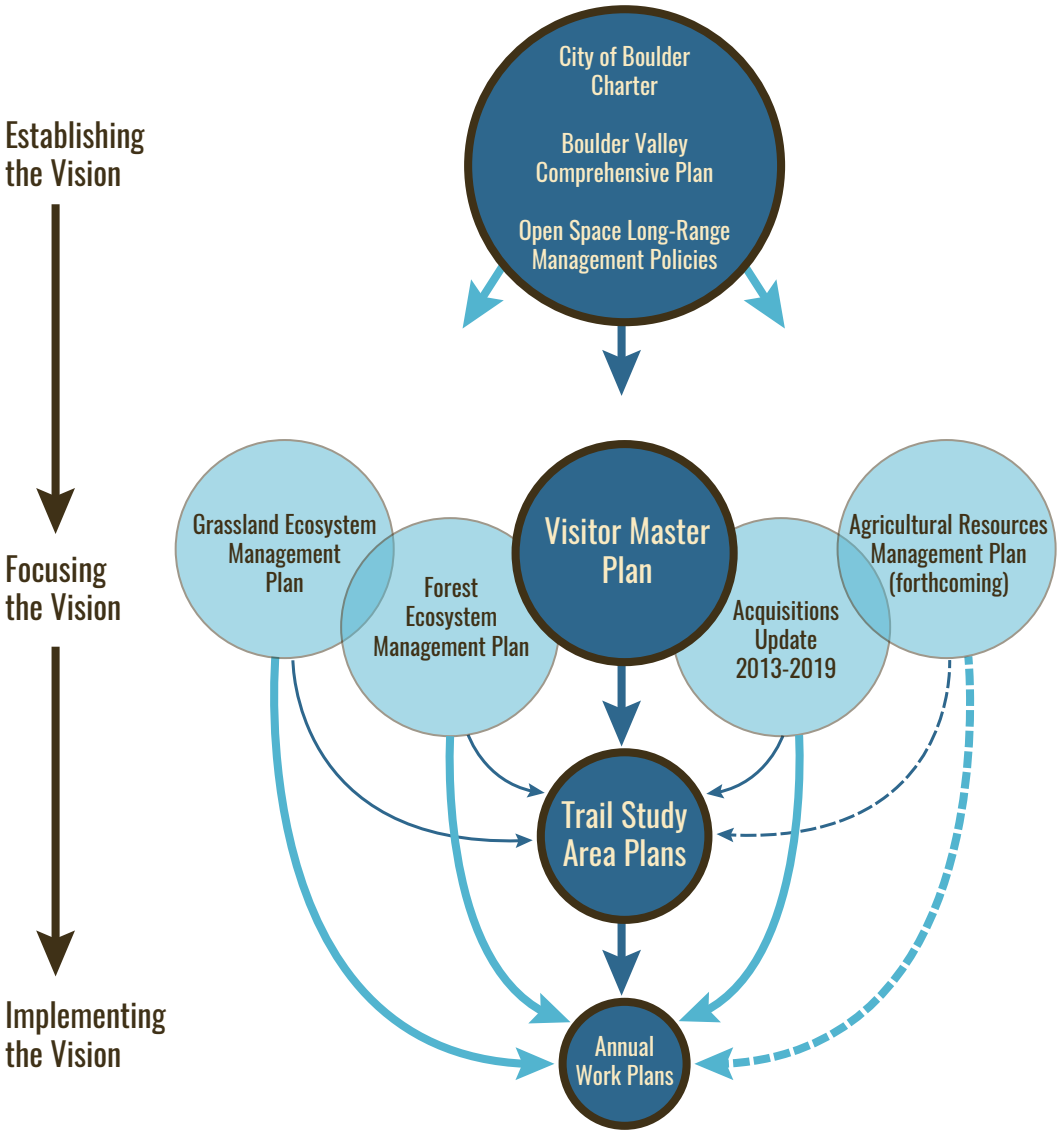
Boulder area youths participated in North TSA youth engagement efforts.

Existing Planning and Policy Guidance

The North TSA Plan is affected and influenced by other OSMP departmental master, area, resource and program management plans. Other shared community visions that must be considered and, as appropriate, integrated into recommendations in the North TSA Plan include City of Boulder master plans and the Boulder Valley Comprehensive Plan.

OSMP staff has been consulting with partner agencies and relevant plans affecting the North TSA to determine how to best integrate and coordinate management objectives. The OSMP Visitor Master Plan (VMP) developed a framework to deliver visitor services and manage visitor facilities in a manner consistent with the conservation of natural, cultural and agricultural resources.

TSA plans provide a means for area-specific implementation of the strategies and policies contained in the VMP. TSA plans also integrate the goals and objectives relevant to visitor access and infrastructure management from OSMP resource plans. These include the Grassland Ecosystem Management Plan, Forest Ecosystem Management Plan and the forthcoming Agricultural Resource Management Plan.



Existing Conditions in the North TSA

The North TSA is home to diverse recreational, natural, agricultural and cultural resources

Recreation Resources

Recreational opportunities occur throughout the North TSA and include a wide range of activities—such as hiking, bike riding, running, horseback riding, dog walking, hang gliding/paragliding, fishing, picnicking and nature study. Most visitors to OSMP, and likely to the North TSA, report a high quality of experience and enjoy the natural setting for passive recreation.

A goal for the North TSA Plan is to maintain the factors that are currently contributing to a high quality visitor experience and take additional actions to improve the quality of visitors' experiences. The OSMP VMP established an area-based framework for implementing management strategies, policies and priorities for visitor infrastructure improvements and service delivery.

Trails and Entry Points

The North TSA contains a 19-mile designated trail system that provides opportunities for visitor activities and connectivity to the Wonderland Lake, North Foothills and Boulder Valley Ranch areas. Several of the designated trails have stretches where the trail location or design can be improved to increase the physical sustainability and reduce impacts on ecological resources. There are also approximately 35 miles of undesignated trails which may not be physically or environmentally sustainable. Some undesignated trails provide access to destinations not served by designated trails, while others parallel designated trails or provide an alternate route to a destination already served by a designated trail.

The Foothills Trail near Wonderland Lake.

A focus for the North TSA Plan will be making the existing trail system more sustainable and reducing the network of undesignated trails, thereby lessening resource impacts. The VMP identified several specific improvements in what is now the North TSA, including trail and trailhead improvements, priority new trail connections and critical road crossings. These improvements were evaluated in the North TSA to improve visitor experience, infrastructure sustainability, safety and resource protection.

A trail or visitor facility is considered sustainable when principles of ecology and economics have been incorporated into the design in an effort to achieve ecological and biological integrity, a quality visitor experience and persistent performance with a minimum of maintenance and upkeep.

8 *Trailheads*

19+ *Miles of designated trails*

35+ *Miles of undesignated trails*

Bell's twinpod, a rare native plant species, growing in a shale outcropping.
© Bill May

Natural Resources

Many of the ecosystems west of U.S. Highway 36 in the North TSA are generally healthy and function naturally. Areas to the east of U.S. 36 have historically been altered to a greater degree for agricultural production, but still contain important wildlife habitat and native plant populations. The North TSA provides habitat and refuge to several sensitive species such as Bell's twinpod, bobolink, Northern Harrier, ottoe skipper, arogos skipper and the prairie rattlesnake.

Some of these rare or uncommon species can be threatened by visitor activities. A focus of the North TSA Plan is to maintain or increase the level of natural resource protection and restoration so OSMP can continue to achieve the community's natural resource conservation goals. The Grassland Ecosystem Management Plan and the Forest Ecosystem Management Plan provide information on natural resource conservation priorities and objectives that have been considered in the development of the North TSA Plan.

Agricultural Resources

Historically, agricultural lands in the North TSA have included beef production, dairy farms, sheep ranching, along with poultry operations, horse boarding, dry land grain production, irrigated forage, irrigated grain harvesting and vegetable production. Today, typical agriculture in the TSA includes cattle grazing and hay production. In response to growing community interest in local foods production, there is now a diversified organic farm in the TSA as well.

OSMP leases properties to local farmers and ranchers who run agricultural operations. In the North TSA, more than 3,000 acres of land are part of OSMP agricultural leases. The Grassland Ecosystem Management Plan and an Agricultural Resources Management Plan—which is in development — provide information on agricultural resources, policies and goals.

3,000 *Acres leased for agriculture in the North TSA*

Hay bales. Photo courtesy Bob Crifasi.

The historic stone Old Kiln along Fourmile Canyon Creek before the 2013 floods. Photo courtesy Sue Hirschfeld.

Cultural Resources

The North TSA contains important paleontological, archaeological and historic resources. There are cultural features and sites that are important to indigenous people, sites and structures indicative of Euro-American settlement, agriculture, transportation and mining. Some well-known North TSA historic sites include the Old Lime Kiln and north-south grade built for the failed Lefthand and Middle Park Railroad west of U.S. 36.

The wide variety of paleontological, archaeological and historic resources creates a fascinating backdrop for people who enjoy the lands of the North TSA. Some of these cultural resources require a higher level of protection, in order to ensure their long-term sustainability.

The North TSA After the 2013 Flood

The September 2013 flood brought unprecedented rainfall to the region and caused severe flooding and extensive damage to the Boulder Valley including OSMP trails, trailheads, irrigation facilities and fences. The flood also caused ecological changes to areas inundated with water and debris. Landscapes and visitor infrastructure near streams and drainages were significantly impacted and in some locations irreversibly altered.

After the flood, the Boulder community actively engaged in recovery efforts to repair and restore OSMP resources. These efforts promptly restored nearly all visitor access. In most areas, visitor access was restored after rapid action was taken to mitigate hazards and implement temporary repairs. Longer-term and lasting repairs of OSMP trails and trailheads has proceeded at a slower, yet steady pace as funding, staffing, contracting resources and environmental conditions allow. The number of sites and extensive amount of work necessary means that repair and restoration work will continue into the future.

Resilience and Sustainability

The lands and resources of the North TSA like the Boulder community as a whole, face stresses like climate change, floods, drought, economic disruption and fire. Innovative and inclusive approaches are necessary for the future of the North TSA to be resilient and respond effectively to these challenges. This plan encompasses actions designed to allow the North TSA to better endure these challenges, and not only bounce back but also "bounce forward," preserving and improving the quality of life within our community.

As part of the city's efforts toward improving resilience, one of the major objectives of the North TSA Plan is to increase the physical and environmental sustainability of trails, trailheads and visitor infrastructure while conserving and restoring the valuable natural, agricultural and cultural resources within this area. Sustainable trails have negligible erosion, minimal braiding, and limited seasonal muddiness and will not require rerouting or major maintenance over long periods of time. Sustainable trails, trailheads and infrastructure support the current and anticipated uses and are designed to keep people on trail with minimal impacts to the adjoining natural systems. Implementing the North TSA Plan fosters a step in the direction of a more resilient future.

North TSA Interests for Plan Outcomes

Community members and stakeholders provided valuable feedback about their interests in the North TSA to OSMP staff and the OSBT through community workshops, online, in person through trailhead or local store-front outreach, email, social media submissions and through special youth engagement opportunities. Interests explain "why" someone wants or needs something rather than "what" they want. Interests enable diverse needs to be better met through more win-win actions. Through the various engagement efforts, the following community interests were identified.

Improved Visitor Experience

Conservation of Resources Natural, Agricultural, Cultural

Improved Access and Accessibility

Honoring Community Values and Commitments

Increased Education and Understanding

Improved Connectivity

Balance of Recreation and Resource Conservation

Increased Safety

Decreased Visitor Conflict

Effective Planning Process and Plan Implementation

The 10 identified North TSA Plan interests are consistent with the goal of the North TSA Plan, and provided guidance and direction for staff in the development of the plan. The goal of the plan is to balance all of the community interests.

Post-Acquisition Property Planning and Management Area Designations

Newly acquired properties need to be integrated into the OSMP system and determinations made about how best to manage the properties' resources and visitor access. This is accomplished by assessing the natural, cultural and agricultural resources of the property, compatibility with visitor-access opportunities and any constraints that need to be addressed. The assessment then allows determinations on how the property can best contribute to the conservation of resources and the delivery of community services as guided by the policies and strategies of the VMP, Grassland Ecosystem Management Plan and Forest Ecology Management Plan, as well as other community adopted plans.

The VMP established the policy that plans would be developed for newly acquired properties. The process would include an assessment of the property and recommendations for public access, and any appropriate infrastructure and services necessary for managing access. Newly acquired property would remain closed to the public until the relevant planning had been completed and on-the-ground actions had been implemented. Planning also would recommend the VMP management area designations if that step had not been taken previously.

The OSMP Acquisition Update 2013-2019 included the option of using a more system-wide framework for integrating new properties into the OSMP system by including them in a broader planning process such as TSA plans. The North TSA includes properties that fit into various stages of assessment, planning and management area designation.

A view of the Joder and West Beech properties north of Boulder.

Property Planning

The North TSA Plan includes three general types of property-specific recommendations:

- *Visitor-access recommendations for recent acquisitions currently closed to public access;*
- *Management-area designations for properties without designations.*
- *A property complex (Joder and Cox properties) with a management area designation that will be reviewed.*

The North TSA Plan includes recommendations for these properties to guide and manage visitor access.