CITY OF BOULDER
CITY COUNCIL AGENDA ITEM

MEETING DATE: June 7, 2016

AGENDA TITLE Consideration of a motion to accept the North Trail Study Area Plan.

PRESENTER/S
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EXECUTIVE SUMMARY

The goal of the North Trail Study Area (TSA) Plan is to provide the management direction to improve the visitor experience; create quality recreation opportunities for Boulder residents and visitors; protect natural, cultural and agricultural resources; and provide a physically and environmentally sustainable system for visitor access in the North TSA. The Open Space Board of Trustees (OSBT), community members and staff have been working for 16 months collecting and compiling information about the TSA, identifying issues and interests, and developing management scenarios. Working with the OSBT and community members, staff developed four scenarios with different ways to address and balance resource needs and community interests. Community feedback, including input from the OSBT and members of the public provided the necessary information to refine the scenarios, resulting in two final alternatives. Those two scenarios and associated public comments were the basis for an OSBT study session on Jan. 13 and 14, 2016. At this study session, OSBT members shared feedback about ways to further improve the scenarios. Staff updated the two scenarios which were discussed by the OSBT during a public hearing on Feb. 10, 2016. At this meeting, the OSBT recommended additional refinements and selected a preferred scenario as the basis for the North TSA Draft Plan (Draft Plan). Staff revised the scenarios as recommended by the OSBT developing a Draft Plan based on the preferred scenario. On March 9, the OSBT approved the Draft Plan with several amendments, recommending acceptance of the amended plan by City Council.

Staff amended the plan document to incorporate the OSBT's recommended changes, and discussed the amended Draft Plan with City Council at a Study Session on May 24, 2016. The study session focused on addressing questions City Council members had regarding the planning and community engagement process used to develop the Draft Plan and the recommendations included in the plan.

The focus of process related questions and discussion included these topics:

- Habitat Conservation Area (HCA) designation and criteria, implementation steps, and visitor access practices.
- The North TSA Sideboards and how they were applied in the process and the recommendation for the North Sky Trail.
- Wetland permitting steps and requirements.

Clarifying questions and discussion about Draft Plan recommendations focused on the following items:

- The benefit of an underpass at U.S. Highway 36 independent of the Joder connection route and cost sharing practices for other underpasses partially funded by Open Space and Mountain Parks (OSMP).
- Regional trail connectivity and compatibility with the Rocky Mountain Greenway.
- Trail design along with visitor experience, access and management clarifications associated with the North Sky Trail and HCA.
- Natural resource, trail construction, and maintenance considerations and implications for trail route options to connect to the Joder property.

Staff is now requesting City Council's acceptance of the North TSA Plan as amended and recommended by the OSBT (Attachment A).

STAFF RECOMMENDATION

Suggested Motion Language:
Staff requests council consideration of this matter and action in the form of the following motion:

Motion to accept the North Trail Study Area Plan.

COMMUNITY SUSTAINABILITY ASSESSMENTS AND IMPACTS

- Environmental: OSMP is a significant community-supported program that is recognized as a leader in preservation of open space lands contributing to the environmental sustainability goal of the City Council. The implementation of the North TSA Plan could result in environmental impacts to natural areas and ecological systems. Implementation could also reduce the number of undesignated trails, restore previously impacted natural areas, and improve the sustainability of trails and visitor infrastructure in ways that foster improved resource conservation.

- Economic: OSMP contributes to the economic vitality goal of the city as it provides part of the context for the diverse and vibrant economic system that sustains services for residents. The land system and the quality of life it represents attract visitors and help businesses to recruit and retain quality employees. The North TSA Plan is intended to contribute positively to both the overall land system and the quality of the visitor experience.
- Social: The North TSA Plan will provide quality recreation opportunities for community members and will provide opportunities to access areas of scenic beauty and natural interest. Since OSMP lands, facilities and programs are equally accessible to all members of the community, the North TSA Plan will increase community accessibility to opportunities to improve physical wellbeing, mental health, and enjoyment of the many features of open space lands.

OTHER IMPACTS

- Fiscal: The funding allocation from the 2016 budget includes funding to support the completion of the planning process to develop the North TSA Plan. Upon City Council acceptance, requests for implementation funding will be integrated into the City of Boulder's six-year Capital Improvements Program and annual operating budget.
- Staff time: The staff time needed to complete this project is part of the 2016 work plan for OSMP staff.

BOARD AND COMMISSION FEEDBACK

Open Space Board of Trustees

On March 9, 2016, the OSBT approved the Draft Plan recommending acceptance of the plan by City Council. The motion passed by a 3-2 vote. The Draft Plan includes staff's revisions reflecting OSBT-approved amendments (Attachment A). The OSBT vote was split primarily because of a difference in preference for the location of a trail connecting the existing OSMP trail system at the Foothills Trail with the Joder Ranch property. The board agreed on making this trail connection; however, the majority supported a trail on the west side of U.S. Highway 36, while the minority preferred an alternative on the east side of the highway with a new underpass beneath U.S. Highway 36 north of Neva Road. The board members' preferences were based on a number of considerations with the degree to which each alternative appropriately balanced the visitor experience and the conservation of natural resources as the most often discussed factor. The board unanimously voted to acknowledge to the council that: *three OSBT members voted for the scenario while two voted against. The main point of contention was whether a north-south connector trail should be constructed through the North Foothills Habitat Conservation Area.*

In addition to the motion approving the Draft Plan and recommending that council accept the plan, board members made nine additional motions. All nine motions were approved by the OSBT. These are summarized in Table No.1 with additional detail excerpted from the approved minutes in Attachment B.

Table 1: OSBT Motions Associated with the North TSA

Unanimously Approved
Boulder Valley Ranch Work with ranch lessee in accordance with property lease to manage access to area, equestrian parking and access to arena.
North Sky Trail and Joder Property Consideration of an Ecological Monitoring Program.
Wrangler Trail Area The area surrounding the Voice and Sight on-corridor Wrangler Trail is designated as dogs on-leash.
Language Correction Language change to emphasize importance and correct typographical error.
Acknowledge Split Vote Acknowledgement of split vote (3-2) regarding plan approval and that the main point of contention was whether the Joder connector should be constructed in the North Foothills HCA.

Approval Split
Approval and Recommendation of Draft Plan to City Council (3:2)
Management Area Designations Affirm the management area designations as shown on page 16 of the North Trail Study Area Draft Plan. (3:2)
Northern Tier Properties Support the current access status of each property as either open or closed be continued except that the Deluca, Hester and Campbell Properties be closed May 1 – July 31 for protection of ground-nesting Bobolinks. (3:2)
Primary Goal Rewording Increase connectivity among North TSA properties while minimizing natural resource impacts to every extent possible. (4:1)
Alternative to OSBT-Recommended Plan If City Council does not support the North Sky Trail, the OSBT recommends that City Council direct staff to revise a plan based on the alternative scenario as modified by OSBT. (3:2)

Parks and Recreation Advisory Board (PRAB)
OSMP staff provided an update on the North TSA planning process to PRAB at its Feb. 22, 2016 meeting. Staff highlighted recommendations for the Draft Plan that involve coordination with the Parks and Recreation Department. These include connecting the Eagle Trail to the trail on the west side of the Boulder Reservoir, other local trail connections and recommendations in the Wonderland Lake area. PRAB members were supportive of efforts to improve recreation opportunities through increased trail connectivity, cooperating to provide hang gliding/paragliding activities in the Wonderland Lake area as well as conserving the natural resources and natural area around Wonderland Lake.

Boulder County Parks and Open Space Advisory Committee (POSAC)
Throughout the North TSA planning process OSMP staff solicited input from Boulder County Parks and Open Space staff where the city and county open space properties adjoin. The goal is to ensure coordination of adjacent management strategies for environmental resources,

agricultural operations and recreational access. Additionally, the jointly owned Beech property has been managed by OSMP under the terms of an Intergovernmental Agreement which requires the managing agency to provide an opportunity for comment and consultation by the other agency.

OSMP staff updated POSAC at their Feb. 25, 2016 meeting which included an opportunity for POSAC members to provide comment. POSAC members had questions about the natural resources of the North Foothills HCA and how off-trail permits will be managed for the North TSA. Other questions and comments pertained to clarifications around the status of the joint ownership of the Beech property and the role of POSAC in providing comment to OSMP. There was an interest expressed by some committee members to recommend the County Commissioners consider whether a trail should be built in the HCA. However, a motion to recommend the commissioners hold a public hearing on the North TSA process failed (5-2). In general, there was overall support for the city's planning process, regional trail connectivity, recognition of the importance of the environmental resources in the North Foothills HCA and support for actions that conserve the natural resources.

Public Participation and Comment

Participation in the planning process has represented a diversity of perspectives in the community including people visiting trails in the North TSA, neighbors, stakeholder organizations, youth and families. Currently, 649 people have signed up to receive email updates about the plan. OSMP staff, OSBT members and members of City Council have received public feedback via email from community members on the Draft Plan and its recommendations. A complete compendium of comments received (through May 31, 2016) is available on the North TSA Website.

Over the course of the planning process community input focused on the relative costs and benefits of the eastern and western Joder connector trail routes. Regardless of preference for the trail route, community members consistently express an interest in taking steps to balance resource protection and provide a quality visitor experience. Those who prefer the eastern route tend to support fewer trails in the North Foothills HCA, and HCAs in general, and place an emphasis on taking actions that will have the least effect on the foothills grasslands and associated species of interest. This perspective noted that the Joder connector trail east of U.S. Highway 36 could provide an acceptable visitor experience and better protect ecological features. Those supporting the western route expressed a preference for a quality recreation experience on the hillside west of the highway, and that a designated trail through the North Foothills HCA could have an acceptable environmental impact as well as allow OSMP to better manage existing and future visitation. Taken as a group, those supporting the western alignment believe that the east of U.S. Highway 36 connector does not provide opportunities for an acceptable overall level of visitor experience.

The Draft Plan and alternative scenario include a significant number of elements that are the same. This core group of management improvements indicates the convergence of community ideas that balance community interests. Examples of areas of convergence include:

- Creating a connection from Foothills Trail to the Joder Ranch Trail;
- Adding a loop trail (Mahogany Loop) with temporal and directional management of bike access to the Joder Ranch Trail;
- Adding passenger vehicle parking (Coyote Trailhead) for the Joder property;

- Redesigning the Boulder Valley Ranch (BVR) trail system;
- Creating a loop trail (Antler Trail) on Wonderland hill;
- Adding passenger vehicle parking and horse trailer parking capacity for BVR (Horseshoe Trailhead);
- Adding trails that create connectivity within the North TSA that further regional connectivity (Talon Trail, Joder connector, Foothills to Degge connection).

Specific to adding a connecting trail to the Joder property, there was common agreement for the trail that includes:

- Creating a trail that offers a quality experience;
- Limiting impacts to natural resources when designing and constructing the connection (conservation-priority design);
- Using ecological best management practices in trail construction;
- Enhancing natural resource restoration in the area to move towards desired conditions for habitat and wildlife.

BACKGROUND

The North TSA includes OSMP lands north of the Diagonal Highway and Linden Avenue. The North TSA Plan includes management recommendations for 7,701 acres that OSMP owns and manages in this area. The goal of the North TSA Plan is to provide the management direction to improve the visitor experience, creating quality recreation opportunities for Boulder residents and visitors; protect natural, cultural and agricultural resources; and provide a physically and environmentally sustainable system for visitor access in the North TSA. Additional background on the plan and the process to develop it is available in Attachment C.

The Planning Process

The North TSA planning process began in February of 2015 and included the following four phases:

1. **Collecting and compiling information** about current conditions and management practices in the TSA which was made available as the North TSA Inventory and Assessment Report in June 2015.

2. **Identifying key issues and interests** that need to be addressed in the plan, summarized in the Interests and Issues Report. The report was distributed in July 2015.

3. **Assessing and improving scenarios**—and selecting one preferred scenario to use as the basis of the plan. Staff created four preliminary scenarios for the North TSA Plan that balanced community interests and addressed issues using a range of actions in different ways. The four preliminary scenarios were completed and made available for public review in October 2015.

   Using input from community members and the OSBT, staff created two refined scenarios from the four preliminary ones. These were distributed in December 2015. In a January study session, staff asked the OSBT for feedback on ways that the refined scenarios could

be further improved. This resulted in updated scenarios. During the February OSBT meeting, the Board recommended additional revisions to both scenarios and selected Scenario B as the preferred scenario and basis of the Draft Plan. The other scenario (Scenario A) was recognized as the alternative (Attachment D).

4. **Developing the draft plan** and seeking the OSBT's approval and recommendation that City Council accept the North TSA Plan. The OSBT has approved the Draft Plan with modifications and recommended City Council acceptance of this modified plan. Staff has revised the Draft North TSA Plan to address the OSBT's recommend changes and is recommending City Council acceptance of the modified Draft Plan (Attachment A).

ANALYSIS

Study Session Follow up Items

During the May 24, 2016 City Council study session on the Draft Plan, several topics were discussed that required additional staff evaluation and follow up. Information about these topics is presented below.

Rocky Mountain Greenway

In 2012, Colorado Governor Hickenlooper and Ken Salazar, former U.S. Secretary of the Interior, established the Rocky Mountain Greenway (RMG) in an effort to link the Rocky Mountain Arsenal, Two Ponds National Wildlife Refuge (NWR), Rocky Flats NWR, and Rocky Mountain National Park using local and regional trails and transit opportunities. As part of the Obama administration's America's Great Outdoors initiative, the RMG has a focus on providing families and children access to public lands. City Council has placed a high priority on the planning and development of regional trails. The RMG is one of several regional trail planning projects that is currently active.

The goal of the RMG has been to support locally-driven projects, relying mostly upon existing trails. A planning and feasibility study for the section of the RMG from Jefferson County to Lyons is underway. However, phase 2 of that effort – which focuses on connections between the City of Boulder and Lyons – has purposely been on hold pending the outcome of the North TSA planning project so that it can consider what, if any, options the North TSA Plan will provide to meet the project goals.

While much of the existing RMG (from Rocky Mountain Arsenal NWR to Two Ponds NWR and approaching Rocky Flats NWR) is a 10-12 foot concrete grade separated bikeway, the design of the trail may vary as it proceeds northward. One concept being discussed is the possibility of the RMG having multiple routes, some that provide a "family-friendly" experience and incorporate mostly grade-separated, low-gradient and/or hard surface bikeways, and others that are a more challenging experience with steeper single tracks. One idea that has been discussed is the inclusion of the Joder trail connector possibly being part of the RMG's "rugged experience route." More "family-friendly" route choices are available with new trail connections recommended in the Draft Plan around the Boulder Reservoir. OSMP will partner with the Parks and Recreation Department to plan a route and complete a trail around the west side of the Boulder Reservoir as envisioned in the Boulder Reservoir Master Plan. Additionally, the Draft

Plan includes a trail along 55th Street (Talon Trail) connecting Boulder Reservoir to Niwot Road. Adding trail connections from Boulder to Niwot Road would complete a southern section for future trail connections from Niwot Road north to the county's Lagerman Reservoir trail network as well as routes north to Lyons (Lyons to Boulder Regional Trail) as envisioned in the Boulder Valley Comprehensive Plan and the Boulder County Comprehensive Plan, including the potential for the Boulder Feeder Canal Trail. Continued collaboration with Boulder County to pursue these connections will remain a high priority for OSMP.

Some members of the community including those on the OSBT and City Council have raised concerns that designation of a trail as part of the RMG could increase levels of visitation and that this would lead to congestion, potential conflict, impacts to natural resources, and other undesirable results. The desire for increased tourism and economic activity that other communities have sought by establishing regional designations or "branding" of their trails is a potential driver for increased levels of visitation. Some community members have expressed support for the RMG designation because they believe that participation would increase the city's chances of receiving state or federal funding to support design and construction. For example, the OSBT and council recently supported participation in a grant application for federal funding to connect a portion of the city's trail system with Rocky Flats NWR—an effort framed around and potentially strengthened by inclusion of the Coalton and/or High Plains trails as part of the RMG.

Habitat Conservation Areas Guidance for Trails

At the May 24 study session, council members asked how the Visitor Master Plan (VMP) addresses trails in Habitat Conservation Areas (HCAs). The conversation focused upon levels of use and density of trails. Staff wanted to provide the following for council's information.

In 2005, the VMP introduced the management area concept to OSMP as a geographic framework for implementing the plan. Management areas are typically relatively large contiguous blocks with generally similar characteristics with regard to patterns of visitation and natural or agricultural resources. The VMP provides information about the defining characteristics of the management area designations (Agricultural Areas, Habitat Conservation Areas, Natural Areas and Passive Recreation Area) as well as goals for these designations and the criteria to be considered when determining the appropriate management area designation for a part of the OSMP land system (Attachment E-A). The VMP also includes a table listing strategies for eleven topics across the management area designations (Attachment E-B).

The VMP provides the following strategy for the management topic "Trail Function, New Trails and Interconnected Trail System states" in HCAs: "*Minimize new trails and trail density; locate new trails to minimize impacts on habitat quality*;" and for "Trail Design for Level of Use" the HCA strategy reads: "*Design and construct trails and other facilities to sustain a low level of visitor use."* Staff recognizes that as the primary trail connection with Joder Ranch, the North Sky Trail is likely to attract moderate to high rather than low levels of visitation. Concerns around introducing levels of use inconsistent with this management strategy for HCA's were considered by staff, discussed with the OSBT and brought up during community meetings and in the feedback we received from individuals and community groups. The recommendation to City Council for the North Sky Trail in the North Foothills HCA represents an exception to the typical HCA management strategy described in the VMP, but an exception consistent with the master plan.

The VMP anticipates the need for flexibility of this sort in the application of management strategies across the designations. As a preamble to the management area strategies section, the VMP includes this statement:

> **Note:** The following table identifies strategies **normally** applied in specific management area designations. (*That does not preclude localized application in any of the management areas where needed).* [Emphasis retained from original.]

The VMP also includes a set of policies specific to management areas (Attachment E-C) including direction to provide higher levels of resource protection where there is greatest vulnerability to impacts from visitation, and to use public access options (such as on-trail, seasonal restrictions, special dog regulations) where appropriate. The Draft Plan includes provisions consistent with these policies to mitigate the impacts of the North Sky Trail by establishing limits on access to respect environmental vulnerability of the HCA, a conceptual route that avoids vulnerable resources where possible and minimizes unavoidable effects and finally through the inclusion of restoration and conservation actions to improve conditions in ecological systems throughout the TSA including those affected by the trail.

<u>Maintenance Comparison for North Sky Trail and Alternative East Route</u>
Even with thoughtful and sustainable trail design and engineering, trails will require maintenance, repair and sometimes rerouting in response to ongoing use, erosion and unpredictable events such as floods and fires. Staff follows best construction practices to make trails physically sustainable. In areas with less sustainable soils and slopes, trails are designed with moderate grades and may include structures to help stabilize soils and minimize erosion as well as the frequency of repairs.

The City Council May 24, 2016 study session packet included a comparison of the trail design, visitor experience and natural resource factors for the western route (North Sky Trail) proposed in the Draft Plan and the alternative scenario's eastern route. A

comparison of the anticipated construction and maintenance cost factors for these routes is included in Attachment F.

Neighborhood Access and Trail Connection from Area III-Planning Reserve

One of the recommendations in the Draft Plan (B5) is to collaborate with partner agencies to create a trail connection from the Area III-Planning Reserve Area and the future urban park site to the BVR trail system. Some community members shared their interest in this connection; and it was included in plan scenarios and the Draft Plan. The recommendation to collaborate with others was based on the idea that access to OSMP would best occur through planning efforts associated with the Boulder Valley Comprehensive Plan commitments to complete a service area expansion plan for the Area III-Planning Reserve.

City Council members inquired about the possibility of providing a neighborhood access point off of publicly accessible roads in advance of future area planning efforts. Twenty-sixth Street runs the length of the west side of the future park site. There are few homes along this road which provides access to and terminates at the Boulder Rifle Club. At this location, 26th Street is also adjacent OSMP lands. There is no existing access at this location (Attachment G). A neighborhood access and trail here would require the consideration of several factors:

- The terrain descends very steeply from the north end of 26th Street into a draw containing shrub communities, a stream, and a string of wetlands and ponds.
- The steep slope would require a gradually descending trail potentially with switchbacks to enter and exit the draw and probably a bridge to cross the stream/wetlands that lie at the bottom of the draw.
- Rare native plant communities are present on the north side of the draw.
- Visitor experience could be compromised by close proximity of the shooting range.
- Current levels of visitation appear to be low with a few lightly used unmapped undesignated trails.

Designing a trail connection from 26th Street into the North TSA trail system would involve integrating a range of resource issues, visitor experience and trail design factors and considering alternative routes.

Taking action in advance of integrated planning for the development of the Planning Reserve may not be needed given the current low levels of use in the area. A new access point may (is likely to) establish patterns of use here and reduce the range of options if and when the planning reserve is considered for service area expansion and annexation. Staff believes the best opportunities to make decisions about this area lie with future planning for the Planning Reserve. Should Council like staff to pursue this evaluation sooner or on-going system-wide resource monitoring and staff's observations of patterns of use in the area suggest that action is needed before that, staff would return to the OSBT and City Council with recommendations to address access, visitor experience and resource issues.

U.S. Highway 36 Underpass

Council members expressed an interest in understanding additional information about the underpass beneath U.S. Highway 36 in the vicinity of the Joder Ranch Trailhead as proposed in the alternative scenario. Council members were interested in learning more about two items:

1. *Staff's analysis and conclusions regarding the underpass as part of the Draft North TSA Plan*.
2. *The cost share opportunities and the cost share arrangements for the U.S. Highway 93 Community Ditch Trail underpass.*

Consideration of the underpass as part of the Draft North TSA Plan

In developing the scenario with the Joder trail connection west of U.S. Highway 36 (the preferred scenario as recommended in the Draft Plan), staff considered the benefit, feasibility and costs of also including an underpass connection to the east. Adding the underpass was found to offer some additional community benefit and both environmental and monetary costs. Based upon community input, staff concluded that in a scenario with a west-side trail connection to Joder, relatively few visitors would preferentially choose an east-side alternative. An analysis of costs included not only consideration of the underpass itself (estimated at $2 million) but the land acquisition and construction costs to connect the underpass with the existing trail system. These additional costs have not been reflected in the Alternative Scenario. In addition to the monetary costs, new trail construction through this section could come with resource impacts to grasslands and potentially rare plant habitat. Taken together, the marginal benefit, the relatively high cost, the uncertainty of partners to cost share the expense (see below), and the potential to re-visit this in the future once visitor use patterns are more established led staff to conclude that the underpass was not a strategic element for the scenario—and consequently the Draft Plan. Furthermore, it was thought that those visitors who were thought to most likely to enjoy a loop involving the Lefthand Trail and west side connector could still do so without an underpass. Staff recognizes that creating such a loop would not be an ideal experience. It would require crossing U.S. Highway 36 at grade and traveling for about .5 mile on Neva Rd.

Cost Sharing

Cost sharing opportunities for the "Joder underpass" are most related to the degree to which the underpass helps other entities achieve their goals. The agencies that are most likely to have an interest in safety and trail connections provided by underpasses are Boulder County, the Colorado Department of Transportation (CDOT) and Great Outdoors Colorado (GOCO). Boulder County does not have any current plans for an underpass in this location. County staff has indicated support for the city's efforts to secure funding for an underpass and a willingness to work with CDOT to see if a reconfiguration of the U.S. Highway 36/Neva Road intersection could be done concurrent with an underpass design. However, county staff has also advised that this would be part of a long-term plan and has not yet been examined and that the county currently has no funds assigned to this project. Additional information about how the underpass relates to

potential funding partnerships and the underpass for Community Ditch at U.S. Highway 93 is available in Attachment H.

Implementing the Draft Plan

Progressing from Conceptual Trails to Completed Trails

The Draft Plan includes conceptual goals for new trail routes and for redesigning or reclaiming existing trails. The progression from a conceptual route to a construction-ready trail project includes detailed site analysis and evaluation, trail design, development of construction documents, obtaining required permits and other activities. The timeline for design and construction will typically range from one to three years depending on complexity.

Projects which are likely to have a high level of public interest in design (visitor facilities including new trails, trailheads and education amenities) will include check-ins with the community, OSBT and council if requested. Design documents could be made available to the public via the department website and noticed through newsletters, webpage alerts, social media postings and with other outreach efforts. Information updates are provided to the OSBT at monthly meetings and to council as requested.

Plan Implementation Costs

The current total estimated cost of implementing the draft plan, not including the personnel expenses of standard employees, is $4.3 million. This estimate includes the costs of more than 86 recommended actions including:

- Design, permitting and construction of:
    - New and rerouted trail alignments (trail surface, bridges, culverts, signs, etc.).
    - Other visitor infrastructure improvements (education amenities, fishing pier, shade structure, boardwalk, etc.).
    - New and improved trailheads (parking, outhouses, kiosks, bike and horse amenities, signs, etc.).
- Assessing and managing priority invasive plants in locations of trail and trailhead improvements.
- Restoring and revegetating undesignated trails and relocated trails.
- Implementing resource protection measures, including seasonal access restrictions and site-specific area closures.
- Paving Longhorn Road.
- Designing, fabricating and installing educational amenities and signs.
- Improving wayfinding, informational and regulatory signs.
- Making changes to recreational opportunities and regulations.

Cost estimates for projects that will require future planning, additional feasibility studies and coordination with other city departments, Boulder County and other agencies are difficult to develop accurately and are not included. Potential costs for systemwide or possible TSA-specific monitoring and restoration are also not included.

The North TSA capital projects are identified in Attachment I. If the plan is finalized, staff will begin to include identified capital projects as part of its annual Capital Improvement Program (CIP) submission. Capital funding for these projects is available from two sources:

- **Capital Enhancement CIP**: the Capital Enhancement CIP fund includes a North TSA Implementation project to fund the expansion or significant improvement of trails, trailheads, facilities and resource protection measures.

- **Lottery Funds**: the Lottery Fund is based on proceeds from the Conservation Trust Fund and provided by the State of Colorado to the city. Lottery funds are typically used by OSMP for capital improvements for recreational purposes.

Ecological enhancement opportunities in the North TSA will be funded out of a new OSMP CIP budget item specifically added to enhance funding available for such projects.

OSMP would also look for additional opportunities to fund projects in the Draft Plan, including grants and partnerships. Some projects may also be suitable for completion by or with the assistance of volunteers.

<u>Project Phasing</u>
The Draft Plan recommendations were ranked by considering the benefits of each strategy based on trail sustainability, visitor experience and environmental benefits. A strategy received a higher ranking if there was greater benefit across all three factors and if that strategy had especially widespread or long-lasting benefit.

Additional factors integrated into project phasing include:
- Project cost, staff capacity or other fiscal constraints.
- Specific timing requirements (i.e. completion of flood-related projects for Federal Emergency Management Agency (FEMA) reimbursement).
- Sequencing (i.e. projects that are necessarily precursors or dependents or that can leverage staff and cost efficiencies through sequencing).
- Prior commitments and projects already planned for completion in upcoming years.
- Projects with a high level of community support/anticipation are given greater priority than projects which are otherwise the same.
- The need to coordinate partner agency collaboration.

The projected timeline for several Draft Plan recommendations with a likely high level of community interest are included in Table No. 2.

Table 2: Projected Timeline for Several Actions

Recommended Action	2017	2018	2019	2020	2021	2022
North Sky Trail	Design	Design / Permits	Build	Build	Complete	
Mahogany Loop (Joder Loop)	Design	Build	Complete			
BVR Trail Reroutes			Design	Design / Permits	Build	Complete
Coyote (Joder) Trailhead	Design	Design / Permits	Complete			

Smaller scale projects and those that have fewer timing or cost constraints (i.e. management area designations, sign projects, regulatory changes) may be included in annual work plans as opportunity allows and accomplished as a part of ongoing core departmental services and infrastructure maintenance. Overall, the department's work program priority continues to be completing flood recovery projects by the end of 2017, maximizing FEMA reimbursement. Staff's projections for North TSA implementation is in context with resuming deferred West TSA projects and is intended to be conservative.

ATTACHMENTS

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B. OSBT North TSA Motions from March 9, 2016 meeting
C. North TSA Plan and Process Summary
D. North TSA Alternative Scenario
E. Visitor Master Plan Management Area Designation Guidance
F. Comparison of Construction and Maintenance Costs and Factors for Joder Connector Trails
G. OSMP Land Adjacent to Area III Planning Reserve
H. Cost Sharing Factors for U.S. Highway 36 Underpass
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Version 2

City of Boulder Open Space and Mountain Parks

North Trail Study Area Plan

DRAFT PLAN

May 2016

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

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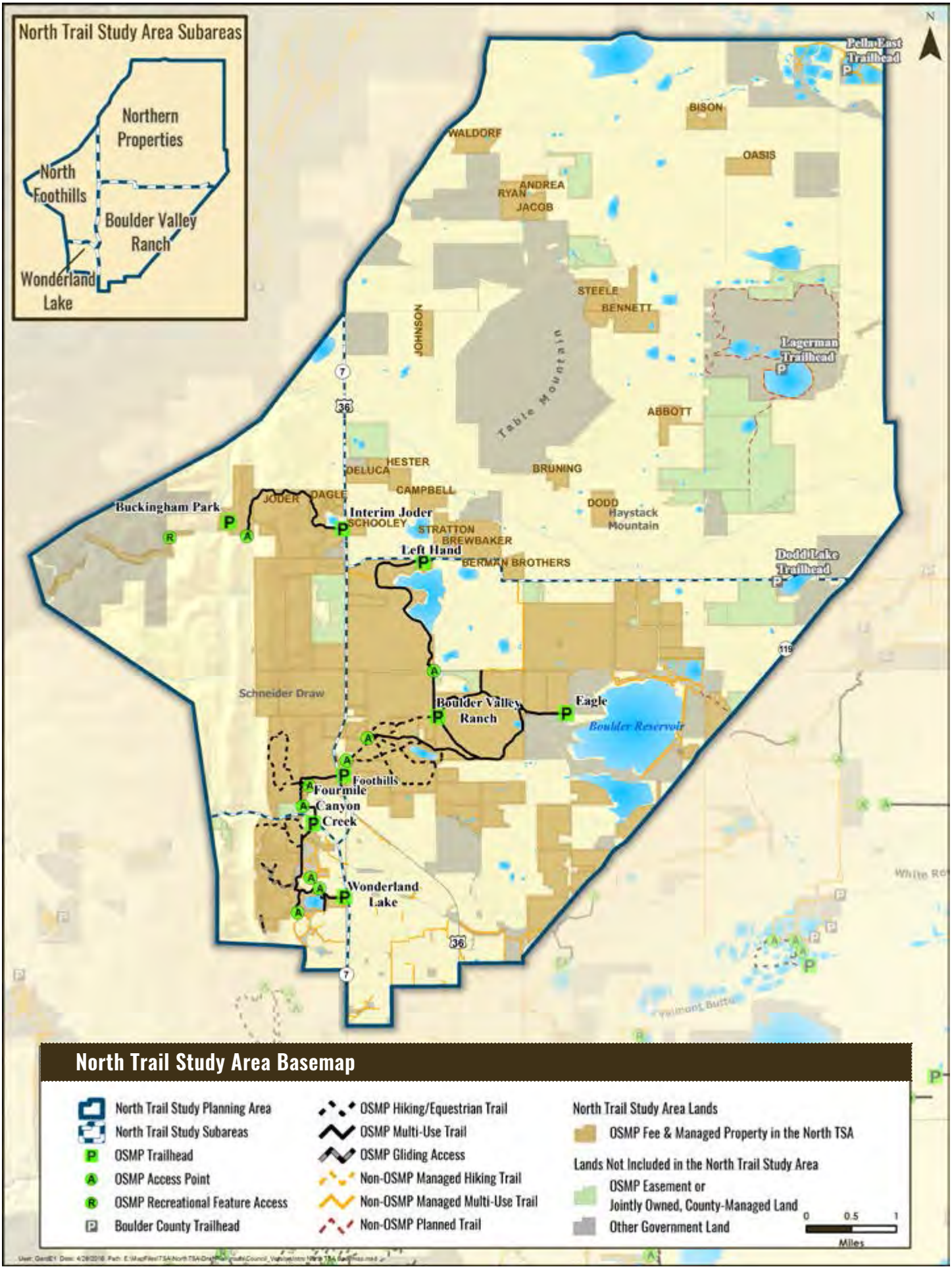
F Appendix F: Feedback Themes Not Included in the Plan

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
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
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Non-OSMP Managed Hiking Trail
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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

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

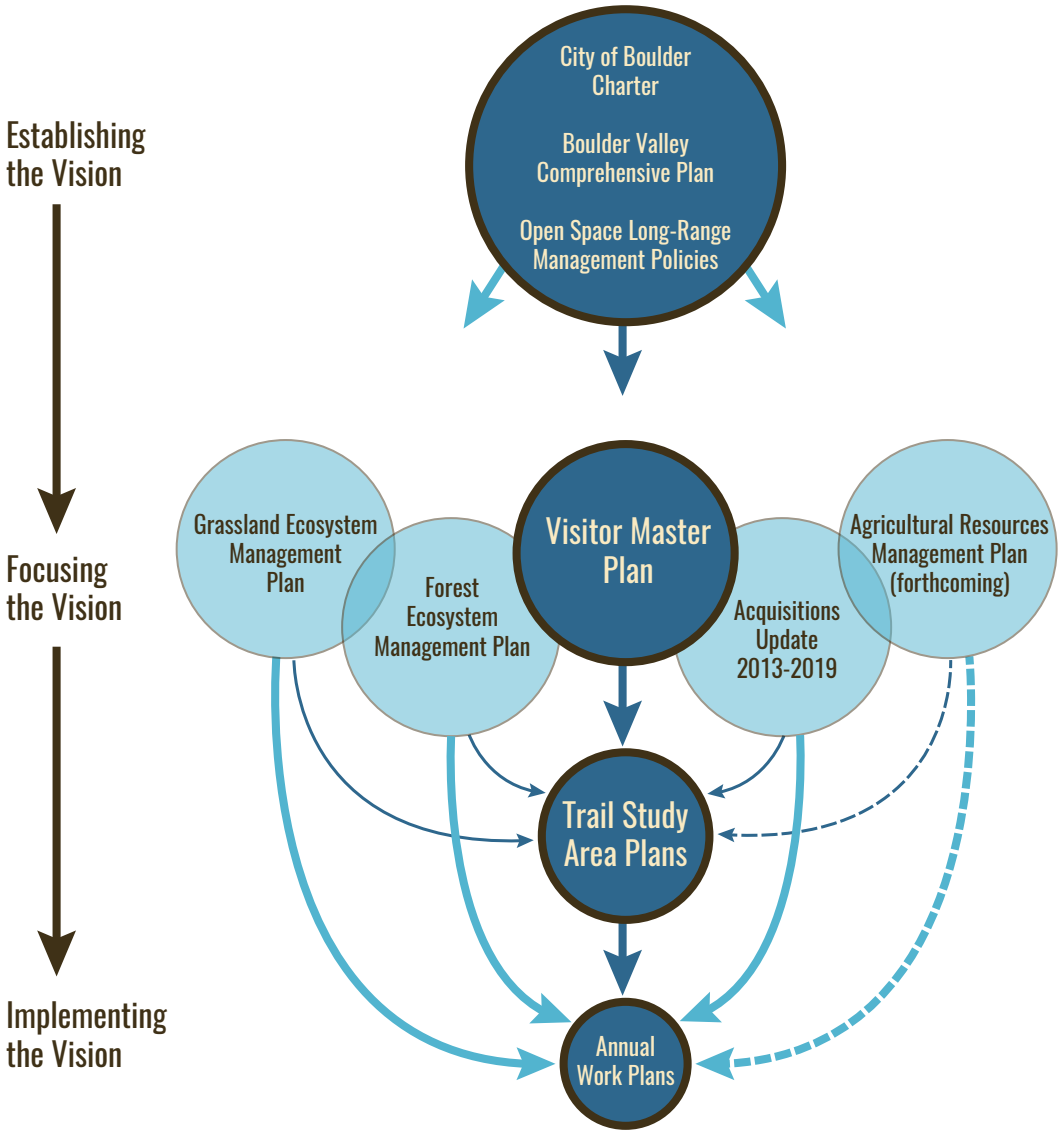
Boulder area youths participated in North TSA youth engagement efforts.

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

Improved Connectivity

Conservation of Resources Natural, Agricultural, Cultural

Balance of Recreation and Resource Conservation

Improved Access and Accessibility

Increased Safety

Honoring Community Values and Commitments

Decreased Visitor Conflict

Increased Education and Understanding

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.

View south from the North Foothills Subarea. © Gary Stevens.

North TSA Plan Recommendations

North TSA-Wide

MAP 1: North TSA-Wide - Management Area Designations

Actions T1 to T9

Provide management area designations for properties without designations to guide management actions.

*Interests Met: 4**

- *Retain the Joder and Cox property designation (**T1**) as a Habitat Conservation Area (HCA) and implement as part of the North Foothills HCA.*
- *Designate Dagle II (**T2**), Stratton (**T5**), Lappin (**T6**), IBM open space easement (**T7**), Hart-Jones Exchange (**T8**) and Palo Park (**T9**) properties as Natural Areas.*
- *Limit public access to on trail travel on IBM open space easement property.*
- *Designate Dakota Ridge Village (**T3**) property as a Passive Recreation Area.*
- *Designate Berman Brothers (**T4**) property as an Agricultural Area.*

Primary Goal

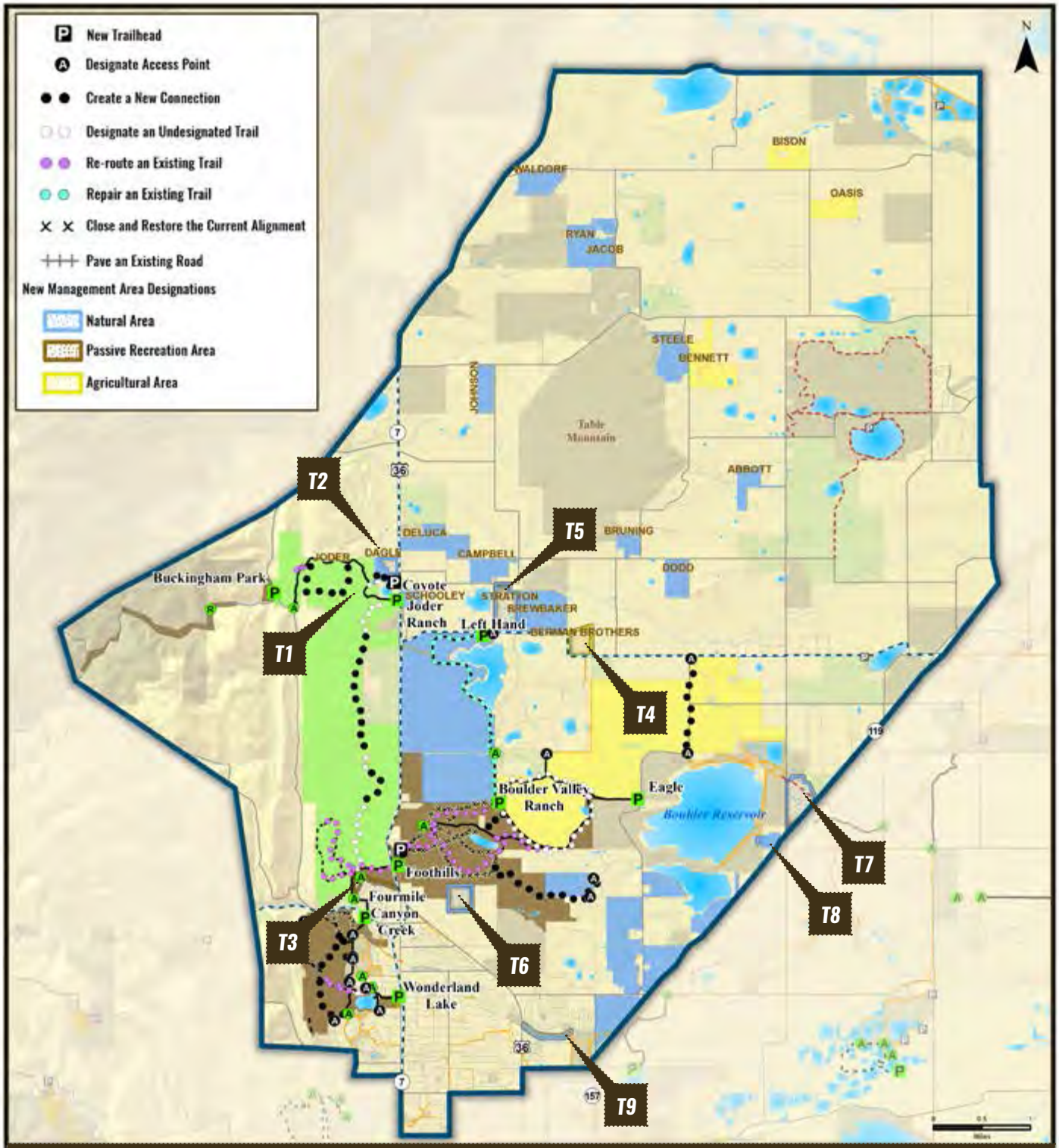
- *Implement VMP direction to provide management area designations for properties without designations to guide management actions.*

Driving Factors/Benefits

- *Joder: includes sensitive habitat and resources that are a consistent extension of habitats and species in North Foothills HCA.*
- *Dagle II: natural area designation is consistent with adjacent Wright and Dagle I management designations.*
- *Dakota Ridge: adjacent to North Foothills Trail and adjoining passive recreation management area.*
- *Berman Brothers: this property has been designated as an agricultural land of statewide importance-suitable for hay production or grazing.*
- *Stratton: protect important resources and create healthy habitats for native amphibians, native fish, and, potentially, Preble's meadow jumping mouse.*
- *Lappin: protect important plant and aquatic species as well as shale barrens habitat.*
- *IBM: support creation of the IBM connector trail.*
- *Hart-Jones Exchange: protect riparian areas and rare plant community habitat.*
- *Palo Park: protect riparian area of Fourmile Canyon Creek.*

**See Appendix D for a list of interests met by each action.*

North TSA Plan Recommendations: TSA-Wide



MAP 1: North TSA-Wide - Management Area Designations

- 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
- Agricultural Area
- Habitat Conservation Area
- Natural Area
- Passive Recreation Area
- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land

Trail changes are depicted conceptually. Actual trail alignments will differ.

MAP 2: North TSA-Wide - Recommendations

Actions T10 to T15

Collaborate with partner agencies to create regional connections.

*Interests Met: 3**

As opportunities arise, collaborate with partner agencies to create the following regional trail connections in a way that minimizes natural resource impacts.

- *(**T10**) North TSA to Boulder County Parks and Open Space's Heil Valley Ranch. The North TSA Plan does not preclude future public planning processes to assess a regional connector trail connection to Heil Ranch on the Buckingham property.*
- *(**T11**) North TSA to Boulder County Parks and Open Space's Lagerman/Imel/AHI/Open Space Complex.*
- *(**T12**) A Boulder-to-Lyons trail connection including the efforts of the Rocky Mountain Greenway Project.*
- *(**T13**) IBM Connector Underpass and Trail (construction pending).*
- *(**T14**) Fourmile Canyon Creek Trail underpass to Cottonwood Trail (construction pending).*
- *(**T15**) Eagle Trail to the planned Boulder Reservoir Trail.*

Primary Goal

- *Enhance regional trail connectivity.*

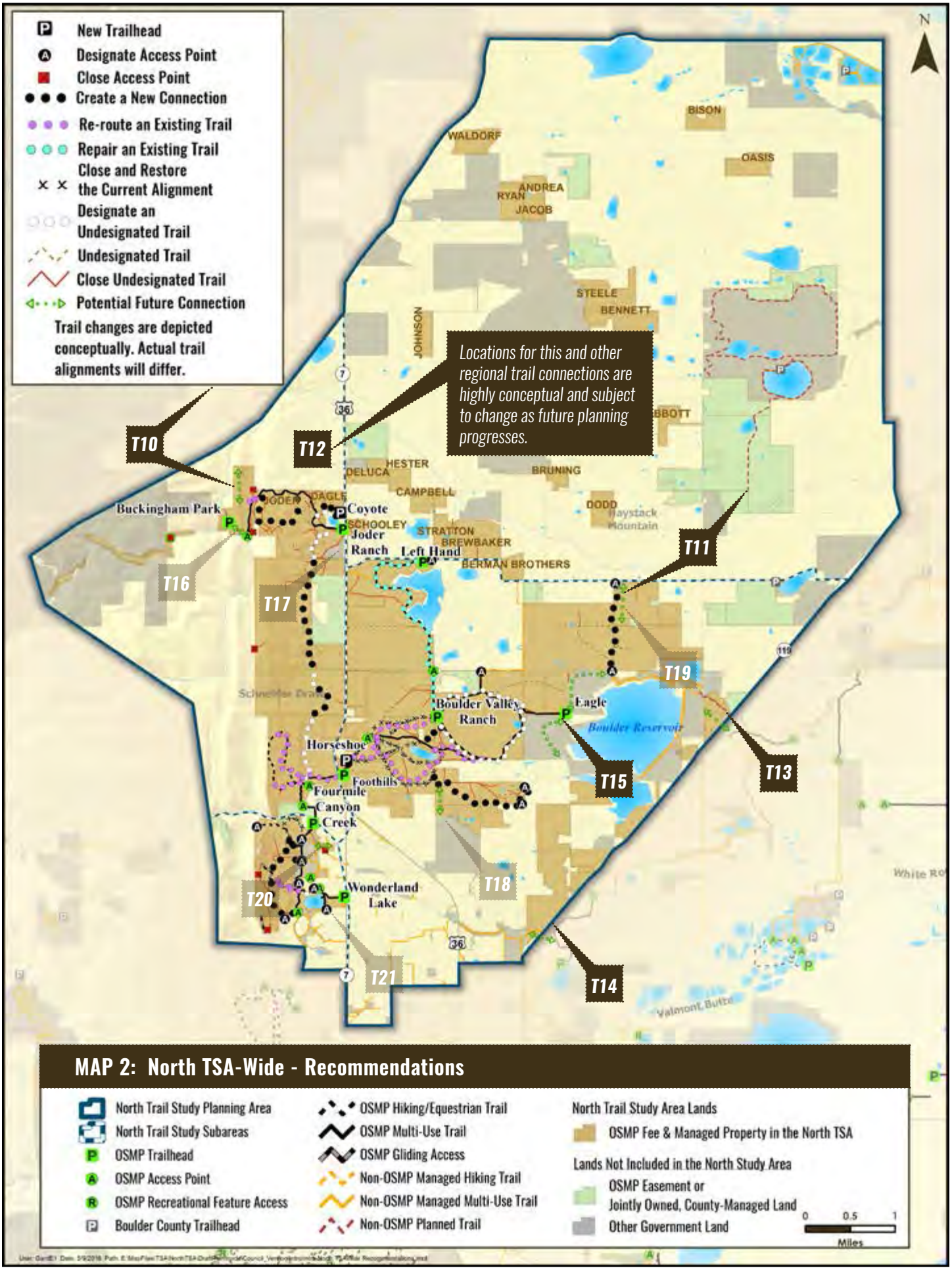
Driving Factors/Benefits

- *Provide greater opportunities for visitors and interconnectivity among adjacent trail systems.*
- *Coordination and collaboration among OSMP and partner agencies to accomplish regional connections.*
- *Specific to the Eagle Trail to Boulder Reservoir Trail connection: keep trail close to 51st and 55th streets in existing transportation corridors as much as is feasible.*

Illustration of a globally rare arogos skipper by OSMP staff Dave Sutherland, prepared for a forthcoming interpretive sign at Joder Ranch.

*See Appendix D for a list of interests met by each action.

North TSA Plan Recommendations: TSA-Wide



MAP 2: North TSA-Wide - Recommendations, continued

Actions T16 to T20

Collaborate with partner agencies to create local trail connections.

*Interests Met: 3**

- *As opportunities arise, collaborate with partner agencies to create the following local trail connections in a way that minimizes natural resource impacts.*
- *(**T16**) Joder Trail to Buckingham Park via Olde Stage Road (in progress).*
- *(**T17**) Joder Ranch and Boulder County's Six-Mile Fold. Boulder County will conduct its own public planning process to determine access and management of visitors on Six-Mile Fold. OSMP will coordinate with the county's planning efforts to determine if and where trails could be located in this area.*
- *(**T18**) City of Boulder's Area III park site to the North TSA.*
- *(**T19**) Boulder Reservoir to Niwot Road.*
- *(**T20**) Fourmile Canyon Creek Greenway path to Foothills Community Park.*

Primary Goal

- *Enhance local trail connectivity.*

Driving Factors/Benefits

- *Provide greater opportunities for visitors and interconnectivity among adjacent trail systems.*
- *Increase coordination and consistency among OSMP and partner agencies.*
- *Specific to Joder Ranch and Boulder County's Six-Mile Fold connection: Provide additional interpretive opportunities.*
- *Specific to Area III park site connection: (1) Work with partner agencies on a north-south trail connection from northern Boulder neighborhoods to North TSA; and (2) Increase accessibility for neighbors to the North TSA.*
- *Specific to Fourmile Canyon Creek Greenway path to Foothills Community Park connection: Connection accepted by City Council in the Greenways Master Plan.*

Action T21

Designate undesignated access points that connect with new or existing designated trails.

*Interests Met: 4**

Primary Goal

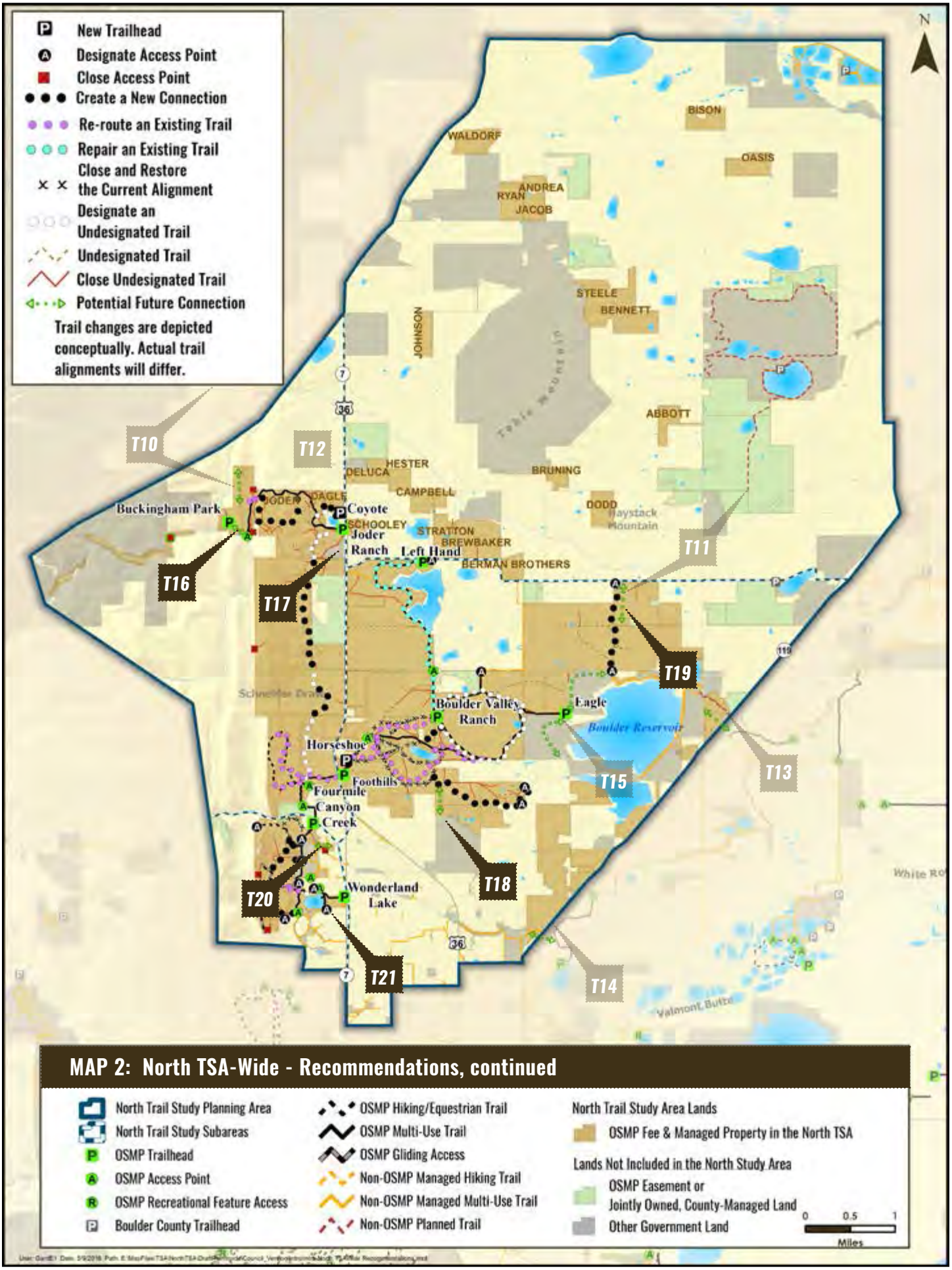
- *Provide managed public access to designated trails to encourage visitors to use designated trails.*

Driving Factors/Benefits

- *Establish clearly identified designated trail access points.*
- *Identify infrastructure and maintenance standards for access points.*
- *Improve connectivity between North TSA and publicly accessible areas.*
- *Minimize impacts to natural resources as connections are improved.*

**See Appendix D for a list of interests met by each action.*

North TSA Plan Recommendations: TSA-Wide



ADDITIONAL ACTIONS: North TSA-Wide - Recommendations

Action T22 Bring all trails up to standards.

*Interests Met: 4**

» *Conduct maintenance activities to bring trails up to OSMP sustainable trail guidelines.***

Primary Goal

» *Increase trail sustainability to protect the OSMP trail system over the long term while providing a quality visitor experience.*

Driving Factors/Benefits

» *A sustainable trail is physically, ecologically and economically sustainable over time.*

» *Ensure trails maintain their character over time and encourage on-trail use.*

» *Use ecological best management practices as work is planned and implemented to minimize erosion and locate trails in a manner that minimizes impacts to surrounding natural and cultural resources.*

» *Upgrade trails so they will require minimal maintenance and financial resources over the long term.*

Action T23 Bring all trailheads and access points up to standards.

*Interests Met: 4**

» *Update, replace and install infrastructure to bring existing trailheads and access points up to OSMP standards.***

Primary Goal

» *Install appropriate and functioning infrastructure at each trailhead and access point to provide a safe, consistent and quality visitor experience.*

Driving Factors/Benefits

» *Provide visitors with safe, well-maintained and functioning infrastructure (e.g., easy to understand signs, toilets, safe parking access, etc.)*

» *Upgrade infrastructure so that it is less difficult and costly to maintain over time.*

Action T24 Remove unnecessary fencing and use wildlife friendly fencing.

*Interests Met: 3**

» *Remove fencing that is no longer serving a function and when modifying or installing fencing in implementation of the North TSA, ensure fencing is wildlife friendly.*

Primary Goal

» *Remove fences no longer serving a purpose and replace barbed-wire fences with less harmful barriers.*

Driving Factors/Benefits

» *Remove fences to improve visitor experience and resource conservation.*

» *Enhance wildlife corridors while balancing livestock control measures.*

» *Install new fences with wildlife friendly design.*

**See Appendix D for a list of interests met by each action.*

*** OSMP trail and trailhead standards available in the North TSA Inventory and Assessment Report. For current information about OSMP standards, visit osmp.org.*

Primary Goal

» *Create larger areas of unfragmented habitat by closing, revegetating or restoring undesignated trails that have not been designated through the North TSA process.*

Driving Factors/Benefits

» *Eliminate undesignated trails that are redundant and unmanaged trail connections.*

» *Improve conservation of rare plant communities and other sensitive resources.*

» *Offset resource impacts of providing new trail connections.*

ACTION T25 Allow natural revegetation or restore all undesignated trails not integrated into designated trail connections.

*Interests Met: 4**

***IMPORTANT NOTE*: The North TSA Plan recommendations will result in some undesignated trails being integrated into the designated trail system and other undesignated trails being closed and vegetation restored. A few undesignated trails are used for authorized vehicle access and will be retained for this purpose.**

North TSA Plan Recommendations for Undesignated Trails	Miles
Integrate into OSMP Trail System	4.7
Close and Restore Vegetation	22.7
Retain for Authorized Vehicle Access	7.9
Total	35.3

» *Assess and prevent the introduction and spread of priority invasive plants along new trail connections and decommissioned or undesignated trail sections under restoration.*

Primary Goal

» *Conserve and restore high-quality native plant communities and rare plant communities.*

Driving Factors/Benefits

» *Share information about the resource impacts associated with the spread of invasive plants and ways visitors can help prevent or minimize this issue.*

» *The North Foothills HCA is an area of high importance for this action.*

ACTION T26 Assess and prevent the introduction and spread of priority invasive plants.

*Interests Met: 2**

Primary Goal

» *Share information with visitors about the ecology, natural features, habitats, plants and animals in various locations throughout the North TSA, including North Foothills HCA, Boulder Valley Ranch and Wonderland Lake.*

Driving Factors/Benefits

» *Increase public awareness and understanding of interesting or unique natural resources.*

» *Improve compliance with regulations through programs directed at resource protection.*

ACTION T27 Create interpretive information and messages about unique, rare and sensitive resources.

*Interests Met: 2**

**See Appendix D for a list of interests met by each action.*

Background photo: Joder property.

North TSA Plan Recommendations

North Foothills

North TSA Plan Recommendations: North Foothills

MAP 3: North Foothills - Management Area Designations

ACTION NF1 Retain the Joder property as a Habitat Conservation Area (HCA).

*Interests Met: 4**

» *Retain the management area designation and include as part of the North Foothills HCA.*

Primary Goal

» *Honor the OSBT's request to thoroughly evaluate the Joder property management area designation and implement the VMP direction to establish management area designations for undesignated properties to guide management actions.*

Driving Factors/Benefits

» *Joder includes sensitive habitat and resources that are a consistent extension of habitats and species in the North Foothills HCA including rare plants and plant communities, highly suitable habitat for North TSA focal species such as globally-imperiled grassland-dependent butterflies, lazuli bunting, lark sparrow and prairie rattlesnake.*

» *Ensures trail development and visitor access are considered in the context of important and sensitive natural resources.*

ACTION NF2 Designate Dagle II property as a Natural Area.

*Interests Met: 2**

Primary Goal

» *Implement VMP direction to provide management area designations for undesignated properties.*

Driving Factors/Benefits

» *Consistent with adjacent Wright and Dagle I management area designations.*

ACTION NF3 Designate Dakota Ridge Village property as a Passive Recreation Area.

*Interests Met: 2**

Primary Goal

» *Implement VMP direction to provide management area designation for undesignated properties.*

Driving Factors/Benefits

» *Consistent with adjacent Passive Recreation Area designation around Foothills Trail.*

**See Appendix D for a list of interests met by each action.*

North TSA Plan Recommendations: North Foothills

MAP 3: North Foothills - Management Area Designations

- North Trail Study Planning Area
- North Trail Study Subareas
- OSMP Access Point
- OSMP Fee & Managed Property
- OSMP Easement or Jointly Owned, County-Managed Land
- OSMP Hiking/Equestrian Trail
- OSMP Multi-Use Trail
- Non-OSMP Managed Multi-Use Trail

Trail changes are depicted conceptually. Actual trail alignments will differ.

- Agricultural Area
- Habitat Conservation Area
- Natural Area
- Passive Recreation Area
- Other Government Land

N

North TSA Plan Recommendations: North Foothills

MAP 4: North Foothills - Subarea-Wide Recommendations

ACTION NF4 Collaborate to create a trail connection from North TSA to Boulder County Parks and Open Space's Heil Valley Ranch.

*Interests Met: 3**

- *As opportunities arise, collaborate with partner agencies to create regional trail connections in a way that minimizes natural resource impacts.*
- *The North TSA Plan does not preclude future public planning processes to assess a regional trail connection to Heil Ranch on the Buckingham property.*

Primary Goal

- *Enhance regional connectivity.*

Driving Factors/Benefits

- *Provide greater opportunities for visitors and interconnectivity among adjacent trail systems.*
- *Increase coordination among OSMP and partner agencies.*

ACTION NF5 Collaborate to create a connection from Joder Ranch Trail to Buckingham Park via Olde Stage Road (in progress).

*Interests Met: 3**

- *As opportunities arise, collaborate with partner agencies to create local trail connections in a way that minimizes natural resource impacts.*

Primary Goal

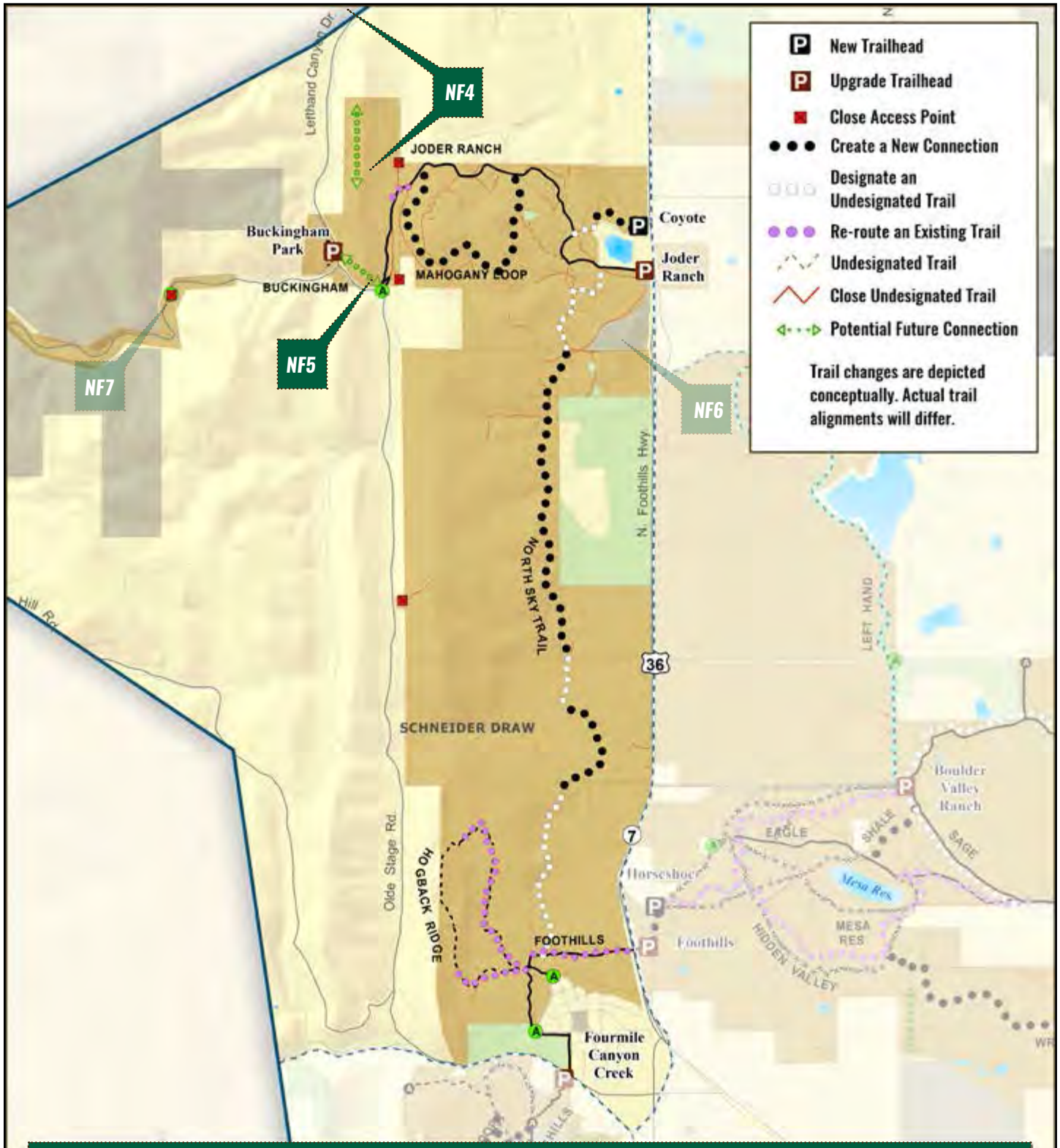
- *Enhance local trail connectivity.*

Driving Factors/Benefits

- *Provide greater opportunities for visitors and interconnectivity among adjacent trail systems.*
- *Increase coordination among OSMP and partner agencies.*

*See Appendix D for a list of interests met by each action.

North TSA Plan Recommendations: North Foothills



MAP 4: North Foothills - Subarea-Wide Recommendations

- North Trail Study Planning Area
- North Trail Study Subareas
- OSMP Access Point
- OSMP Recreational Feature Access
- OSMP Hiking/Equestrian Trail
- OSMP Multi-Use Trail

North Trail Study Area Lands

- OSMP Fee & Managed Property

Lands Not Included in the North Trail Study Area

- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land

0 0.5 Miles

N

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MAP 4: North Foothills - Subarea-Wide Recommendations, continued

Action NF6 Collaborate to create a connection between Joder Ranch and Boulder County's Six-Mile Fold property.

*Interests Met: 3**

- *As opportunities arise, collaborate with partner agencies to create local trail connections in a way that minimizes natural resource impacts.*
- *Boulder County will conduct its own public planning process to determine access and management of visitors onto Six-Mile Fold. OSMP will coordinate with the county's planning efforts to determine if and where trails could be located to provide access to this area and minimize natural resource impacts.*

Primary Goal

- *Enhance local trail connectivity to provide designated access from the Joder Ranch Trail and Trailhead to the Six-Mile Fold area.*

Driving Factors/Benefits

- *Provide greater opportunities for visitors and interconnectivity among adjacent trail systems.*
- *Increase coordination among OSMP and partner agencies.*
- *Enhance interpretive and education access and opportunities.*
- *Protect geological and natural resources.*

Action NF7 Close Cottonwood Recreation Area.

*Interests Met: 2**

Primary Goal

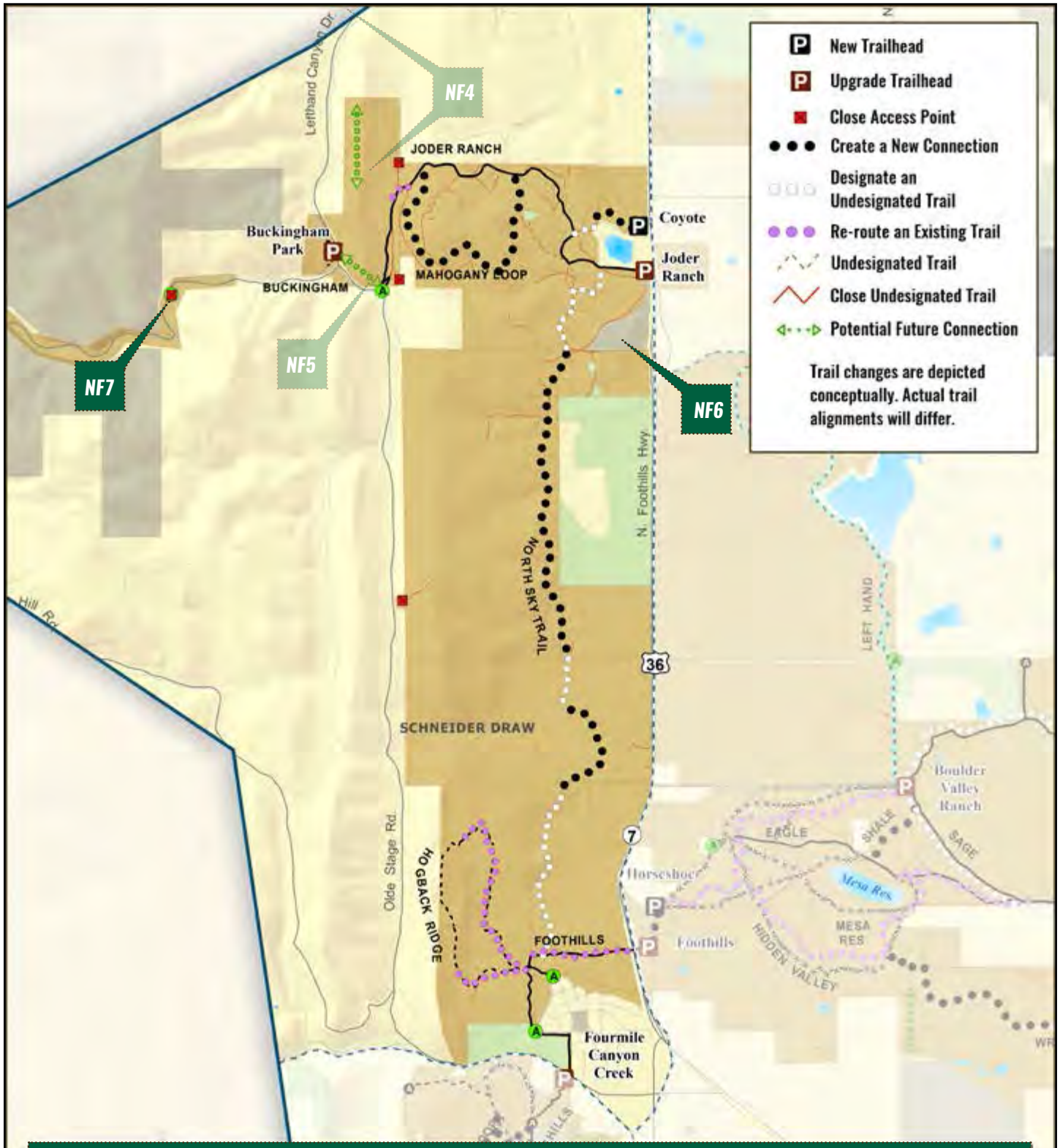
- *Support Lefthand Creek wetland and riparian restoration efforts after 2013 flood.*

Driving Factors/Benefits

- *The site was significantly altered after the 2013 flood and recreation amenities destroyed.*
- *Area is no longer suitable as a recreation access area.*

**See Appendix D for a list of interests met by each action.*

North TSA Plan Recommendations: North Foothills



MAP 4: North Foothills - Subarea-Wide Recommendations, continued

- North Trail Study Planning Area
- North Trail Study Subareas
- OSMP Access Point
- OSMP Recreational Feature Access
- OSMP Hiking/Equestrian Trail
- OSMP Multi-Use Trail

North Trail Study Area Lands

- OSMP Fee & Managed Property

Lands Not Included in the North Trail Study Area

- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land

0 0.5 Miles

N

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North TSA Plan Recommendations: North Foothills

MAP 5: North Foothills - Joder Focus Area

Action NF8 Realign western section of the Interim Joder Trail near the Buckingham property. (Joder Ranch Trail)

*Interests Met: 4**

Primary Goal

» *Improve trail conditions to improve physical sustainability and visitor experience.*

Driving Factors/Benefits

» *Re-route steep, unsustainable portion of trail at west end of carriage road that connects to Buckingham property to improve sustainability and reduce the trail grade.*

» *Conserve butterfly habitats and minimize the impact of the trail re-route on butterfly highly suitable habitat.*

Action NF9 Construct one loop trail on the northwest section of the Joder property. (Mahogany Loop)

*Interests Met: 4**

Primary Goal

» *Increase recreation and visitor experience opportunities.*

Driving Factors/Benefits

» *Provide new visitor opportunity while limiting the extent of trail in areas of highest resource sensitivity and avoiding trails crossing through the large drainage on the property.*

» *Manage visitor activities to minimize visitor conflict on the loop trail.*

» *Allow restoration of historic undesignated trails to increase habitat quality in HCA.*

Action NF10 Construct a new trailhead for passenger vehicle parking on the Dagle/Wright properties. (Coyote Trailhead)

*Interests Met: 4**

Primary Goal

» *Provide additional passenger vehicle parking for Joder Ranch that does not require visitors to cross U.S. 36.*

Driving Factors/Benefits

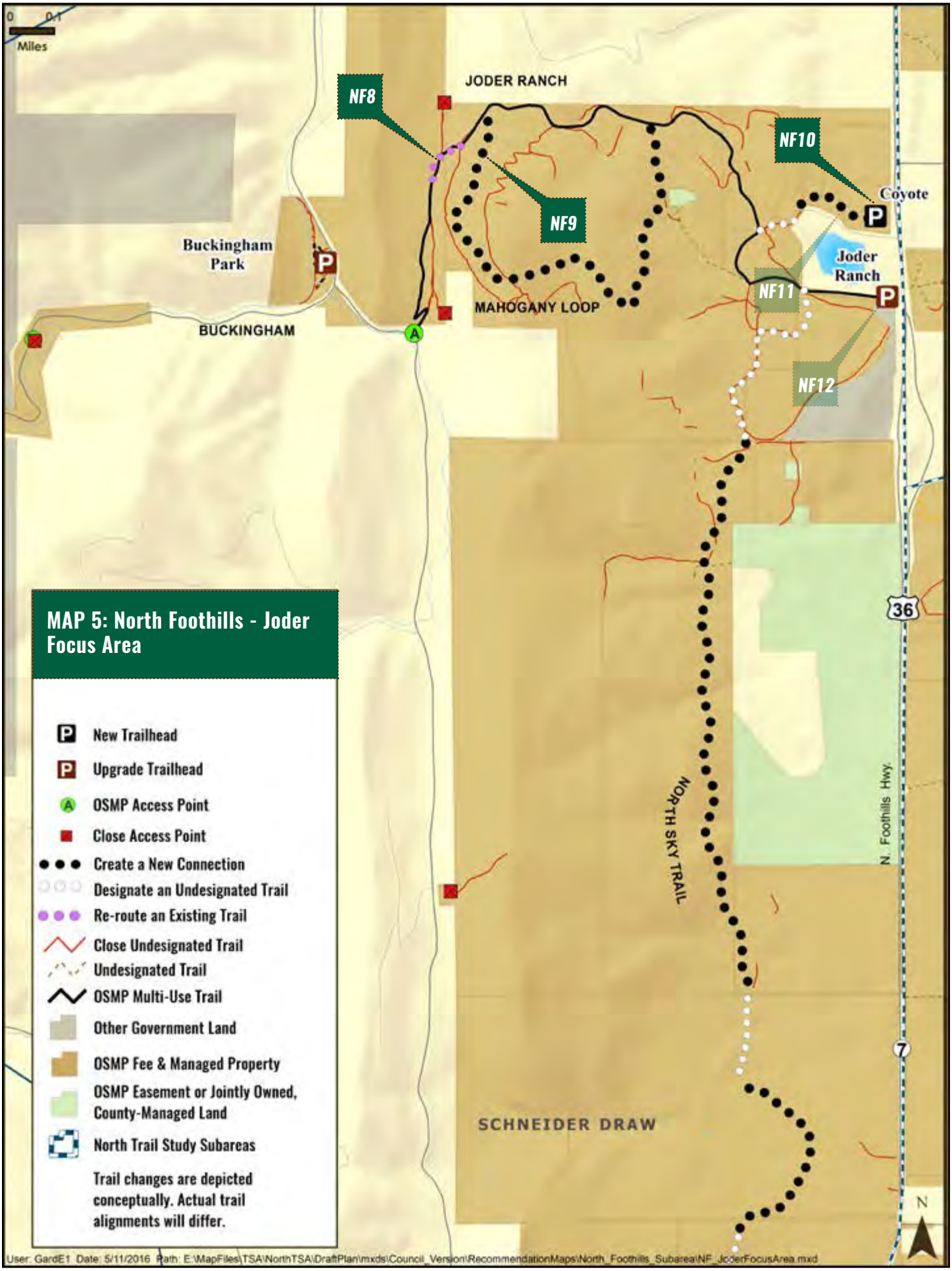
» *Provide parking for pedestrians and cyclists.*

» *Construct parking lot that has suitable terrain, drainage and soil quality.*

» *Access road off of U.S. 36 may provide suitable sitelines for obtaining Colorado Department of Transportation (CDOT) access permits.*

**See Appendix D for a list of interests met by each action.*

North TSA Plan Recommendations: North Foothills



MAP 5: North Foothills - Joder Focus Area, continued

ACTION NF11 Construct a connector trail from the new trailhead (Coyote Trailhead) on the Dagle property to the Joder Ranch Trail.

*Interests Met: 5**

Primary Goal

» *Provide connection from the new parking area to the Joder Ranch Trail.*

Driving Factors/Benefits

» *Create trail connectivity with trailhead.*

» *Minimize visitor conflict along the access road to lessees on the Dagle and Wright properties.*

ACTION NF12 Retain Interim Joder Trailhead. (Joder Ranch Trailhead)

*Interests Met: 4**

Primary Goal

» *Provide horse trailer and large-vehicle parking for the Joder trail system. Retain a limited number of passenger vehicle parking spots.*

Driving Factors/Benefits

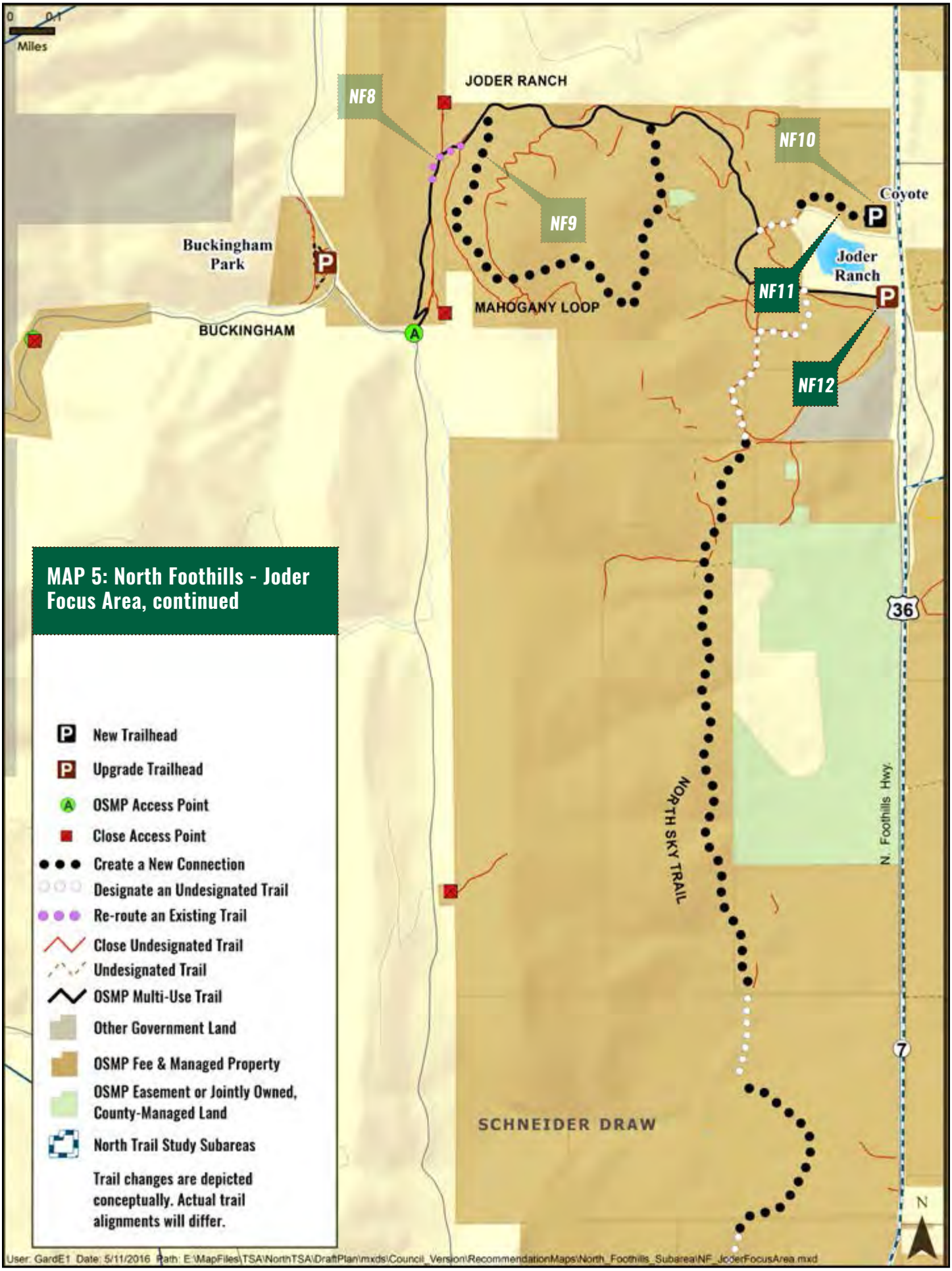
» *Provide access for equestrians and school groups to the Joder property and Boulder County's Six-Mile Fold property.*

» *Increase safety by preventing the need for equestrians/school groups to cross U.S. 36 to access Joder property.*

Barn on Joder property.

*See Appendix D for a list of interests met by each action.

North TSA Plan Recommendations: North Foothills



MAP 6: North Foothills - Hogback and North Sky Focus Area

ACTION NF13 Construct a north-south connector trail from Foothills Trail to the Joder Ranch Trail west of U.S. 36. (North Sky Trail)

*Interests Met: 4**

- *Construct a trail from the southern section of the Railroad Grade, west of Foothills Business Park, connecting to the Joder Ranch Trail.*
- *Use best efforts to locate connector trail through the conservation easement.*

Primary Goal

- *Increase connectivity among North TSA properties while minimizing natural resource impacts to every extent possible.*

Driving Factors/Benefits

- *Use existing infrastructure and trails including parts of the Railroad Grade and abandoned roads and bridges.*
- *Minimize resource disturbance as much as feasible where creation of new trail tread is necessary.*
- *The conservation easement includes lower quality habitat than the area west of the conservation easement, and would allow for less impactful drainage crossings.*
- *Use steep terrain adjacent to Railroad Grade to encourage visitors to stay on the trail.*
- *Create interpretive opportunities around new trail alignment and the natural resources of the North Foothills HCA.*
- *Locate the trail east of the Railroad Grade to cross through Schneider Draw at a location that minimizes impacts to the high quality riparian area.*
- *Design drainage crossings to minimize wetland impacts and associated required mitigation.*
- *In a few locations where a pedestrian/equestrian-designed trail, rather than bike-accessible trail, can reduce resource impacts, consider designing these sections with the option that cyclists may need to dismount their bikes.*

ACTION NF14 Include the North Sky Trail in the muddy closure program.

*Interests Met: 3**

Primary Goal

- *Improve trail sustainability and reduce trail maintenance and repair costs.*

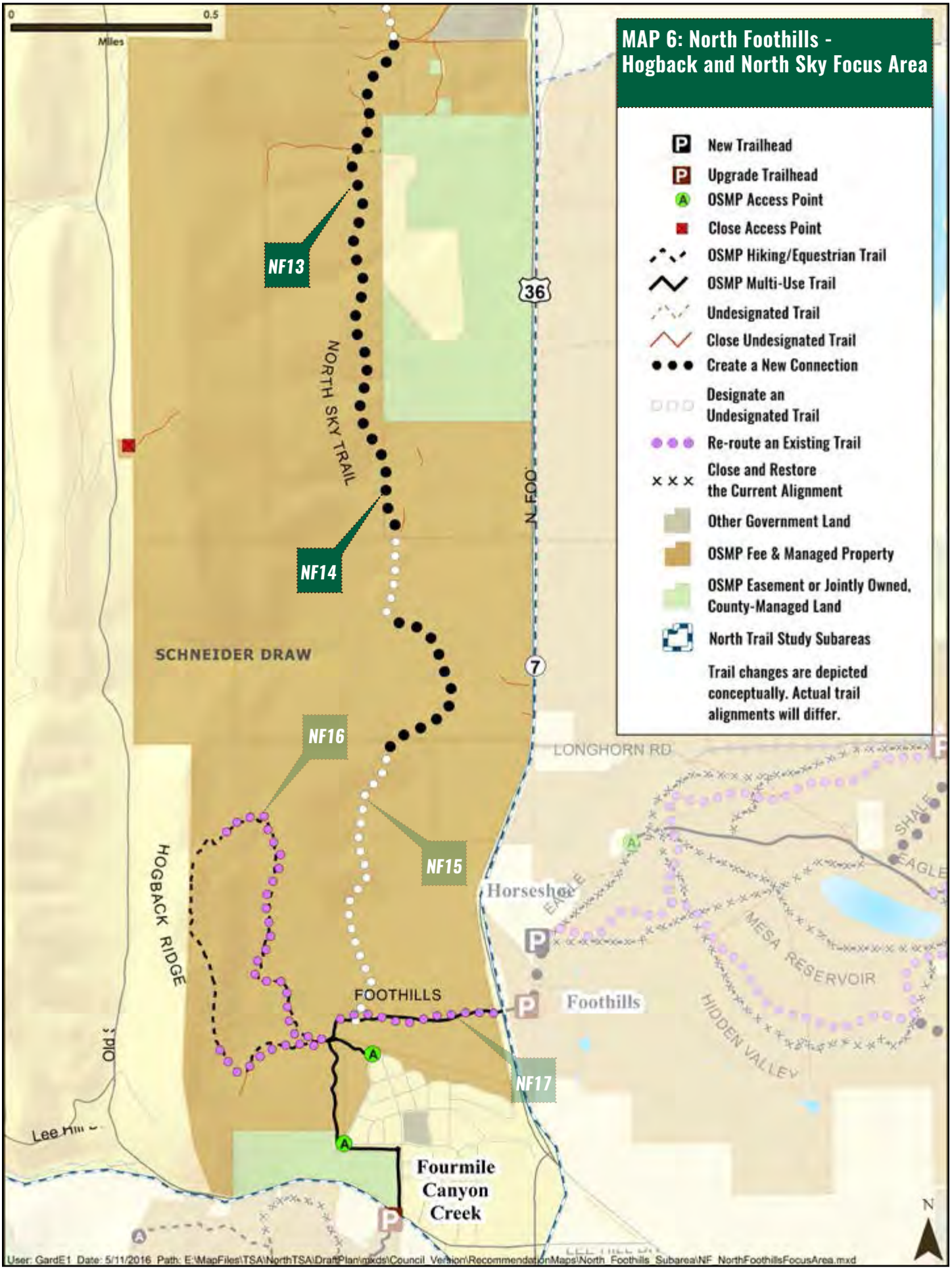
Driving Factors/Benefits

- *Reduce trail braiding and natural resource impacts.*
- *Improve trail conditions and sustainability.*

Schneider Draw

*See Appendix D for a list of interests met by each action.

North TSA Plan Recommendations: North Foothills



MAP 6: North Foothills - Hogback and North Sky Focus Area, continued

ACTION NF15 Post educational signs about the North Foothills HCA.

*Interests Met: 4**

» *Include information about the area's important natural resources as well as safety concerns such as rattlesnakes.*

Primary Goal

» *Educate visitors about the important natural resources and safety concerns of the HCA.*

Driving Factors/Benefits

» *Reduce impacts of new recreation opportunities on natural resources.*

» *Increase visitor awareness of special natural resources and HCAs.*

» *Increase safety of visitors.*

» *Increase compliance with regulations intended to protect the habitats of the HCA.*

ACTION NF16 Re-route Hogback Trail.

*Interests Met: 5**

Primary Goal

» *Construct a more sustainable trail.*

Driving Factors/Benefits

» *Improve trail quality and sustainability, thereby encouraging visitors to stay on trail, as well as minimize trail braiding and the creation of social trails.*

» *During re-route, minimize impacts to highly suitable habitat for North TSA focal species including bluestem dependent butterflies, lark sparrow and prairie rattlesnakes.*

» *Avoid rare and sensitive plant communities, rare plant habitat and wetlands in re-route planning.*

» *Repair trail damaged by 2013 flood.*

ACTION NF17 Re-route Foothills Trail where it connects to Hogback Trail and eastward to U.S. 36.

*Interests Met: 5**

Primary Goal

» *Construct a more sustainable trail.*

Driving Factors/Benefits

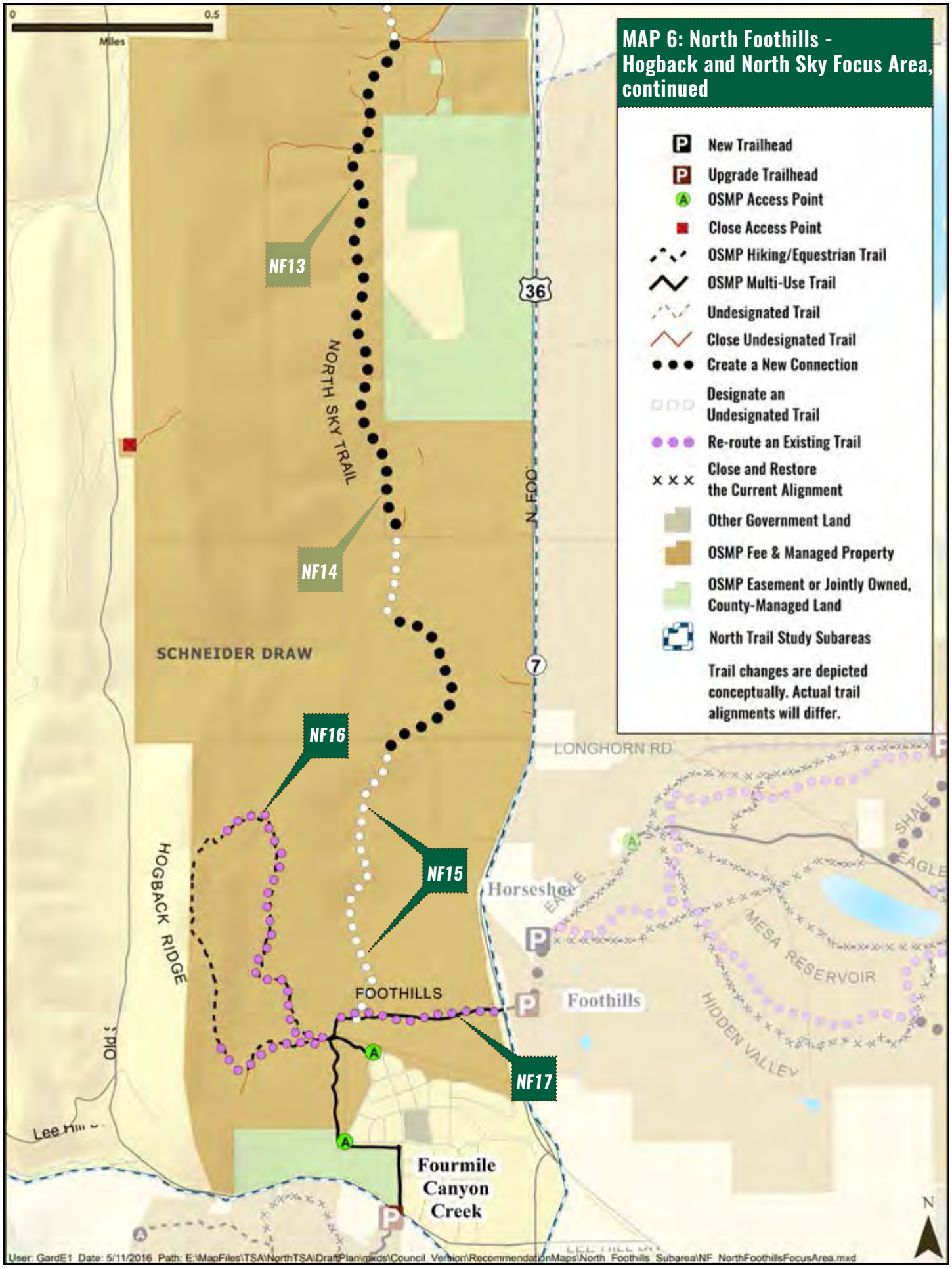
» *Improve trail quality and sustainability, thereby encouraging visitors to stay on trail as well as minimize trail braiding and the creation of social trails.*

» *During re-route, minimize impacts to highly suitable habitat for North TSA focal species including bluestem dependent butterflies, lark sparrow and prairie rattlesnakes.*

» *Repair trail damaged by 2013 flood.*

» *Avoid rare plant habitat in planning and constructing re-route.*

**See Appendix D for a list of interests met by each action.*


MAP 6: North Foothills - Hogback and North Sky Focus Area, continued
New Trailhead
Upgrade Trailhead
OSMP Access Point
Close Access Point
OSMP Hiking/Equestrian Trail
OSMP Multi-Use Trail
Undesignated Trail
Close Undesignated Trail
Create a New Connection
Designate an Undesignated Trail
Re-route an Existing Trail
Close and Restore the Current Alignment
Other Government Land
OSMP Fee & Managed Property
OSMP Easement or Jointly Owned, County-Managed Land
North Trail Study Subareas
Trail changes are depicted conceptually. Actual trail alignments will differ.
0
0.5
Miles
NF13
NF14
NF15
NF16
NF17
NORTH SKY TRAIL
N FOO
36
7
SCHNEIDER DRAW
LONGHORN RD
HOGBACK RIDGE
Horseshoe
EAGLE
SHALE
MESA RESERVOIR
HIDDEN VALLEY
FOOTHILLS
Foothills
Fourmile Canyon Creek
Lee Hill
N
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North TSA Plan Recommendations: North Foothills

MAP 7: North Foothills - North Foothills Habitat Conservation Area (HCA) Off-Trail Permit Recommendations

ACTION NF18 Do not allow off-trail permits for the area inside the Joder loop trail for two years following the trail's construction. (Mahogany Loop)

*Interests Met: 2**

Primary Goal

» *Reduce impacts of new recreational opportunities on natural resources.*

Driving Factors/Benefits

» *Provide best chance of successfully restoring undesignated trails within the loop and improve habitat conditions.*

» *Provide an opportunity for the restoration and revegetation of existing undesignated trails.*

» *Decrease the potential for creation of new undesignated trails.*

» *Minimize impacts on natural resources while providing new trail access.*

ACTION NF19 Do not allow off-trail permits within the North Foothills HCA.

*Interests Met: 2**

» *Off-trail permits not allowed in the North Foothills HCA except for areas west and north of Joder Ranch Trail and inside the Mahogany Loop.*

Primary Goal

» *Reduce impacts of new recreation opportunities on natural resources outside of trail corridor.*

Driving Factors/Benefits

» *Minimize impacts on natural resources while providing new trail access.*

» *Decrease the potential for creation of new undesignated trails.*

» *Decrease habitat fragmentation and increase protection of sensitive natural resources outside of the trail corridor. The new trail provides access to view and enjoy the HCA.*

ACTION NF20 After City Council approval of the North TSA Plan, staff will return to the OSBT with monitoring recommendations for the North Foothills HCA, the North Sky Trail and the Joder property.

Primary Goal

» *Have staff endeavor to develop and bring back to the OSBT an ecological monitoring program for the North Sky Trail and the Joder property in light of the important ecological qualities of these properties.*

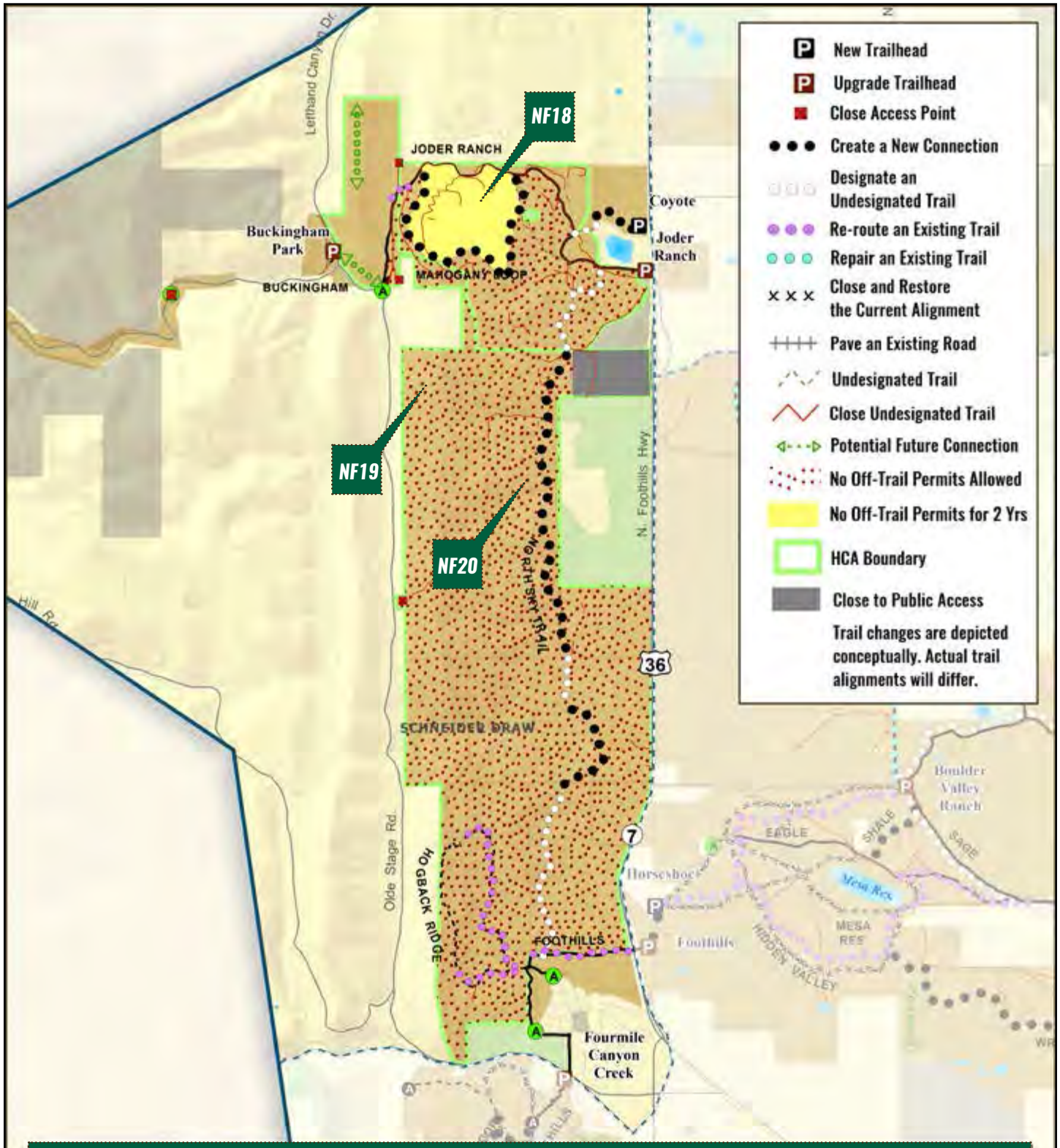
Driving Factors/Benefits

» *Action added by OSBT during approval of the draft plan.*

Prairie rattlesnake, a focal species in the North Trail Study Area. © Greg Joder

*See Appendix D for a list of interests met by each action.

North TSA Plan Recommendations: North Foothills



MAP 7: North Foothills - North Foothills Habitat Conservation Area Off-Trail Permit Recommendations

- North Trail Study Planning Area
- North Trail Study Subareas
- OSMP Access Point
- OSMP Recreational Feature Access
- OSMP Hiking/Equestrian Trail
- OSMP Multi-Use Trail

North Trail Study Area Lands

- OSMP Fee & Managed Property

Lands Not Included in the North Study Area

- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land

0 0.5 Miles

N

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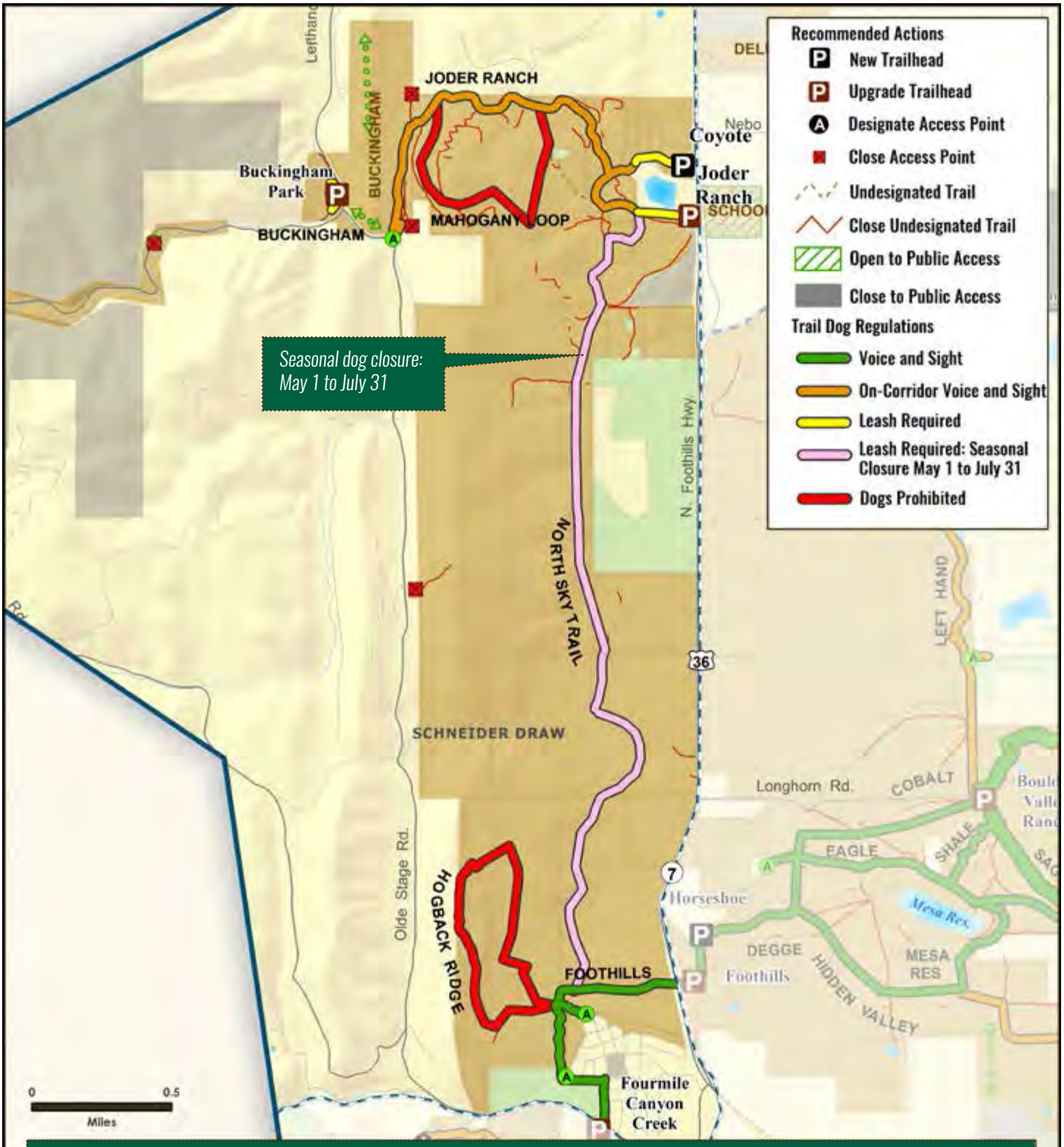
MAP 8: North Foothills - Trail-Based Dog Regulations

TRAIL NAME	DOG REGULATION
New Trails	
Joder Loop Trail (Mahogany Loop)	Dogs Prohibited
Connector Trail from Coyote Trailhead to Interim Joder Trail (Joder Ranch Trail)	On-Corridor Voice and Sight Leash Required (Coyote Trailhead leash extent)
Joder connector trail (North Sky Trail)	Leash Required (August 1 - April 30) Dogs Prohibited (May 1 - July 31)
Existing and Re-routed Trails with New Dog Regulations	
Trails serving the Buckingham Park picnic area	Leash Required
Interim Joder Trail (Joder Ranch Trail)	On-Corridor Voice and Sight Leash Required (Joder Ranch Trailhead leash extent)
Existing and Re-routed Trails with No Changes to Existing Dog Regulations	
Hogback Trail with re-routed section	Dogs Prohibited
Foothills North Trail with re-routed section	Voice and Sight

There are no new recommended off-trail dog regulations in this subarea.

© Michael Morton

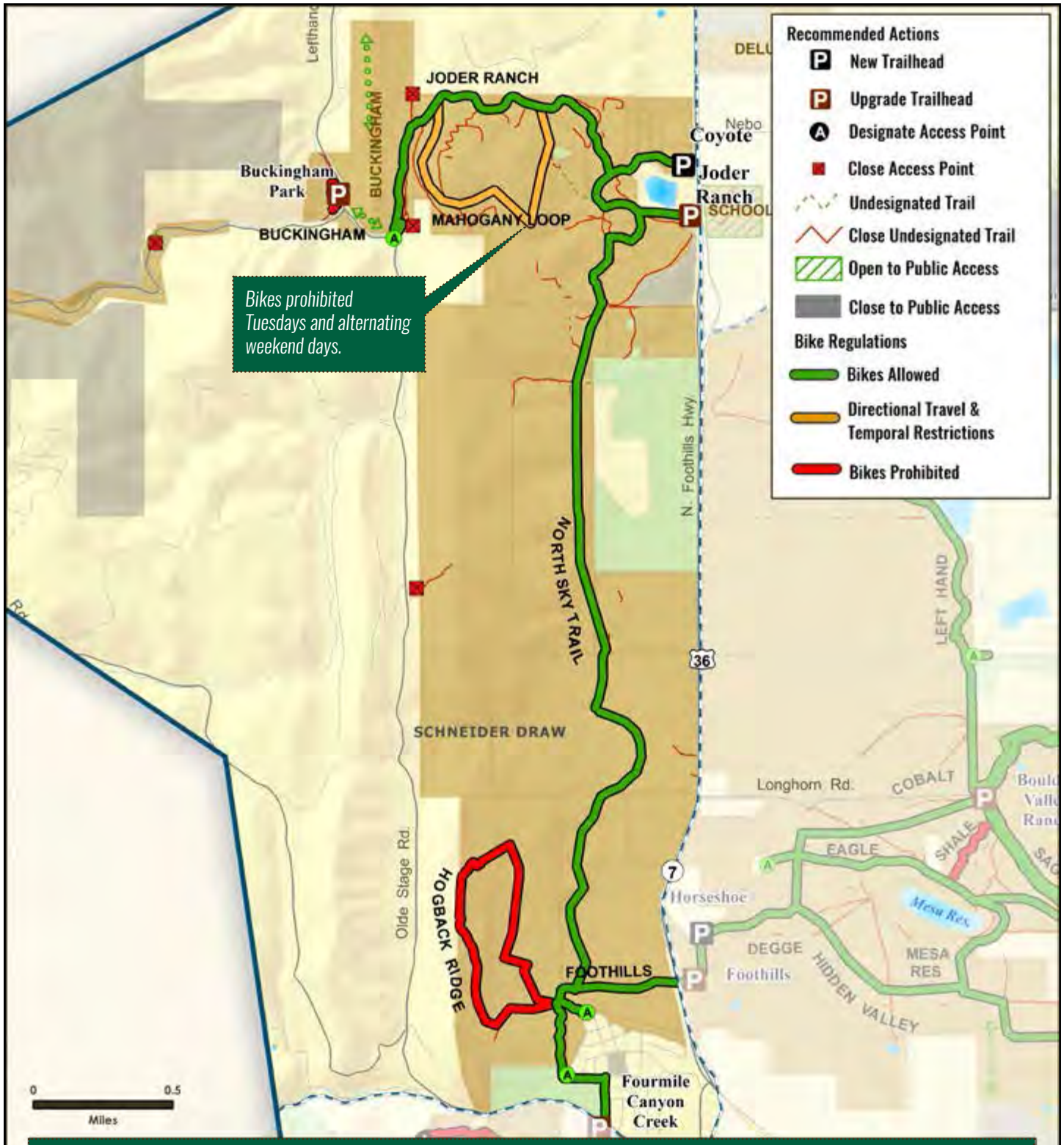
North TSA Plan Recommendations: North Foothills



MAP 9: North Foothills - Bike Regulations

TRAIL NAME	BIKE REGULATION
New Trails	
Western Joder Loop Trail (Mahogany Loop)	Bikes allowed with directional and temporal restrictions. Bikes prohibited Tuesdays and alternating weekend days. Directional travel will alternate every two weeks.
Connector Trail from Coyote Trailhead to Interim Joder Trail (Joder Ranch Trail)	Bikes Allowed
Joder connector trail (North Sky Trail)	Bikes Allowed
Existing and Re-routed Trails with No Changes to Existing Bike Regulations	
Trails serving the Buckingham picnic area	Bikes Prohibited
Interim Joder Trail (Joder Ranch Trail)	Bikes Allowed
Hogback Trail with re-routed section	Bikes Prohibited
Foothills North Trail with re-routed section	Bikes Allowed

North TSA Plan Recommendations: North Foothills



MAP 9: North Foothills - Bike Regulations

- North Trail Study Planning Area
- North Trail Study Subareas
- OSMP Trailhead
- OSMP Access Point
- OSMP Recreational Feature Access
- Boulder County Trailhead
- Potential Future Connections
- OSMP Hiking/Equestrian Trail
- OSMP Multi-Use Trail
- OSMP Gliding Access
- Non-OSMP Managed Hiking Trail
- Non-OSMP Managed Multi-Use Trail

North Trail Study Area Lands

- OSMP Fee & Managed Property

Lands Not Included in the North Trail Study Area

- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land

N

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MAP 10: North Foothills - Trail-Based Horse Regulations

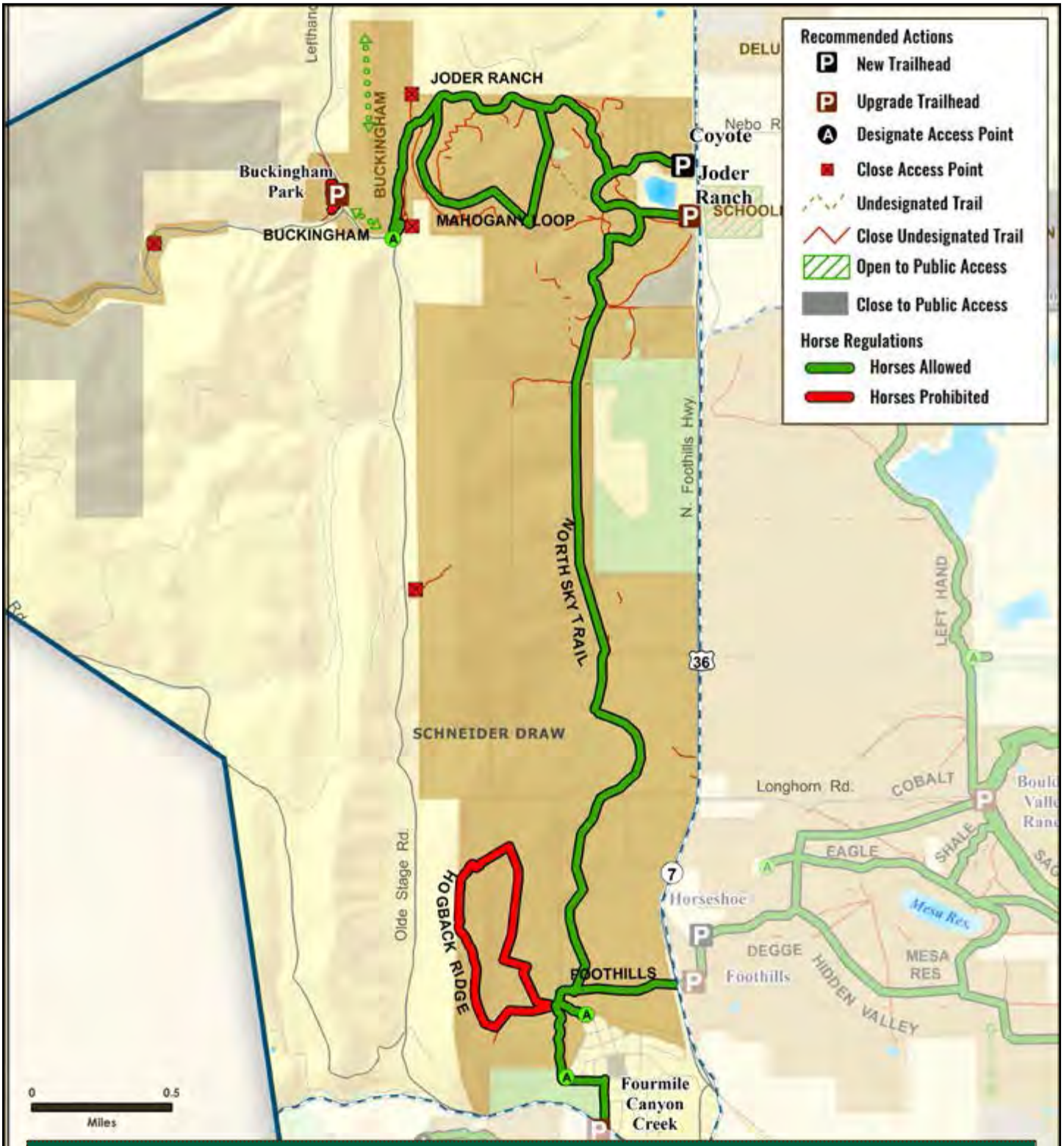
TRAIL NAME	HORSE REGULATION
New Trails	
Western Joder Loop Trail (Mahogany Loop)	*Horses Allowed*
Connector Trail from Coyote Trailhead to Interim Joder Trail (Joder Ranch Trail)	*Horses Allowed*
Joder connector trail (North Sky Trail)	*Horses Allowed*
Existing and Re-routed Trails with New Horse Regulations	
Trails serving the Buckingham picnic area	*Horses Prohibited*
Hogback Trail with re-routed section	*Horses Prohibited*
Existing and Re-routed Trails with No Changes to Existing Horse Regulations	
Interim Joder Trail (Joder Ranch Trail)	*Horses Allowed*
Foothills North Trail with re-routed section	*Horses Allowed*

New Off-Trail Horse Regulations

Horses prohibited off-trail in the North Foothills Habitat Conservation Area (exceptions listed below)

- *Horses allowed off-trail on the Buckingham property and the Joder property west and north of the Joder Ranch Trail.*
- *Horses allowed off-trail inside the Joder Loop Trail (Mahogany Loop) following a two-year restriction of off-trail access to allow for the revegetation of undesignated trails.*

North TSA Plan Recommendations: North Foothills



MAP 10: North Foothills - Trail-Based Horse Regulations

- North Trail Study Planning Area
- North Trail Study Subareas
- OSMP Trailhead
- OSMP Access Point
- OSMP Recreational Feature Access
- Boulder County Trailhead
- Potential Future Connections
- OSMP Hiking/Equestrian Trail
- OSMP Multi-Use Trail
- OSMP Gliding Access
- Non-OSMP Managed Hiking Trail
- Non-OSMP Managed Multi-Use Trail

North Trail Study Area Lands

- OSMP Fee & Managed Property

Lands Not Included in the North Trail Study Area

- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land

N

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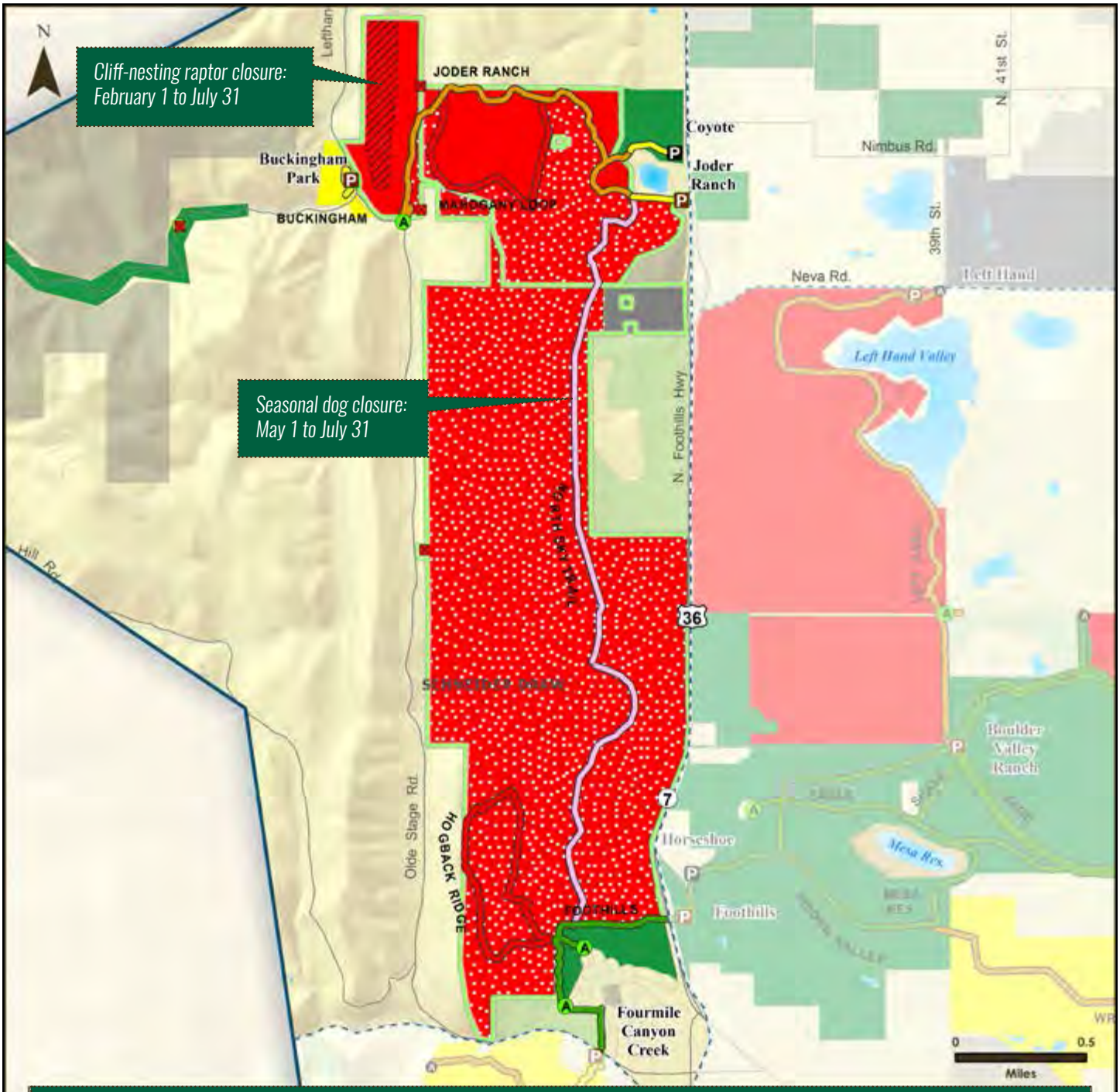
MAP 11: North Foothills - Regulatory Settings

Visitor access regulations pertain to the management of activities both on- and off-trail. The regulatory settings map includes on-trail and off-trail specific regulations where public access is restricted year-round, areas with seasonal wildlife closures and on-trail and off-trail dog regulations.

North TSA Plan Recommendations: North Foothills



MAP 11: North Foothills - Regulatory Settings

- North Trail Study Planning Area
- North Trail Study Subareas
- HCA Boundary
- OSMP Trailhead
- OSMP Access Point

Visitor Access Regulations

- New Trailhead
- New Access Point
- Close Access Point

Trail Dog Regulations

- Voice and Sight
- On-Corridor Voice and Sight
- Leash Required
- Leash Required: Seasonal Closure May 1 - July 31
- Dogs Prohibited
- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land

Dog Regulation Areas

- Voice and Sight Control
- Leash Required
- Dogs Prohibited
- Open with Seasonal Closure (May 1-July 31)
- Seasonal Raptor Closure
- Closed to Off-Trail Public Access
- Closed to Public Access

Background photo: Lefthand Trailhead.

North TSA Plan Recommendations

Boulder Valley Ranch

MAP 12: Boulder Valley Ranch - Management Area Designations

Actions B1 to B4

Provide management area designations for properties without designations to guide management actions.

*Interests Met: 4**

» *Designate Lappin property (**B1**), IBM open space easement property (**B2**), Hart-Jones Exchange property (**B3**) and Palo Park property (**B4**) as Natural Areas. Limit public access to on-trail travel on IBM open space easement property.*

Primary Goal

» *Implement VMP direction to provide management area designations for properties without designations to guide management actions.*

Driving Factors/Benefits

Lappin Property

» *Conserve natural resources while allowing access for low-impact passive recreation.*

» *Maintain habitat effectiveness of Lappin Pond in supporting sensitive native fish species.*

» *Protect important plant and aquatic species.*

» *Increase protection of shale barrens habitat and pond.*

» *Conserve highly suitable habitat for North TSA focal wildlife species.*

IBM open space easement property

» *Support efforts of creating the IBM connector trail.*

» *Create management regulations to implement terms of the easement and respond to the property owner's interests.*

Hart-Jones Exchange property

» *Protect riparian areas.*

» *Protect habitat for rare plants.*

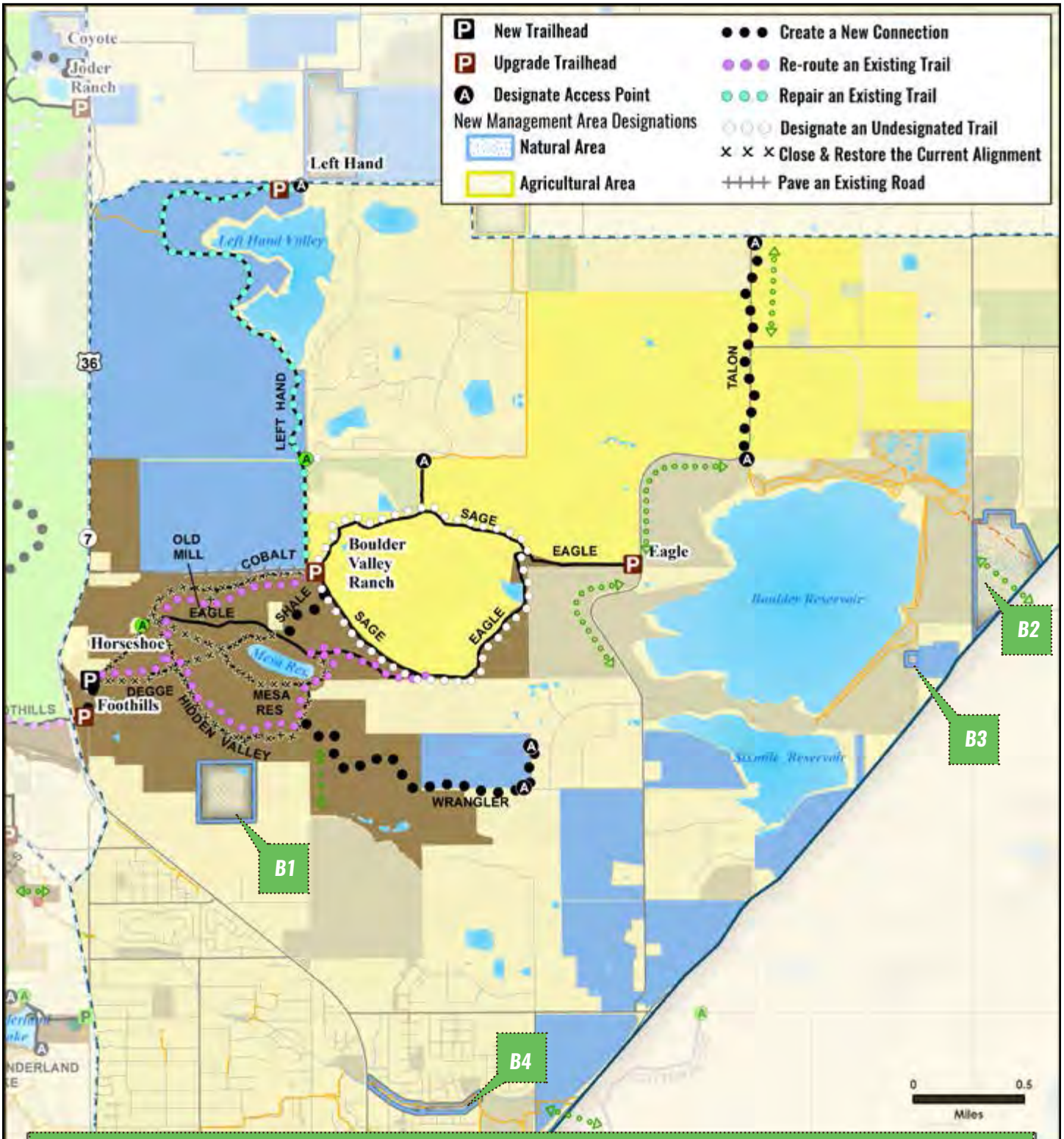
Palo Park property

» *Protect riparian areas of Fourmile Canyon Creek.*

» *Property includes Greenway path.*

*See Appendix D for a list of interests met by each action.

North TSA Plan Recommendations: Boulder Valley Ranch



MAP 12: Boulder Valley Ranch - Management Area Designations

- North Trail Study Planning Area
- North Trail Study Subareas
- OSMP Access Point
- OSMP Fee & Managed Property
- OSMP Easement or Jointly Owned, County-Managed Land
- Potential Future Connection
- OSMP Multi-Use Trail
- Non-OSMP Planned Trail
- Non-OSMP Managed Multi-Use Trail
- Agricultural Area
- Habitat Conservation Area
- Natural Area
- Passive Recreation Area
- Other Government Land

Trail changes are depicted conceptually. Actual trail alignments will differ.

N

MAP 13 : Boulder Valley Ranch - Subarea-Wide Recommendations

Actions B5 to B9
Collaborate with partner agencies to create regional trail connections.

*Interests Met: 5**

- *As opportunities arise, collaborate with partner agencies to create the following regional trail connections in a way that minimizes natural resource impacts.*
- *(**B5**) City of Boulder's Area III park site to the North TSA.*
- *(**B6**) A Boulder-to-Lyons trail connection including the efforts of the Rocky Mountain Greenway Project.*
- *(**B7**) IBM Connector Trail (construction pending).*
- *(**B8**) Fourmile Canyon Creek Trail underpass to Cottonwood Trail (construction pending).*
- *(**B9**) Eagle Trail to the planned Boulder Reservoir Trail.*

Primary Goal

- *Enhance regional connectivity.*

Driving Factors/Benefits

- *Provide greater opportunities for visitors and interconnectivity among adjacent trail systems.*
- *Increase coordination/consistency among OSMP and partner agencies.*

*Specific to Area III park site (**B5**):*

- *Collaborate with other partner agencies to provide a north-south trail connection from northern Boulder neighborhoods to North TSA.*
- *Increase accessibility for neighbors to the North TSA.*

*Specific to Eagle Trail to Boulder Reservoir Trail connection (**B9**):*

- *Keep trail close to 51st and 55th streets and in existing transportation corridors as much as is feasible.*

Action B10 Provide public access to portions of Lappin, Lousberg, Papini and B.L.I.P. properties while protecting sensitive natural resources.

*Interests Met: 2**

- *Protect aquatic and wetland resources in and around ponds on these properties by prohibiting public access to the ponds.*

Primary Goal

- *Establish areas where visitor access is not allowed for important aquatic sites.*

Driving Factors/Benefits

- *Protect aquatic habitats that are being managed for species of concern, including native fish.*
- *Explain reasoning for restricting access to ponds by using signs with positive messaging about sensitive aquatic resources in order to promote compliance.*
- *Conserve highly suitable habitat for North TSA focal wildlife species.*

**See Appendix D for a list of interests met by each action.*

North TSA Plan Recommendations: Boulder Valley Ranch

MAP 13: Boulder Valley Ranch - Subarea-Wide Recommendations

- North Trail Study Planning Area
- North Trail Study Subareas
- OSMP Trailhead
- OSMP Access Point

Trail changes are depicted conceptually. Actual trail alignments will differ.

- Potential Future Connection
- OSMP Hiking/Equestrian Trail
- OSMP Multi-Use Trail
- Non-OSMP Planned Trail
- Non-OSMP Managed Multi-Use Trail
- Undesignated Trail

North Trail Study Area Lands

- OSMP Fee & Managed Property

Lands Not Included in the North Trail Study Area

- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land

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North TSA Plan Recommendations: Boulder Valley Ranch

MAP 14: Boulder Valley Ranch - East Beech and Lefthand Focus Area

Action B11 Designate access point for where Lefthand Trail connects to Neva Road.

*Interests Met: 4**

Primary Goal

» *Designate an access point that is served by a designated trail.*

Driving Factors/Benefits

» *Provide trail connectivity directly to Neva Road.*

» *Increase safety.*

Action B12 Bring Lefthand Trailhead up to standards.

*Interests Met: 4**

» *Include horse trailer parking at Lefthand Trailhead.*

Primary Goal

» *Include horse trailer parking in the existing trailhead space.*

Driving Factors/Benefits

» *Ensure consistent and basic facilities at all trailheads based on visitation numbers and facility standards.*

» *Replace infrastructure that is in need of repair.*

» *Improve sustainability and safety.*

Action B13 Improve Lefthand Trail.

*Interests Met: 5**

Primary Goal

» *Improve the physical sustainability of the trail to better accommodate visitors and protect resources.*

Driving Factors/Benefits

» *Retain a north-south connection to Neva Road that improves trail sustainability and helps conserve and reduce impacts to sensitive natural resources.*

» *Conserve large habitat blocks.*

» *Conserve highly suitable habitat for North TSA focal wildlife species.*

Action B14 Designate a connector trail from Lefthand Trail to the Lake Valley Estates neighborhood.

*Interests Met: 3**

Primary Goal

» *Designate and manage an existing undesignated trail that serves to connect a neighborhood to the North TSA.*

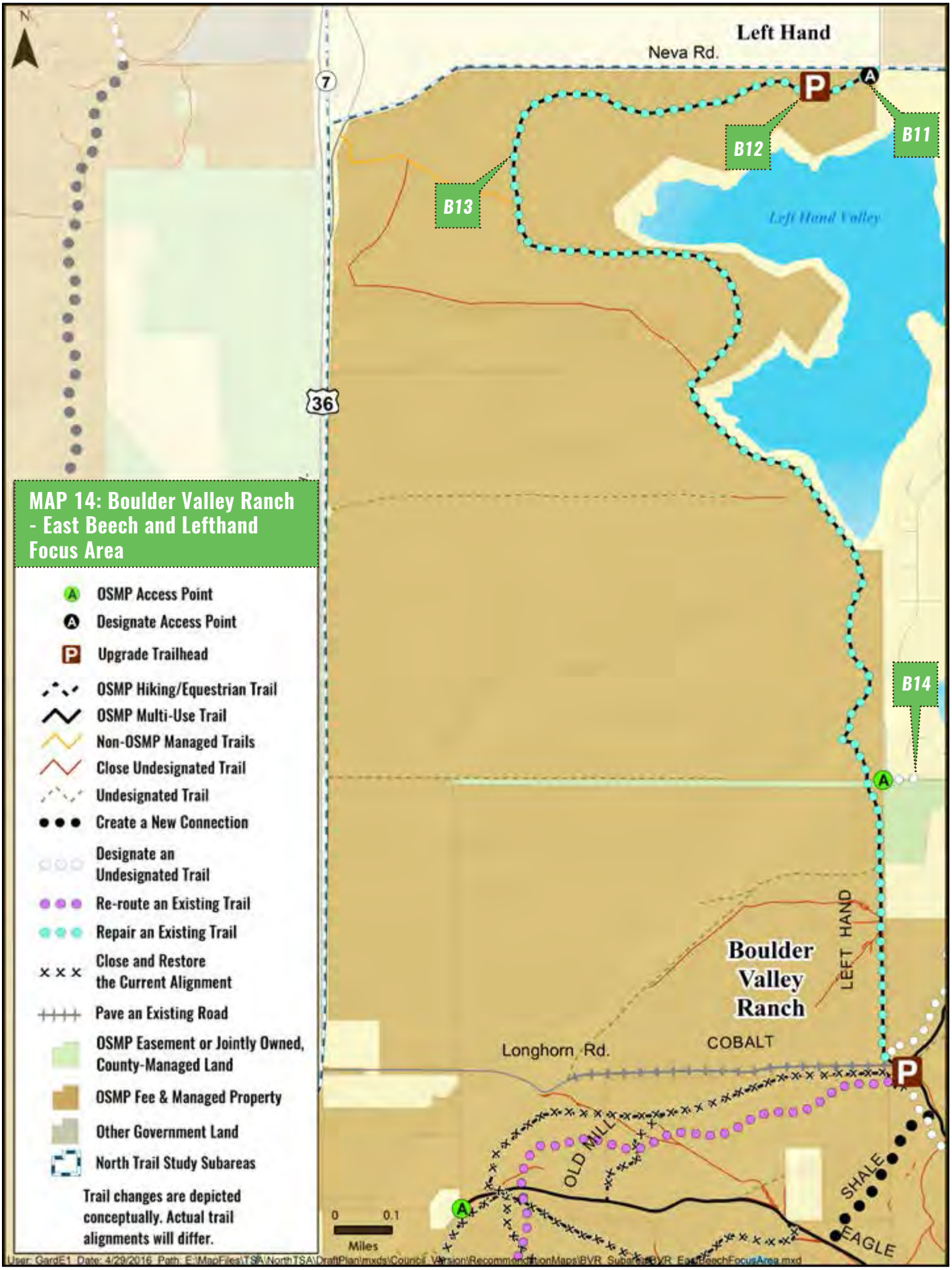
Driving Factors/Benefits

» *Improve access to North TSA trail system.*

» *Consolidate undesignated access points and trails.*

**See Appendix D for a list of interests met by each action.*

North TSA Plan Recommendations: Boulder Valley Ranch



North TSA Plan Recommendations: Boulder Valley Ranch

MAP 15: Boulder Valley Ranch - Eagle and Boulder Reservoir Focus Area

Action B15 Create a connection via the Boulder Reservoir to Niwot Road. (Talon Trail)

*Interests Met: 7**

» *Create a regional trail connection in a way that minimizes natural resource impacts. Work with partner agencies to determine the most feasible trail alignment with a preference for an alignment along 55th Street.*

Primary Goal

» *Increase connections between North TSA and other regional destinations. Enhance local trail connectivity and the creation of safe road crossing and trail connections.*

Driving Factors/Benefits

» *Provide increased connectivity.*

» *Allow visitors a safe alternative to current connections along roadways.*

» *By siting a trail on road right of way; maintain habitat effectiveness for North TSA focal wildlife species like Northern Harrier and plains topminnow.*

» *Provide greater opportunities for visitors.*

» *Increase coordination/consistency among OSMP and partner agencies.*

Action B16 Bring Eagle Trailhead up to standards.

*Interests Met: 5**

» *Include horse trailer parking at Eagle Trailhead.*

Primary Goal

» *Provide designated horse trailer parking.*

Driving Factors/Benefits

» *Reconfigure trailhead to improve safety.*

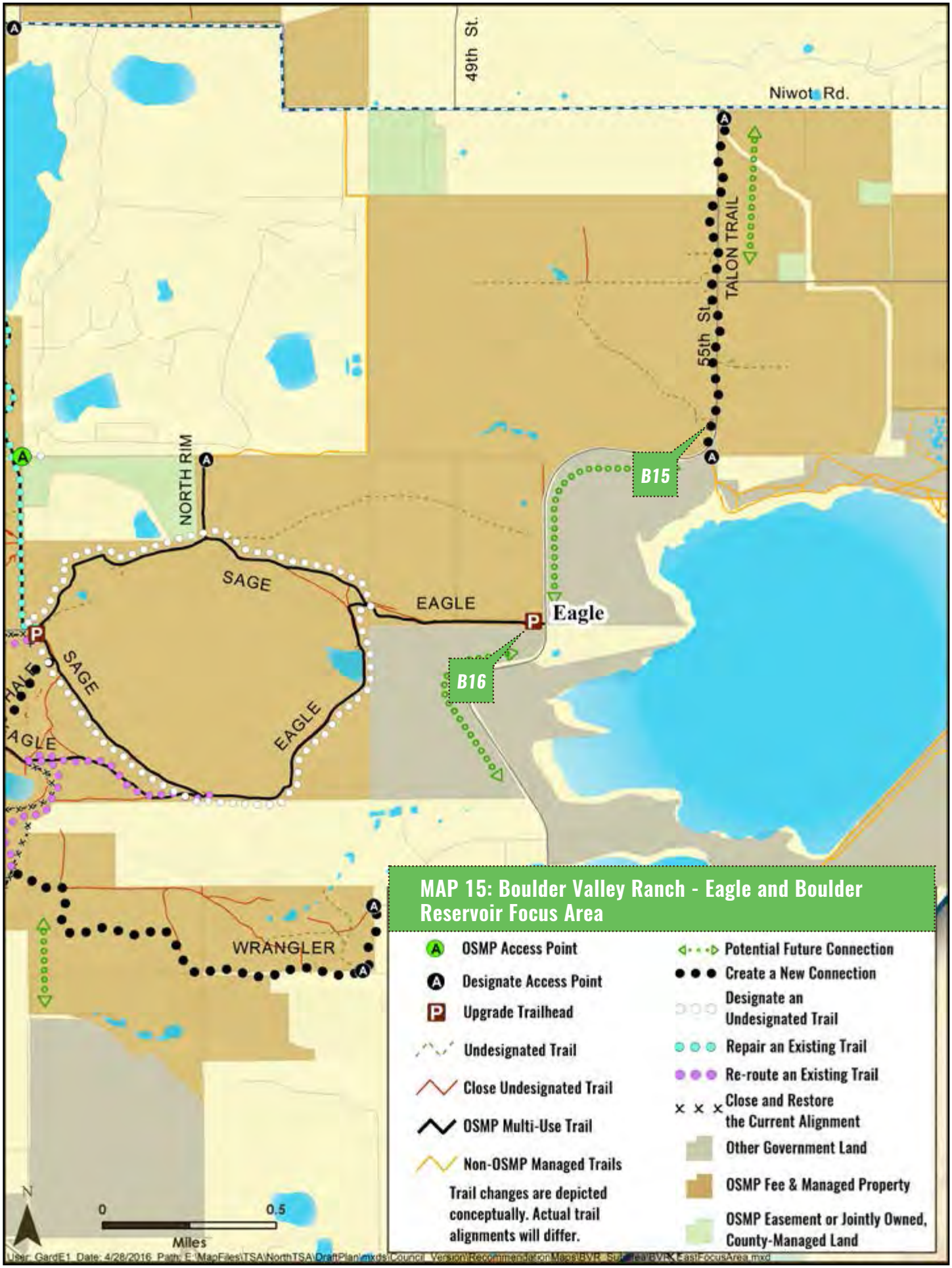
» *Ensure consistent and basic facilities at all trailheads based on visitation numbers and facility standards.*

» *Replace infrastructure that is in need of repair.*

Eagle Trailhead, to be upgraded to include horse trailer parking.

*See Appendix D for a list of interests met by each action.

North TSA Plan Recommendations: Boulder Valley Ranch



North TSA Plan Recommendations: Boulder Valley Ranch

MAP 16: Boulder Valley Ranch - Degge Focus Area

Action B17 Bring Foothills Trailhead up to standards.

*Interests Met: 6**

Primary Goal

» *Improve parking configuration to allow cars to safely back out of parking spaces.*

Driving Factors/Benefits

» *Ensure consistent and basic facilities at all trailheads based on visitation numbers and facility standards.*

» *Replace infrastructure that is in need of repair.*

» *Reconfigure trailhead to improve safety.*

Action B18 Add a new trailhead at the Degge Trail access point. (Horseshoe Trailhead)

*Interests Met: 2**

» *Provide additional parking capacity and horse trailer parking.*

Primary Goal

» *Add horse trailer parking and provide additional parking facilities at the Degge Trail access point.*

Driving Factors/Benefits

» *Provide a new trailhead in a location that would minimize impacts to resources.*

» *Improve capacity for horse trailer parking.*

Action B19 Create a trail connection between Foothills and Degge trails, re-route Degge Trail.

*Interests Met: 5**

» *Provide a trail connection from Foothills Trail to re-routed west end of Degge Trail.*

Primary Goal

» *Improve visitor experience, trail connectivity and offer a safer way for visitors to connect from the Foothills Trail to the Boulder Valley Ranch/Mesa Reservoir area trails.*

Driving Factors/Benefits

» *Improve trail connectivity and safety of access.*

» *Replace high-density, low-quality trails with fewer, high-quality, sustainable trails.*

Foothills Trailhead, to be upgraded to improve parking circulation and safety.

*See Appendix D for a list of interests met by each action.

North TSA Plan Recommendations: Boulder Valley Ranch

MAP 16: Boulder Valley Ranch - Degge Focus Area

North TSA Plan Recommendations: Boulder Valley Ranch

MAP 17: Boulder Valley Ranch - Mesa Reservoir Focus Area

ACTION B20 Replace existing trails north of Mesa Reservoir with new trail connections.

*Interests Met: 5**

» *Replace Old Mill and Cobalt trails with a single new trail and replace western section of Eagle Trail and steep, downhill section of Eagle Trail with new re-routed connections.*

Primary Goal

» *Replace high-density, low-quality trails with fewer, high-quality, sustainable trails to improve visitor experience.*

Driving Factors/Benefits

» *Use terrain effectively to create a better visitor experience and improve biking access.*

» *Where possible, relocate trail sections that run through prairie dog colonies to maintain or improve prairie rattlesnake highly suitable habitat and manage public safety issues related to rattlesnakes.*

» *Follow current general trail alignments in reconstruction to retain quality and size of grassland habitats.*

ACTION B21 Replace undesignated trails through sensitive resources with a single trail. (Shale Trail)

*Interests Met: 4**

» *Provide a sustainable connection with Sage Trailhead, by replacing undesignated trails through shale barrens and rare plant habitat with one new designated trail with educational signs for pedestrians and equestrians north of Mesa Reservoir.*

Primary Goal

» *Consolidate and replace unsustainable undesignated trails with a single designated trail to better protect shale barrens and rare plants, habitat and populations.*

Driving Factors/Benefits

» *Reduce the number and extent of undesignated trails.*

» *Provide an opportunity for the public to learn about the unique resources of the site.*

ACTION B22 Provide nature-viewing access at Mesa Reservoir.

*Interests Met: 5**

Primary Goal

» *Create recreation opportunities specifically for visitors looking for a quiet experience.*

Driving Factors/Benefits

» *Provide access to view wetland resources.*

ACTION B23 Replace existing trails with a new trail connection south of Mesa Reservoir.

*Interests Met: 5**

» *Replace southern sections of Mesa Reservoir Trail and the Hidden Valley Trail with a new single trail connection.*

Primary Goal

» *Replace high-density, low-quality trails with fewer, high-quality, sustainable trails to improve visitor experience.*

Driving Factors/Benefits

» *Use terrain effectively to create a better visitor experience and improve biking access.*

» *Follow current general trail alignments in reconstruction to retain quality and size of grassland habitats.*

» *Enhance education and interpretive offerings in the area.*

*See Appendix D for a list of interests met by each action.

North TSA Plan Recommendations: Boulder Valley Ranch

MAP 17: Boulder Valley Ranch - Mesa Reservoir Focus Area

- OSMP Access Point
- OSMP Fee & Managed Property
- OSMP Hiking/Equestrian Trail
- OSMP Multi-Use Trail
- Undesignated Trail
- Close Undesignated Trail
- Create a New Connection
- Designate an Undesignated Trail
- Re-route an Existing Trail
- Close and Restore the Current Alignment

Trail changes are depicted conceptually. Actual trail alignments will differ.

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North TSA Plan Recommendations: Boulder Valley Ranch

MAP 18: Boulder Valley Ranch - South Boulder Valley Ranch Focus Area

Action B24 Pave Longhorn Road.

*Interests Met: 2**

» *Pave or resurface Longhorn Road with an alternative permeable surface material.*

Primary Goal

» *Provide a more sustainable and safer surface, to improve access to Sage Trailhead.*

Driving Factors/Benefits

» *Existing gravel roadway is difficult to maintain and in poor condition.*

» *Roadway surface is eroded and can't be effectively resurfaced with gravel.*

Action B25 Bring Sage (BVR) Trailhead up to standards.

*Interests Met: 5**

» *Improve restroom facilities.*

Primary Goal

» *Provide better facilities to benefit visitors.*

Driving Factors/Benefits

» *Reconfigure trailhead to improve safety.*

» *Ensure consistent and basic facilities at all trailheads based on visitation numbers and facility standards.*

» *Replace infrastructure that is in need of repair.*

» *Update restrooms to bring them up to standards.*

Action B26 Improve Americans with Disabilities Act (ADA) access on Eagle and Sage trails.

*Interests Met: 4**

Primary Goal

» *Retain and improve wheelchair access to the Eagle and Sage loop at BVR.*

Driving Factors/Benefits

» *These trails are suitable for providing improved ADA access due to the trail width and design.*

» *The grade and out-slope are appropriate, but some areas will need to be improved.*

Action B27 Provide a parallel single track trail at BVR.

*Interests Met: 3**

» *Designate and slightly re-route in some locations one parallel single track tread adjacent to the Eagle and Sage loop at BVR.*

Primary Goal

» *Provide improved visitor experience and safety while reducing visitor conflict by providing a managed alternate trail tread adjacent to existing trail.*

Driving Factors/Benefits

» *Improve visitor experience.*

» *Consolidate multiple undesignated trail treads into a single designated tread and improve trail sustainability, by re-routing some sections and conducting maintenance on the single track.*

» *Decrease visitor conflict.*

**See Appendix D for a list of interests met by each action.*

North TSA Plan Recommendations: Boulder Valley Ranch

MAP 18: Boulder Valley Ranch - South Boulder Valley Ranch Focus Area

- OSMP Access Point
- New Trailhead
- Upgrade Trailhead
- Designate for Fishing
- Maintain ADA Standards
- Designate Access Point
- OSMP Fee & Managed Property
- OSMP Hiking/Equestrian Trail
- OSMP Multi-Use Trail
- Non-OSMP Managed Trails
- Undesignated Trail
- Close Undesignated Trail
- Pave an Existing Road
- OSMP Easement or Jointly Owned, County-Managed Land
- Create a New Connection
- Designate an Undesignated Trail
- Re-route an Existing Trail
- Repair an Existing Trail
- Close and Restore the Current Alignment
- Other Government Land

Trail changes are depicted conceptually. Actual trail alignments will differ.

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MAP 18: Boulder Valley Ranch - South Boulder Valley Ranch Focus Area, continued

ACTION B28 Allow fishing access on eastern shore of BVR pond.

*Interests Met: 4**

Primary Goal

» *Formalize and designate area for water access to reduce impacts to wildlife, aquatic and other natural resources.*

Driving Factors/Benefits

» *Protect northern shore from resource degrading impacts of visitor activities.*

» *Retain current seasonal closure over part of the pond to protect sensitive wildlife.*

ACTION B29 Create a new trail connection on the south side of the Papini property. (Wrangler Trail)

*Interests Met: 6**

» *Provide a trail connection along the south side of the Papini property connecting Kelso Road to the Mesa Reservoir trail system.*

Primary Goal

» *Increase trail connectivity within the North TSA and between surrounding residential areas and reduce undesignated trails.*

Driving Factors/Benefits

» *Provide trail connections to reduce the extent and number of undesignated trails.*

» *Protect natural resources from impacts associated with undesignated trails and access points. Allow access within a fenced corridor on the Papini property to protect natural resources, including ponds which may become a native fish refuge.*

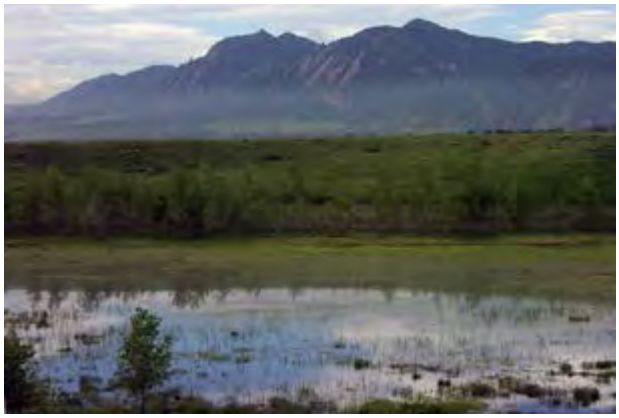
ACTION B30 Public access to BVR arena.

Primary Goal

» *Continue to follow the terms of the lease regarding public access to the BVR equestrian arena and concurrently develop options for nearby horse trailer parking and/or seek to provide an equivalent and suitable corral option that will be determined in cooperation with stakeholders that will be vetted and approved in a future public process. Proactively address any conflict issues resulting from public access in future lease negotiations.*

Driving Factors/Benefits

» *Action added by OSBT during approval of the draft plan.*



Mesa Reservoir. Photo courtesy Bob Crifasi.

*See Appendix D for a list of interests met by each action.

North TSA Plan Recommendations: Boulder Valley Ranch

MAP 18: Boulder Valley Ranch - South Boulder Valley Ranch Focus Area, continued

- OSMP Access Point
- New Trailhead
- Upgrade Trailhead
- Designate for Fishing
- Maintain ADA Standards
- Designate Access Point
- OSMP Fee & Managed Property
- OSMP Hiking/Equestrian Trail
- OSMP Multi-Use Trail
- Non-OSMP Managed Trails
- Undesignated Trail
- Close Undesignated Trail
- Pave an Existing Road
- OSMP Easement or Jointly Owned, County-Managed Land
- Create a New Connection
- Designate an Undesignated Trail
- Re-route an Existing Trail
- Repair an Existing Trail
- Close and Restore the Current Alignment
- Other Government Land

Trail changes are depicted conceptually. Actual trail alignments will differ.

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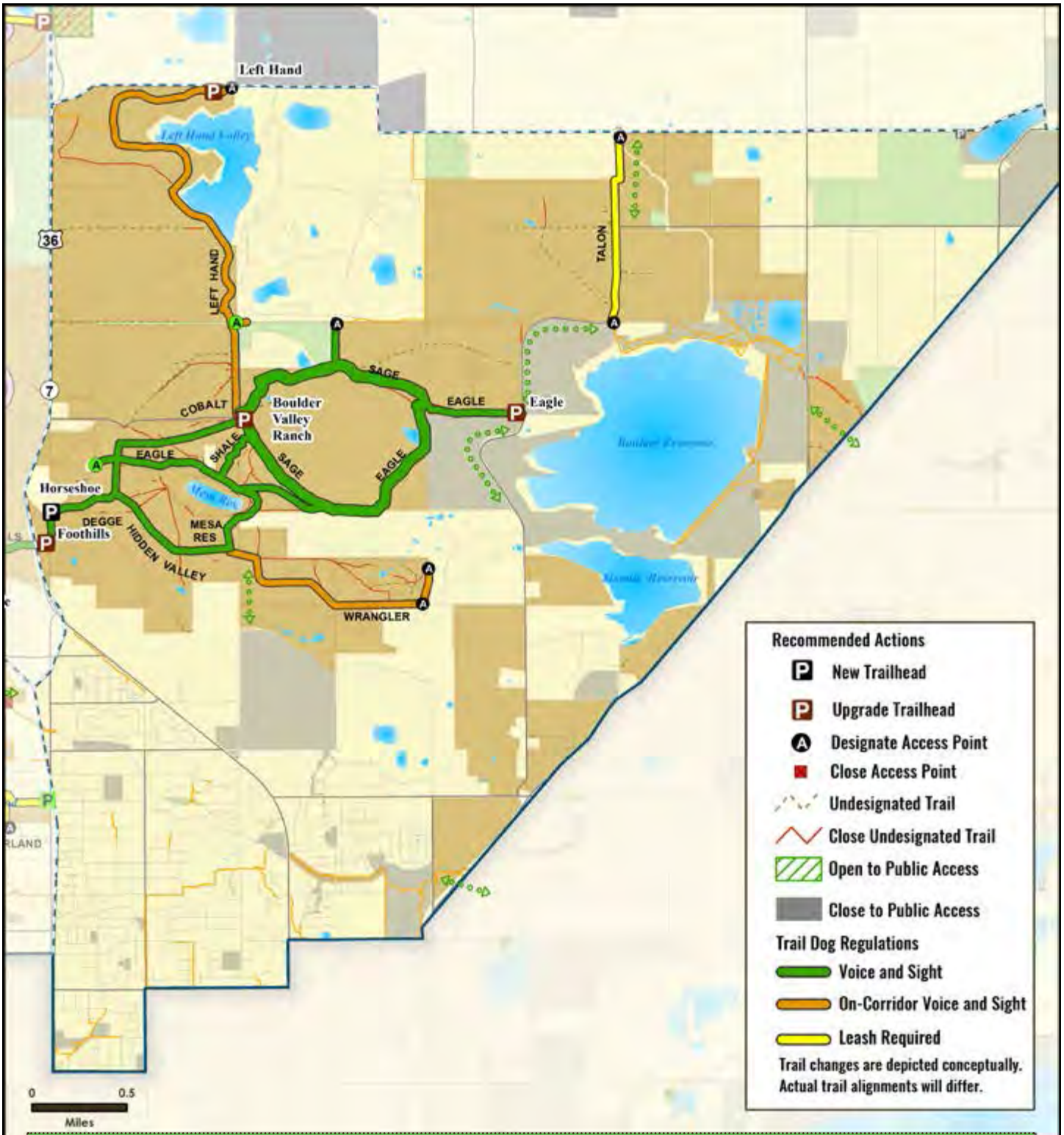
MAP 19: Boulder Valley Ranch - Trail-Based Dog Regulations

TRAIL NAME	DOG REGULATION
New Trails	
Connector trail from Lefthand Trail to the Lake Valley Estates neighborhood	On-Corridor Voice and Sight
Designated single track around Eagle and Sage trails	Voice and Sight
Connector near 55th Street to Niwot Road (Talon Trail)	Leash Required
Papini connector trail (Wrangler Trail)	On-Corridor Voice and Sight
Interpretative trail to Mesa Reservoir (Shale Trail)	Voice and Sight
Connector from Foothills Trailhead to Horseshoe Trailhead	Voice and Sight
Existing and Re-routed Trails with New Dog Regulations	
Lefthand Trail	On-Corridor Voice and Sight
Existing and Re-routed Trails with No Changes to Existing Dog Regulations	
Eagle Trail	Voice and Sight
Sage Trail	Voice and Sight
North Rim Trail (OSMP section)	Voice and Sight
Re-routed Cobalt Trail / Old Mill Trail	Voice and Sight
Re-routed Hidden Valley Trail / Mesa Reservoir	Voice and Sight
Re-routed Degge Trail	Voice and Sight

New Off-Trail Dog Regulations
Dogs required to be on leash on the properties adjacent to the Papini connector trail (Wrangler Trail). On-Corridor Voice and Sight access allowed on the Wrangler Trail.

North TSA Plan Recommendations: Boulder Valley Ranch



MAP 19: Boulder Valley Ranch - Trail-Based Dog Regulations

- North Trail Study Planning Area
- North Trail Study Subareas
- OSMP Trailhead
- OSMP Access Point
- OSMP Recreational Feature Access
- Boulder County Trailhead
- Potential Future Connection
- OSMP Hiking/Equestrian Trail
- OSMP Multi-Use Trail
- Non-OSMP Planned Trails
- Non-OSMP Managed Hiking Trail
- Non-OSMP Managed Multi-Use Trail

North Trail Study Area Lands

- OSMP Fee & Managed Property

Lands Not Included in the North Trail Study Area

- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land

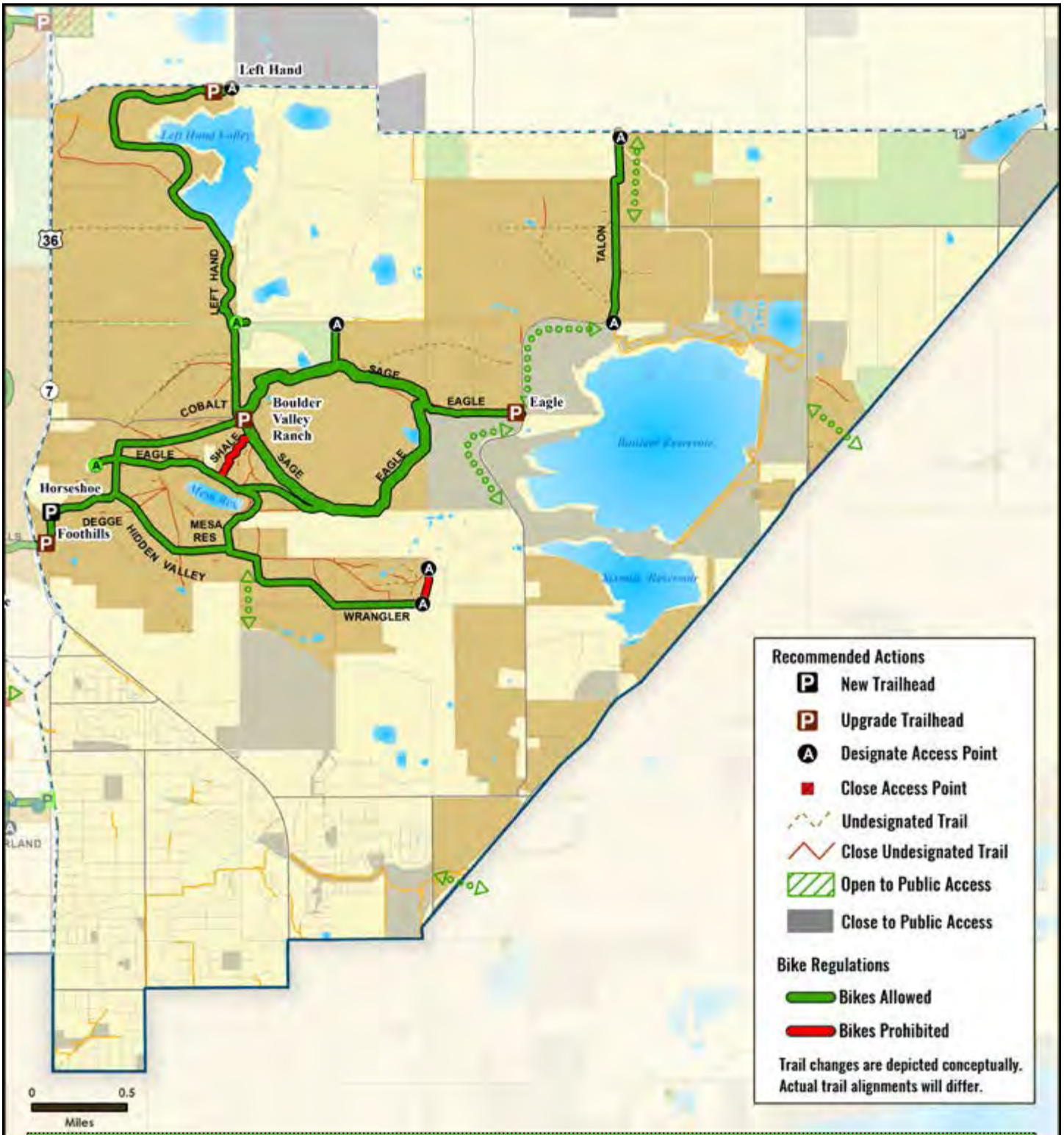
N

User: GardE1 Date: 5/9/2016 Path: E:\MapFiles\TSA\NorthTSA\DraftPlan\mxd\Council_Version\RegulationsMaps\BVR_Subarea\BVR Subarea - Dogs.mxd

MAP 20: Boulder Valley Ranch - Bike Regulations

TRAIL NAME	BIKE REGULATION
New Trails	
Connector trail from Lefthand Trail to the Lake Valley Estates neighborhood	Bikes Allowed
Designated single-track around Eagle and Sage trails	Bikes Allowed
Connector near 55th Street to Niwot Road (Talon Trail)	Bikes Allowed
Papini connector trail (Wrangler Trail)	Bikes Allowed, except for a neighborhood connection on the east.
Interpretive trail to Mesa Reservoir (Shale Trail)	Bikes Prohibited
Connector from Foothills Trailhead to new Horseshoe Trailhead	Bikes Allowed
Existing and Re-routed Trails with New Bike Regulations	
Re-routed Cobalt Trail / Old Mill Trail	Bikes Allowed
Re-routed Hidden Valley Trail / Mesa Reservoir	Bikes Allowed
Re-routed Degge Trail	Bikes Allowed
Existing and Re-routed Trails with No Changes to Existing Bike Regulations	
Lefthand Trail	Bikes Allowed
Eagle Trail	Bikes Allowed
Sage Trail	Bikes Allowed
North Rim Trail (OSMP section)	Bikes Allowed

North TSA Plan Recommendations: Boulder Valley Ranch



MAP 20: Boulder Valley Ranch - Bike Regulations

- North Trail Study Planning Area
- North Trail Study Subareas
- OSMP Trailhead
- OSMP Access Point
- OSMP Recreational Feature Access
- Boulder County Trailhead
- Potential Future Connection
- OSMP Hiking/Equestrian Trail
- OSMP Multi-Use Trail
- OSMP Gliding Access
- Non-OSMP Managed Hiking Trail
- Non-OSMP Managed Multi-Use Trail

North Trail Study Area Lands

- OSMP Fee & Managed Property

Lands Not Included in the North Trail Study Area

- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land

N

User: GardE1 Date: 5/9/2016 Path: E:\MapFiles\TSA\NorthTSA\DraftPlan\mxds\Council_Version\RegulationsMaps\BVR_Subarea\BVR Subarea - Bikes.mxd

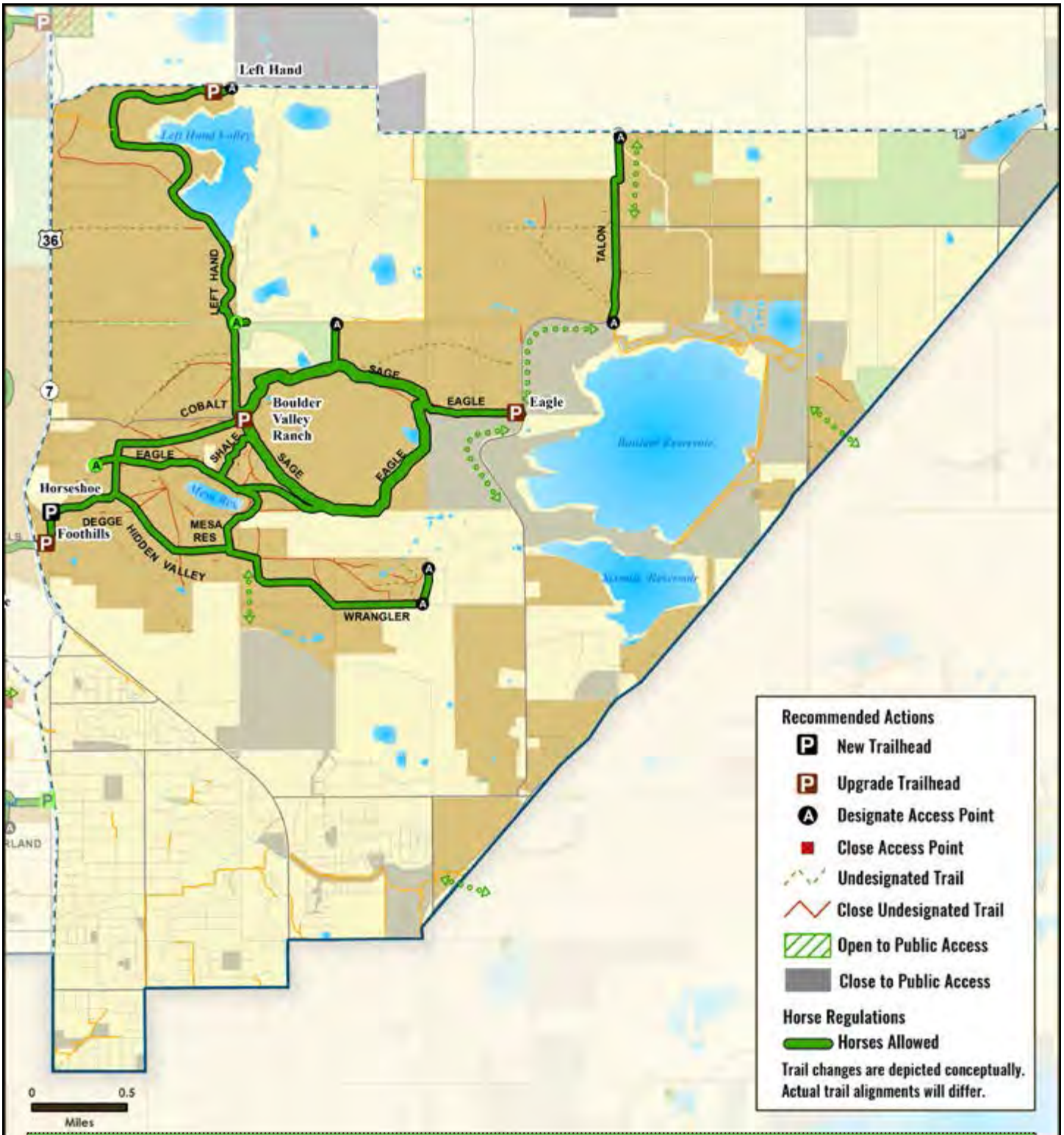
MAP 21: Boulder Valley Ranch - Trail-Based Horse Regulations

TRAIL NAME	HORSE REGULATION
New Trails	
Connector trail from Lefthand Trail to the Lake Valley Estates neighborhood	Horses Allowed
Designated single-track around Eagle and Sage trails	Horses Allowed
Connector near 55th Street to Niwot Road (Talon Trail)	Horses Allowed
Papini connector trail (Wrangler Trail)	Horses Allowed
Interpretive trail to Mesa Reservoir (Shale Trail)	Horses Allowed
Connector from Foothills Trailhead to new Horseshoe Trailhead	Horses Allowed
Existing and Re-routed Trails with No Changes to Existing Horse Regulations	
Lefthand Trail	Horses Allowed
Eagle Trail	Horses Allowed
Sage Trail	Horses Allowed
North Rim Trail (OSMP section)	Horses Allowed
Re-routed Cobalt Trail/Old Mill Trail	Horses Allowed
Re-routed Hidden Valley Trail/Mesa Reservoir Trail	Horses Allowed
Re-routed Degge Trail	Horses Allowed

Horses are allowed off trail in this subarea.

Lefthand Trailhead

North TSA Plan Recommendations: Boulder Valley Ranch



MAP 21: Boulder Valley Ranch - Trail-Based Horse Regulations

- 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

North Trail Study Area Lands

- OSMP Fee & Managed Property

Lands Not Included in the North Trail Study Area

- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land

N

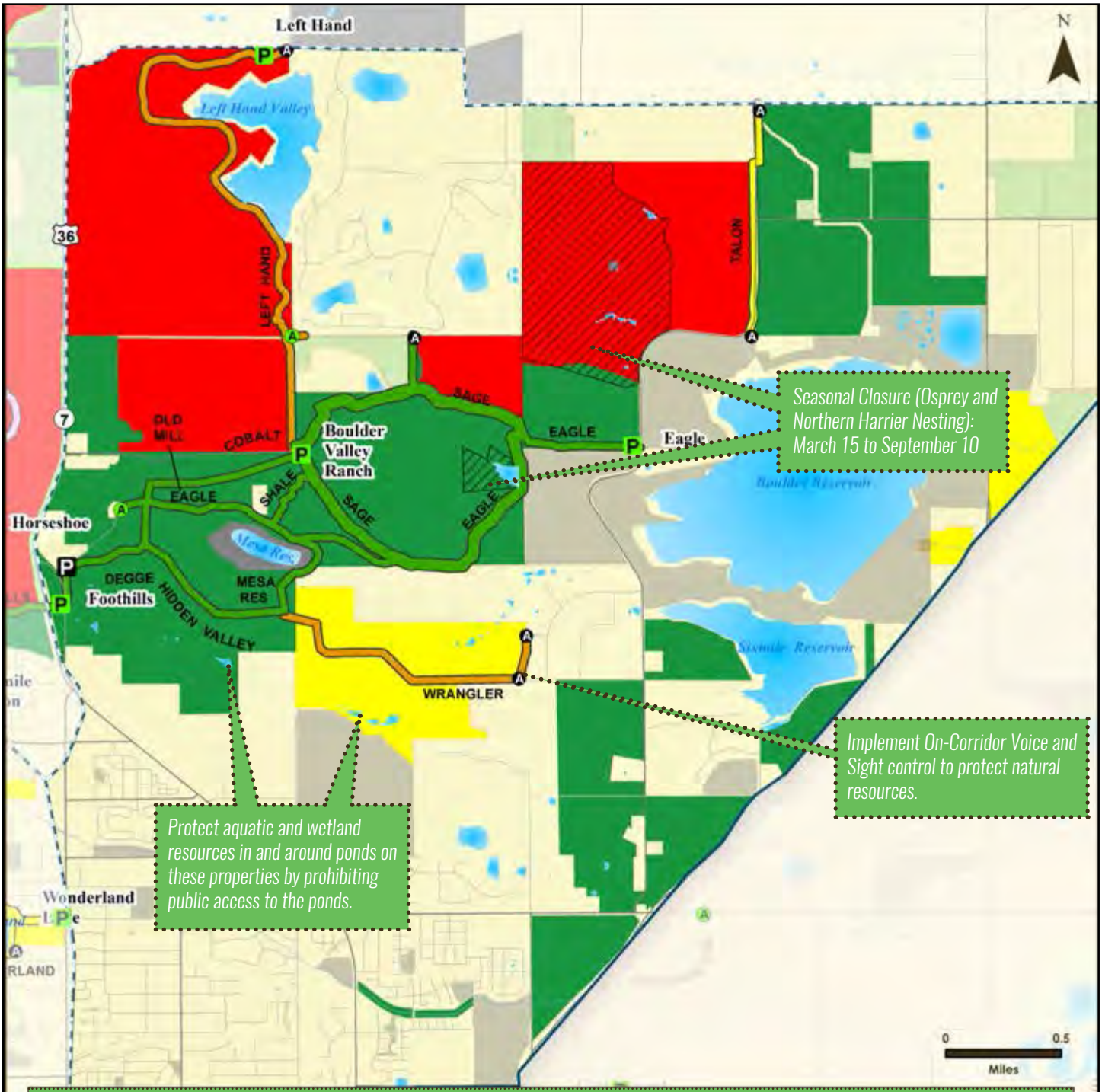
User: GardE1 Date: 5/9/2016 Path: E:\MapFiles\TSA\NorthTSA\DraftPlan\mxds\Council_Version\RegulationsMaps\BVR_Subarea\BVR Subarea - Horses.mxd

MAP 22: Boulder Valley Ranch - Regulatory Settings

Visitor access regulations pertain to the management of activities both on- and off-trail. The regulatory settings map includes on-trail and off-trail specific regulations where public access is restricted year-round, areas with seasonal wildlife closures and on-trail and off-trail dog regulations.

Prairie grasses in autumn backlit by golden sunset, fence and leafless trees at Boulder Valley Ranch. © Jack Sasson.

North TSA Plan Recommendations: Boulder Valley Ranch



MAP 22: Boulder Valley Ranch - Regulatory Settings

North Trail Study Subareas

OSMP Trailhead

OSMP Access Point

Visitor Access Regulations

New Trailhead

New Access Point

Trail Dog Regulations

Voice and Sight

On-Corridor Voice and Sight

Leash Required

Dogs Prohibited

OSMP Easement or Jointly Owned, County-Managed Land

Other Government Land

Dog Regulation Areas

Voice and Sight Control

Leash Required

Dogs Prohibited

Closed to Public Access

Seasonal Wildlife Closure

Trail changes are depicted conceptually. Actual trail alignments will differ.

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Background photo: Wonderland Lake.

North TSA Plan Recommendations

Wonderland Lake

North TSA Plan Recommendations: Wonderland Lake

MAP 23: Wonderland Lake - Subarea-Wide Recommendations

Action W1 Collaborate with Parks and Recreation to support nature play experiences on their adjacent properties.

*Interests Met: 1**

» *Collaborate with City of Boulder Parks and Recreation Department to support designed nature play experiences on their property and support appropriate passive recreation aspects of this type of experience on adjacent OSMP land.*

Primary Goal

» *Support the creation of places designed for children on Parks and Recreation properties to gain a greater appreciation for, and awareness of, the natural environment.*

Driving Factors/Benefits

» *Promote daily contact with the natural environment and outdoor space consistent and suitable for OSMP lands.*

Action W2 Assess vision for Foothills Nature Center.

*Interests Met: 2**

» *OSMP is assessing and preparing plans for the future vision of the Foothills Nature Center and associated trailhead.*

Primary Goal

» *A separate building and site assessment process will determine potential changes to the Foothills Nature Center and Trailhead.*

Action W3 Construct a shade structure near Wonderland Lake Trailhead.

*Interests Met: 2**

Primary Goal

» *Provide a shaded area where education and other groups can gather when accessing the Wonderland Lake area.*

Driving Factors/Benefits

» *Provide shade for the safety and comfort of educational groups and other visitors.*

Action W4 Improve safety at Broadway crossing.

*Interests Met: 3**

» *Support and encourage improvements to crossing between Sumac Avenue, RTD bus stop and the Foothills Nature Center.*

Primary Goal

» *Encourage and support creating a safer and more visible way to cross Broadway for visitors accessing Foothills Nature Center and Wonderland Lake by bus.*

Driving Factors/Benefits

» *Improve accessibility of North TSA to visitors who rely upon public transit.*

Note: There are no new management area designations in this subarea.

**See Appendix D for a list of interests met by each action.*

North TSA Plan Recommendations: Wonderland Lake

MAP 23: Wonderland Lake - Subarea-Wide Recommendations

- North Trail Study Planning Area
- North Trail Study Subareas
- OSMP Trailhead
- OSMP Access Point
- Potential Future Connection
- OSMP Hiking/Equestrian Trail
- OSMP Multi-Use Trail
- OSMP Gliding Access
- Non-OSMP Managed Multi-Use Trail

North Trail Study Area Lands
- OSMP Fee & Managed Property

Lands Not Included in the North Trail Study Area
- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land

N

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MAP 24: Wonderland Lake - Fourmile Canyon Creek Focus Area

Action W5 Revegetate the flood-damaged northern loop section of Old Kiln Trail.

*Interests Met: 2**

Primary Goal

» *Protect rare plants and unique geological features in this area.*

Driving Factors/Benefits

» *Rebuilding the trail is not feasible given the extensive damage from the 2013 flood.*

» *Restore/improve riparian habitat.*

Action W6 Rename Four Mile Creek Trailhead as Fourmile Canyon Creek Trailhead.

*Interests Met: 2**

Primary Goal

» *Align trailhead name with Fourmile Canyon Creek.*

Action W7 Collaborate to create a connection from Fourmile Canyon Creek Greenway path to Foothills Community Park.

*Interests Met: 3**

» *As opportunities arise, collaborate with partner agencies to create local trail connections in a way that minimizes natural resource impacts.*

Primary Goal

» *Provide greater opportunities for visitors and interconnectivity among adjacent trail systems.*

Driving Factors/Benefits

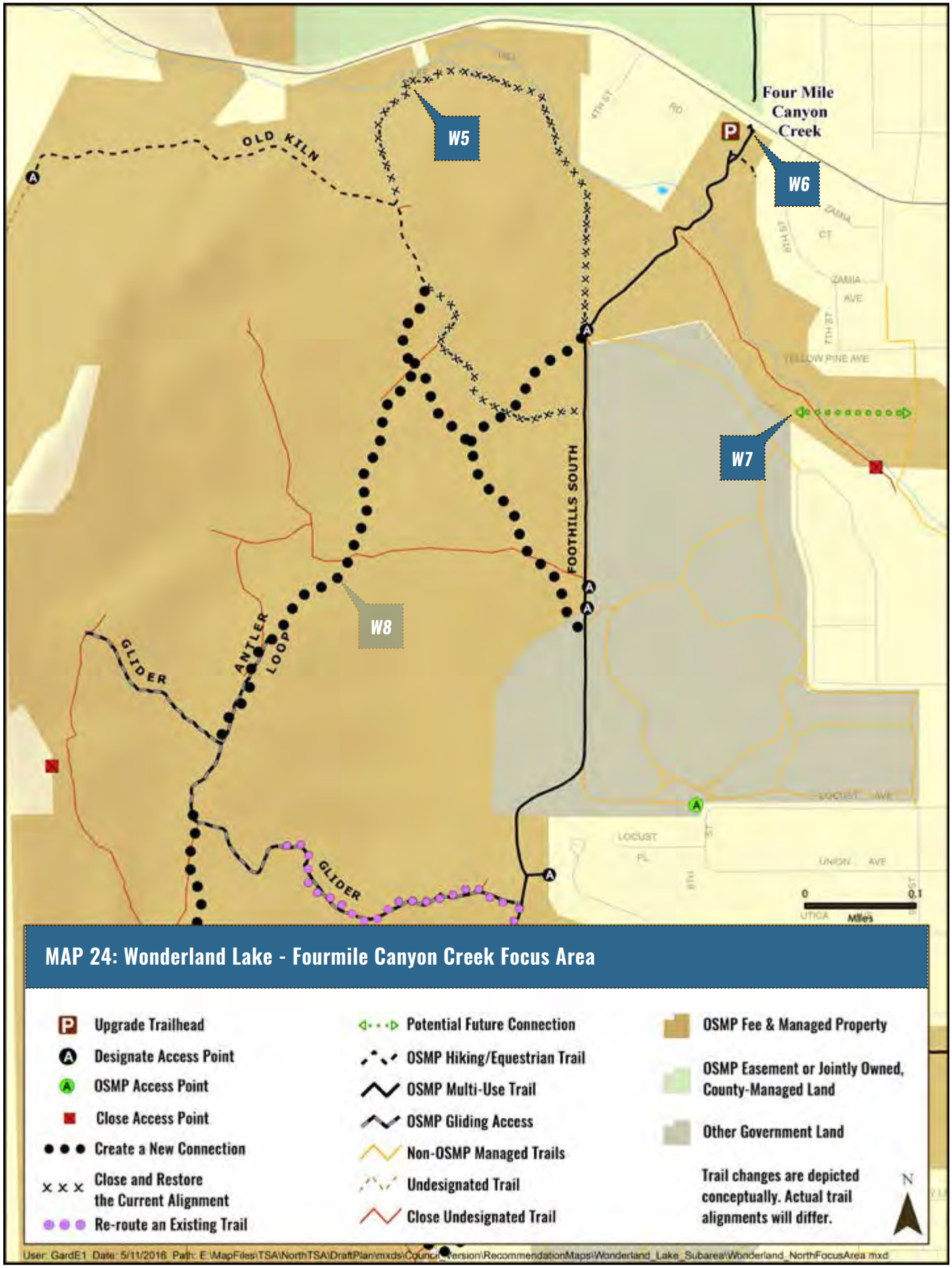
» *Increase coordination/consistency among OSMP and partner agencies to advance local trail connections that also conserve natural and agricultural resources.*

» *Connection accepted by City Council in the Greenways Master Plan.*

Staff Steve Mertz by historical limestone kiln after flood of September 2013 washed out Fourmile Canyon Creek channel.

*See Appendix D for a list of interests met by each action.

North TSA Plan Recommendations: Wonderland Lake



North TSA Plan Recommendations: Wonderland Lake

Action W8 Create Wonderland Lake backdrop loop trail connection by re-routing trails. (Antler Loop)

*Interests Met: 4**

MAP 25: Wonderland Lake - South Foothills Focus Area

» *Re-route existing designated and undesignated trails to provide more sustainable connections to the paragliding launch sites and visitors seeking a trail experience on the Wonderland hogback.*

Primary Goal

» *Provide new trail access to improve visitor experience, replace undesignated trails and reduce maintenance and management costs.*

Driving Factors/Benefits

» *Avoid sensitive natural resources through the addition of sustainable trails, re-routing of unsustainable trails and closure of undesignated trails.*

*See Appendix D for a list of interests met by each action.

North TSA Plan Recommendations: Wonderland Lake

MAP 25: Wonderland Lake - South Foothills Focus Area

- Designate Access Point
- Provide Improvements
- Upgrade Trailhead
- Close Access Point
- Maintain ADA Standards
- Build Safe Crossing
- Paragliding Launch Sites
- OSMP Hiking/Equestrian Trail
- OSMP Multi-Use Trail
- OSMP Gliding Access
- Non-OSMP Managed Trails
- Close Undesignated Trail
- Undesignated Trail
- Create a New Connection
- Designate an Undesignated Trail
- Re-route an Existing Trail
- Close and Restore the Current Alignment
- Potential Future Connection
- Close to Public Access
- OSMP Fee & Managed Property
- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land

Trail changes are depicted conceptually. Actual trail alignments will differ.

N

MAP 26: Wonderland Lake - Wonderland Lake Backdrop Focus Area

ACTION W9 Re-route portion of the Wonderland Lake Trail.

*Interests Met: 2**

» *Re-route the steep downhill section of trail just north of where it connects into Foothills South Trail.*

Primary Goal

» *Increase sustainability of this section of trail while minimizing impacts to rare plant communities including New Mexico feathergrass in this area.*

ACTION W10 Create a second, smaller Wonderland Lake backdrop loop trail. (Glider Access Trail)

*Interests Met: 3**

» *Create a more sustainable trail connection to replace the existing glider access trail.*

Primary Goal

» *Increase recreation and loop trail opportunities for visitors.*

Driving Factors/Benefits

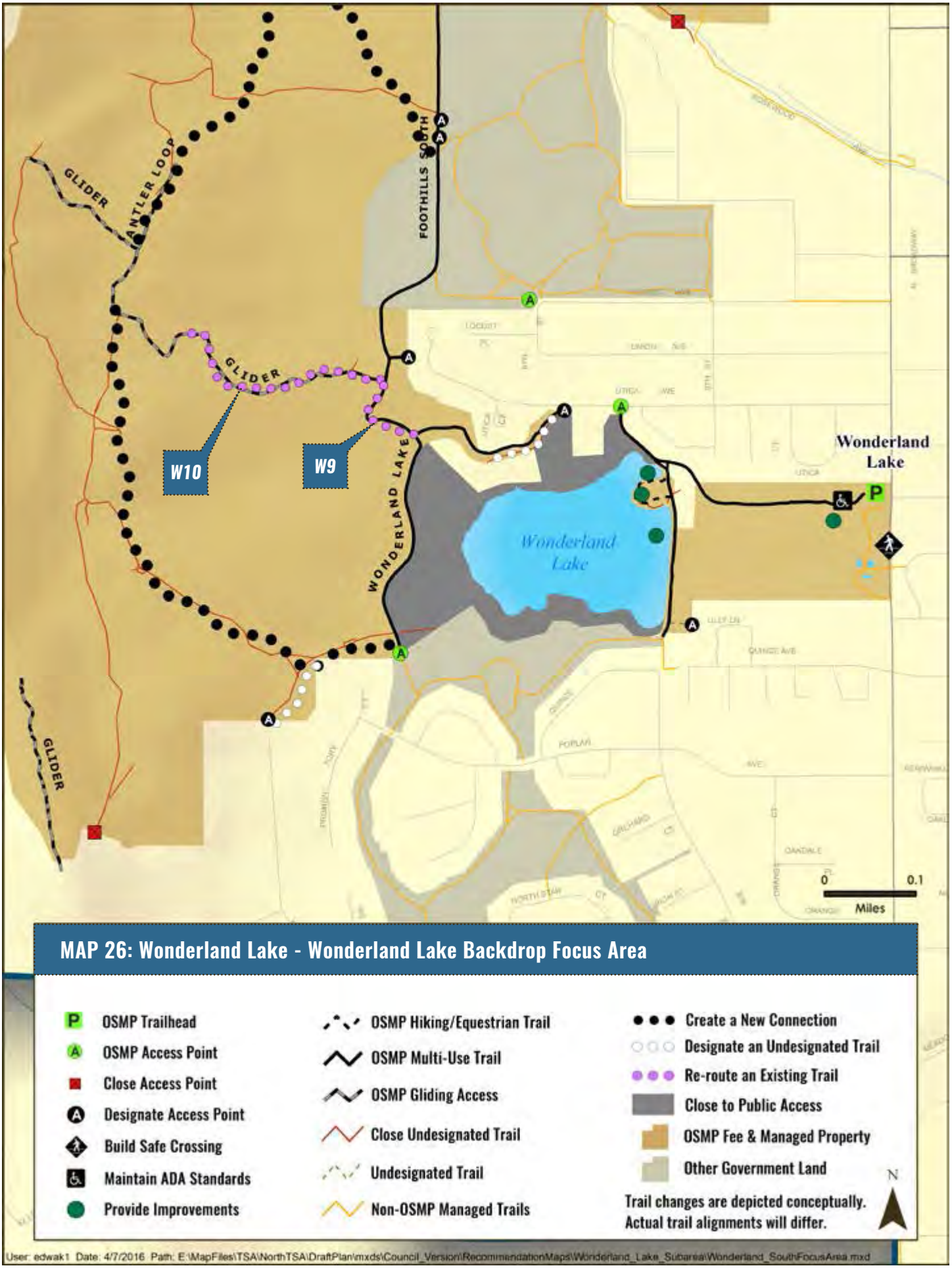
» *Increase connectivity among trails.*

» *Increase trail sustainability.*

Blooming New Mexico feathergrass. © Bill May.

*See Appendix D for a list of interests met by each action.

North TSA Plan Recommendations: Wonderland Lake



MAP 26: Wonderland Lake - Wonderland Lake Backdrop Focus Area

North TSA Plan Recommendations: Wonderland Lake

MAP 27: Wonderland Lake - Wonderland Lake Focus Area

Action W11 Improve Americans with Disabilities Act (ADA) access on Wonderland Lake Trail.

*Interests Met: 5**

Primary Goal

» *Provide more inclusive access to all types of visitors at Wonderland Lake Trail.*

Driving Factors/Benefits

» *This trail is suitable for improving ADA accessibility due to its grade, out-slope, trail width and lack of obstacles in the trail tread.*

Action W12 Prohibit boats and belly boats on Wonderland Lake.

*Interests Met: 2**

Primary Goal

» *Provide greater protection of lake and wetland natural resources.*

Driving Factors/Benefits

» *Minimize disturbance to waterfowl and shorebirds.*

» *Designate fishing access off of the dam, peninsula and a pier where visitor impacts to wetland resources can be minimized.*

Action W13 Prohibit ice skating on Wonderland Lake.

*Interests Met: 2**

Primary Goal

» *Creates consistent visitor access regulations and increases visitor safety.*

Driving Factors/Benefits

» *Consistent with restrictions to prohibit access on the lake in order to protect wetlands.*

Action W14 Allow sledding on Wonderland Lake dam.

*Interests Met: 2**

Primary Goal

» *Provide sledding access in an area that does not damage natural resources or have safety concerns.*

Driving Factors/Benefits

» *Formalize an area where children/families can sled.*

Action W15 Do not provide access to Wonderland Lake's south, west and north shores.

*Interests Met: 1**

Primary Goal

» *Protect sensitive wetland resources on the south, west and north shores of Wonderland Lake.*

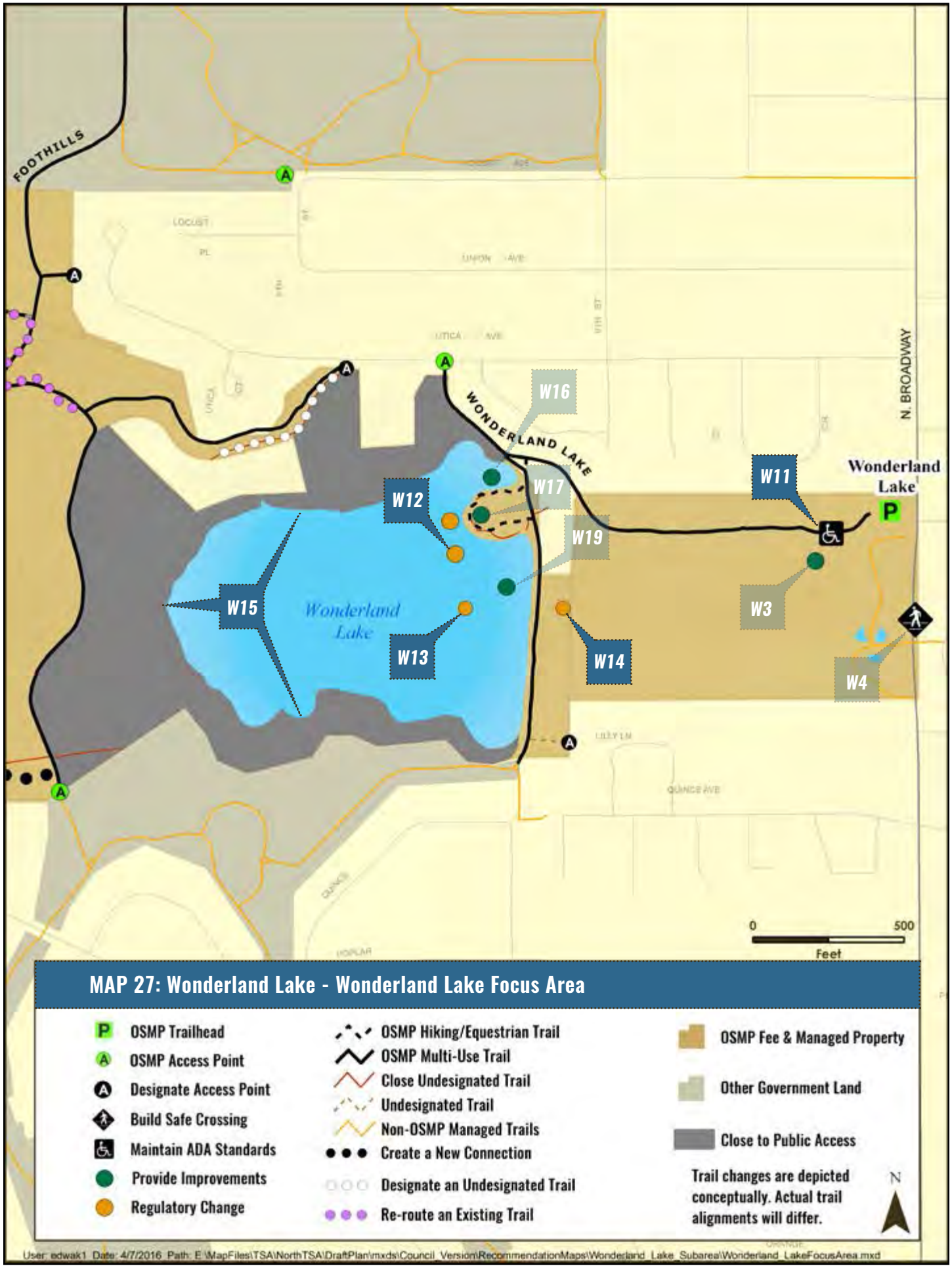
Driving Factors/Benefits

» *Minimize disturbance to waterfowl, shorebirds and other wildlife.*

» *Areas of the east shore are accessible for water access, fishing access and interpretive opportunities.*

**See Appendix D for a list of interests met by each action.*

North TSA Plan Recommendations: Wonderland Lake



North TSA Plan Recommendations: Wonderland Lake

MAP 28: Wonderland Lake - Peninsula Focus Area

ACTION W16 Provide access to the cattail marsh on north side of peninsula.

*Interests Met: 4**

Primary Goal

» *Increase opportunities for education and interpretive experiences, especially for families and youth.*

Driving Factors/Benefits

» *Provide out and back interpretive boardwalk access to the cattail marsh adjacent to peninsula where impacts can be minimized at this site and by protecting other wetland areas around the lake.*

ACTION W17 Establish hardened pullout areas on the peninsula for educational programming and a hardened wading access.

*Interests Met: 4**

» *Provide increased beach access on the western edge of the peninsula.*

Primary Goal

» *Increase and define opportunities to access water to foster education and interpretive experiences.*

Driving Factors/Benefits

» *Mitigate conflicts among interpretive programs with children and families and other visitor activities.*

» *Concentrate access into defined areas on to the peninsula, protecting wetland vegetation in other areas on the peninsula and around the lake.*

ACTION W18 Allow Wonderland Lake wading access from designated areas on the peninsula.

*Interests Met: 3**

Primary Goal

» *Provide a special water access opportunity for improved visitor experience and nature study for youth.*

Driving Factors/Benefits

» *Access to water for visitors would be limited to peninsula and occur in location where impacts to natural resources can be minimized.*

» *Increase consistency and compliance of regulations in this area.*

ACTION W19 Create Wonderland Lake fishing pier.

*Interests Met: 6**

Primary Goal

» *Increase opportunities to fish, access water and provide education and interpretive experiences.*

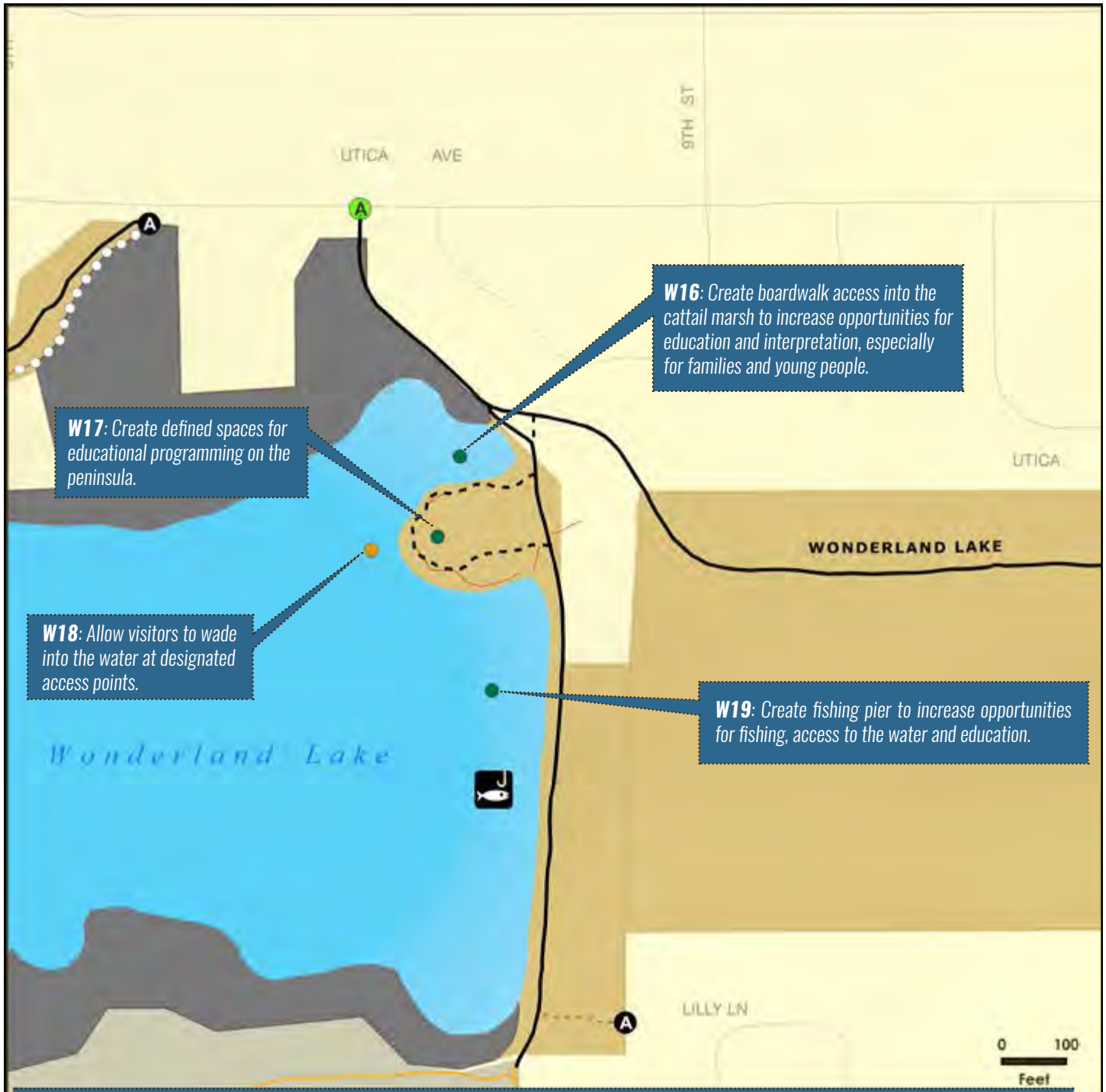
Driving Factors/Benefits

» *Provide fishing access alternative to enhance the safety for visitors traveling along the dam around those who are fishing.*

» *Concentrate fishing and lake access to protect wetland vegetation in other areas around the lake.*

**See Appendix D for a list of interests met by each action.*

North TSA Plan Recommendations: Wonderland Lake



MAP 28: Wonderland Lake - Peninsula Focus Area

- OSMP Access Point
- Designate Access Point
- Fishing Access
- Regulatory Change
- Provide Improvements
- OSMP Hiking/Equestrian Trail
- OSMP Multi-Use Trail
- Close Undesignated Trail
- Undesignated Trail
- Non-OSMP Managed Trails
- Designate an Undesignated Trail
- OSMP Fee & Managed Property
- Other Government Land
- Close to Public Access

Trail changes are depicted conceptually. Actual trail alignments will differ.

N

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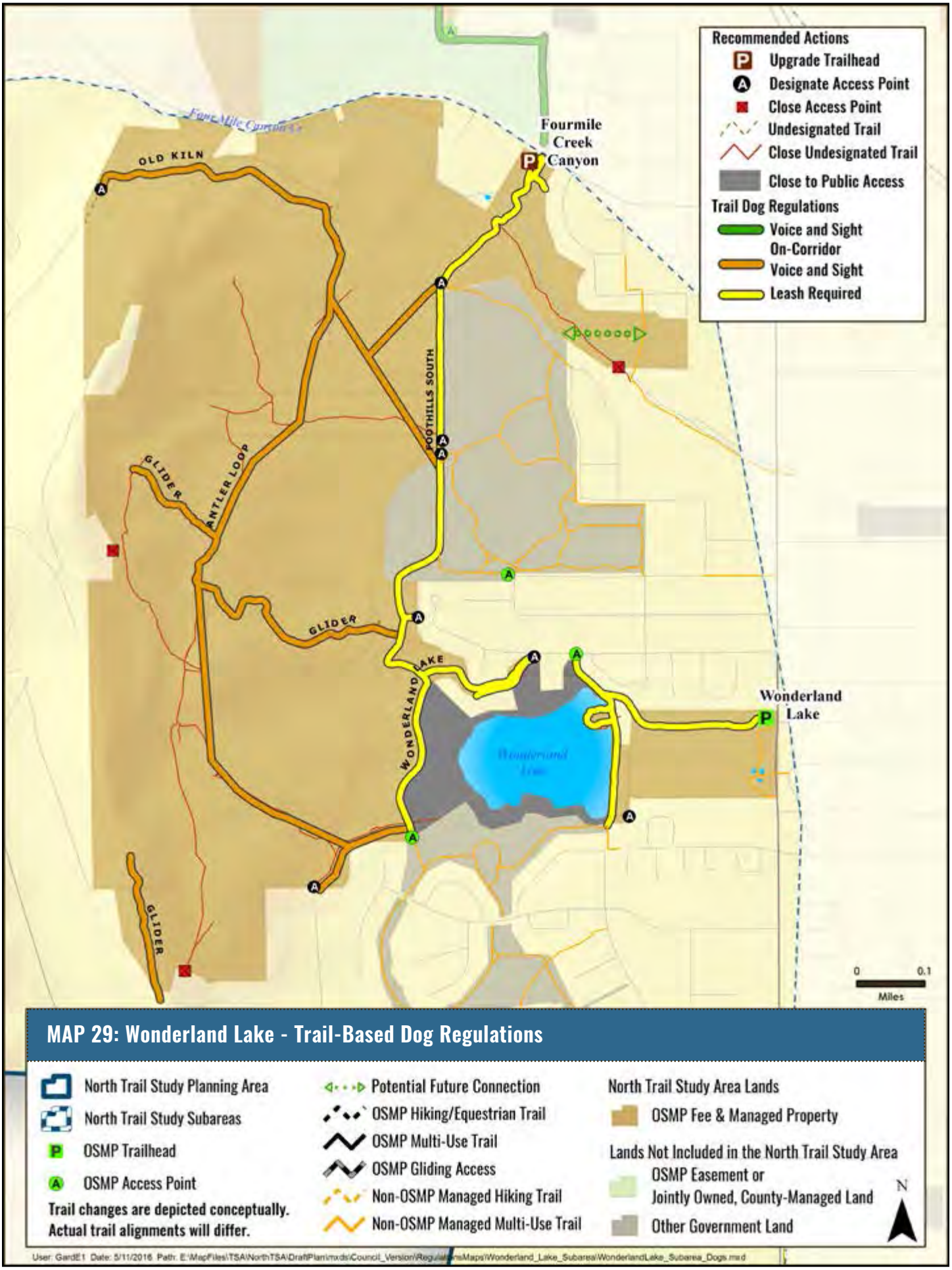
MAP 29: Wonderland Lake - Trail-Based Dog Regulations

TRAIL NAME	DOG REGULATION
New Trails	
Wonderland Hill loop (Antler Loop)	On-Corridor Voice and Sight
Existing and Re-routed Trails with New Dog Regulations	
Old Kiln Trail	On-Corridor Voice and Sight
Re-routed Wonderland Hill glider access (Glider Access Trail)	On-Corridor Voice and Sight
Wonderland Hill south glider access off Pine Needle Road	On-Corridor Voice and Sight
Existing and Re-routed Trails with No Changes to Existing Dog Regulations	
Foothills South Trail	Leash Required
Wonderland Lake trails	Leash Required
Wonderland Lake peninsula trail	Leash Required

There are no new off-trail regulations in this subarea. Dogs are required to be on leash when off-trail in this subarea.

North TSA Plan Recommendations: Wonderland Lake



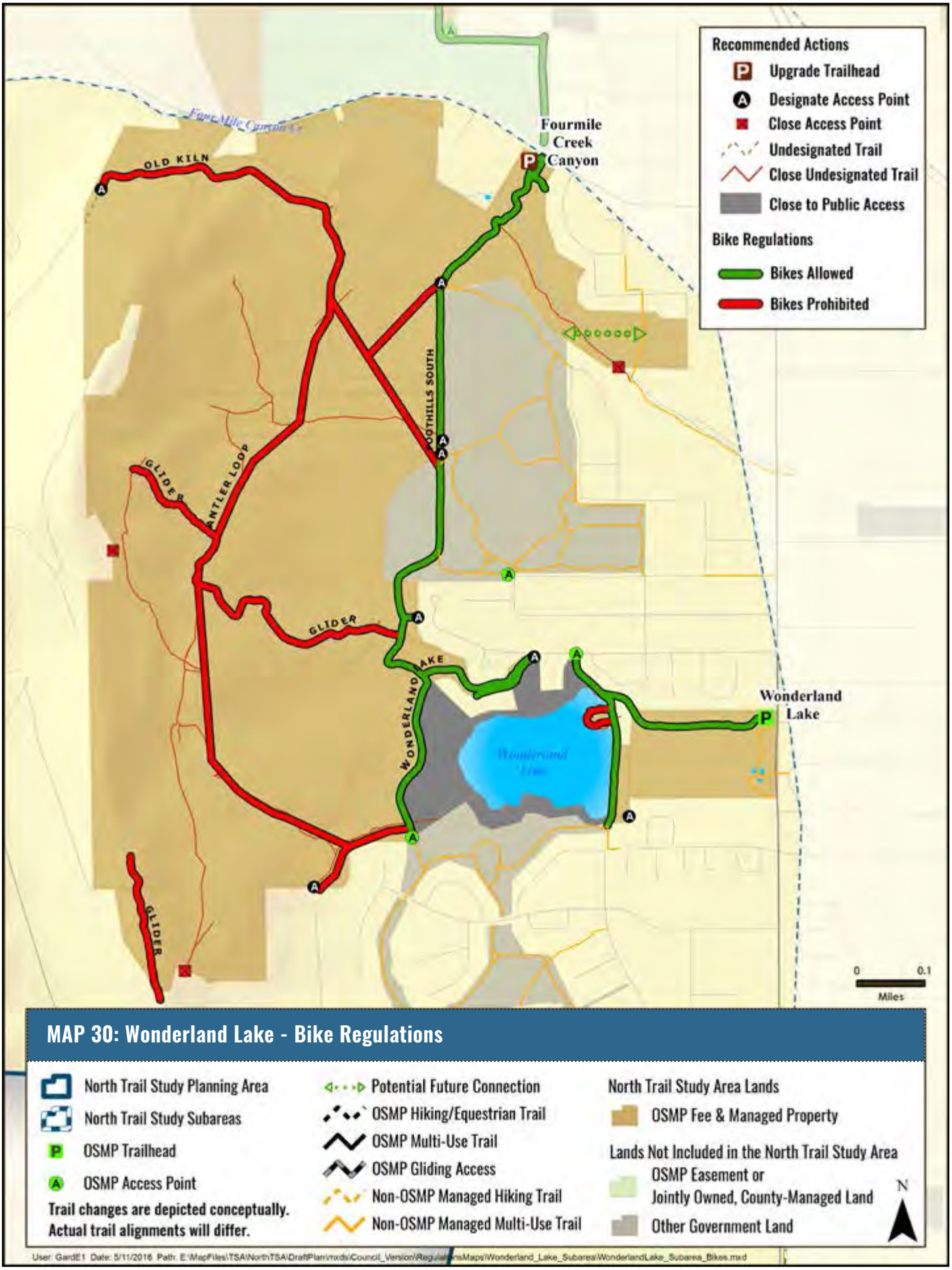
MAP 30: Wonderland Lake - Bike Regulations

TRAIL NAME	BIKE REGULATION
New Trails	
Wonderland Hill loop (Antler Loop)	Bikes Prohibited
Existing and Re-routed Trails with No Changes to Existing Bike Regulations	
Wonderland Lake trails	Bikes Allowed
Foothills South Trail	Bikes Allowed
Old Kiln Trail	Bikes Prohibited
Re-routed Wonderland Hill glider access (Glider Access Trail)	Bikes Prohibited
Wonderland Hill south glider access off Pine Needle Road	Bikes Prohibited
Wonderland Lake peninsula trail	Bikes Prohibited

There are no existing and re-routed trails with new bike regulations in this subarea.

Cyclists demonstrating the Fruita Lean, a practice that allows other visitors to pass while minimizing resource impacts.

North TSA Plan Recommendations: Wonderland Lake

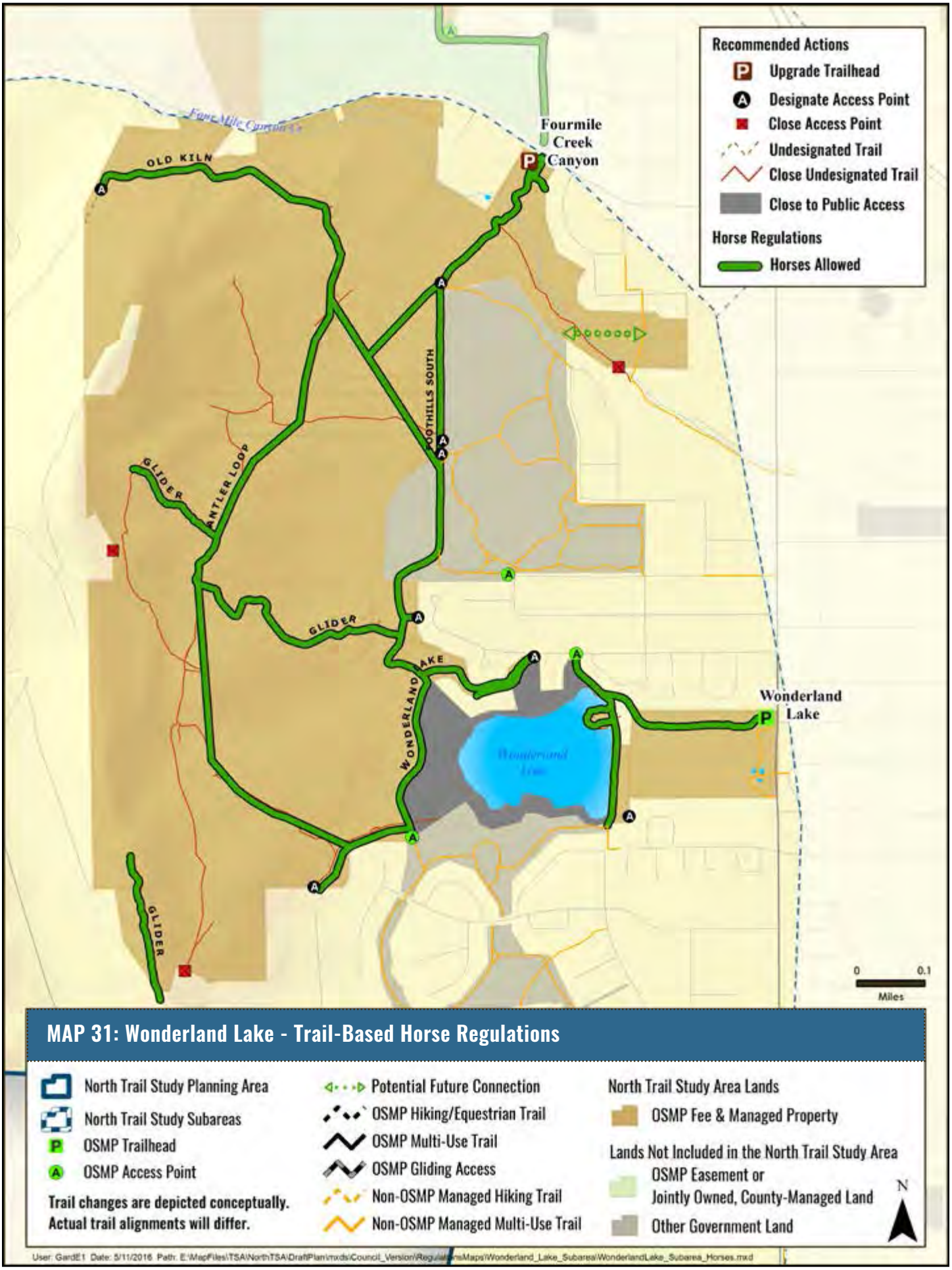


MAP 31: Wonderland Lake - Trail-Based Horse Regulations

TRAIL NAME	HORSE REGULATION
New Trails	
Wonderland Hill loop (Antler Loop)	*Horses Allowed*
Existing and Re-routed Trails with No Changes to Existing Horse Regulations	
Foothills South Trail	*Horses Allowed*
Old Kiln Trail	*Horses Allowed*
Re-routed Wonderland Hill glider access (Glider Access Trail)	*Horses Allowed*
Wonderland Hill south glider access off Pine Needle Road	*Horses Allowed*
Wonderland Lake trails	*Horses Allowed*
Wonderland Lake peninsula trail	*Horses Allowed*

Horses are allowed off-trail in this subarea.

North TSA Plan Recommendations: Wonderland Lake

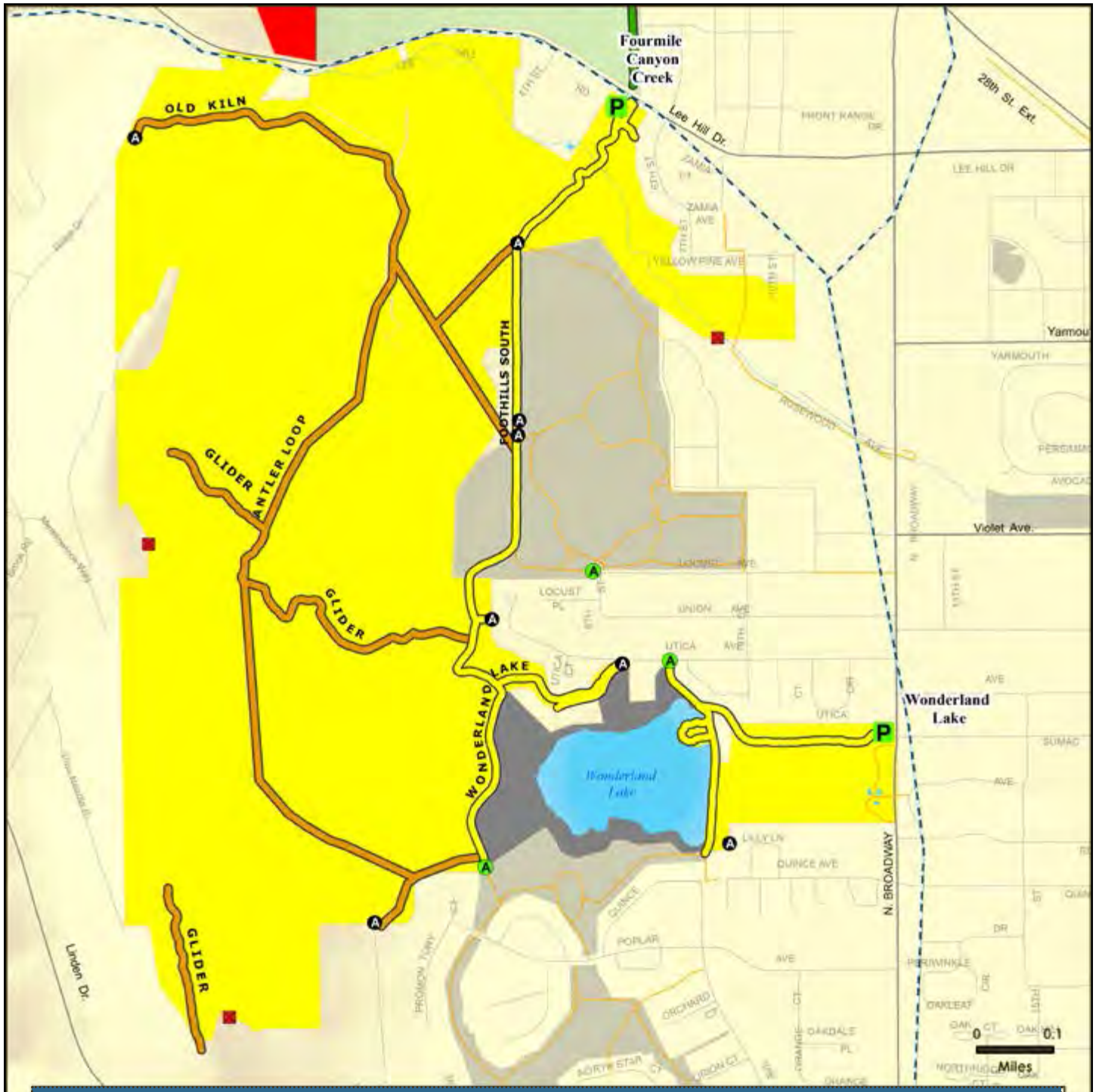


MAP 32: Wonderland Lake - Regulatory Settings

Visitor access regulations pertain to the management of activities both on- and off-trail. The regulatory settings map includes on-trail and off-trail specific regulations where public access is restricted year-round, areas with seasonal wildlife closures and on-trail and off-trail dog regulations.

Dog walker and cyclists at Wonderland Lake.

North TSA Plan Recommendations: Wonderland Lake



MAP 32: Wonderland Lake - Regulatory Settings

- North Trail Study Planning Area
- North Trail Study Subareas
- OSMP Trailhead
- OSMP Access Point

Visitor Access Regulations

- New Access Point
- Close Access Point

Trail Dog Regulations

- Voice and Sight
- On-Corridor Voice and Sight
- Leash Required
- Dogs Prohibited

Trail changes are depicted conceptually. Actual trail alignments will differ.

Dog Regulation Areas

- Voice and Sight Control
- Leash Required
- Dogs Prohibited
- Closed to Public Access
- Other Government Land

N

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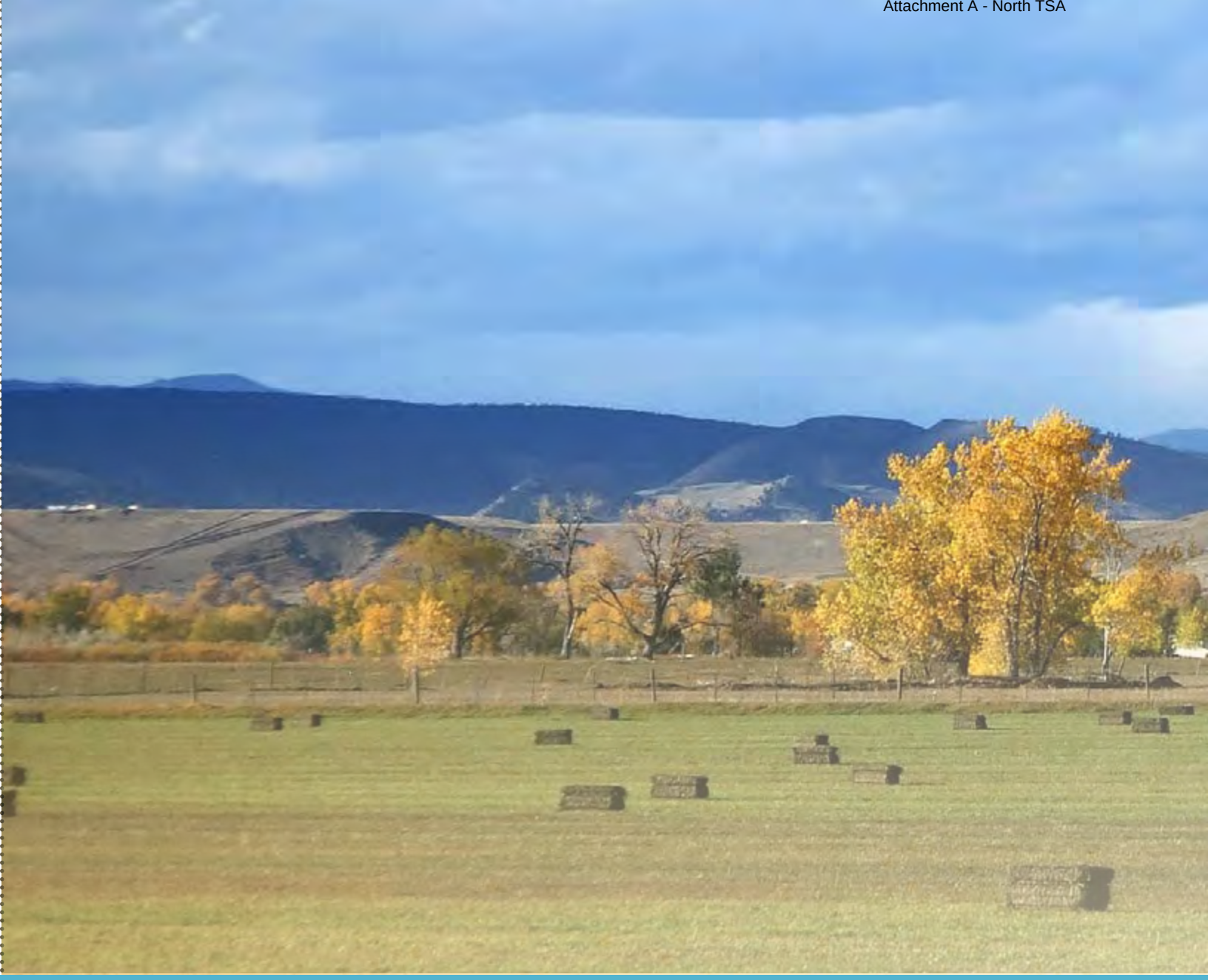


Background photo: View towards Haystack Mountain across hayfields.

North TSA Plan Recommendations

Northern Properties

MAP 33: Northern Properties - Management Area Designations

Action NP1 Designate Berman Brothers as an Agricultural Area.

*Interests Met: 3**

Primary Goal

» *Implement VMP direction to provide management area designations for undesignated properties.*

Driving Factors/Benefits

» *Berman Brothers property has been designated as an agricultural land of statewide importance- suitable for hay or grazing with irrigation ditches.*

Action NP2 Designate Stratton property as a Natural Area.

*Interests Met: 4**

Primary Goal

» *Implement VMP direction to provide management area designations for undesignated properties.*

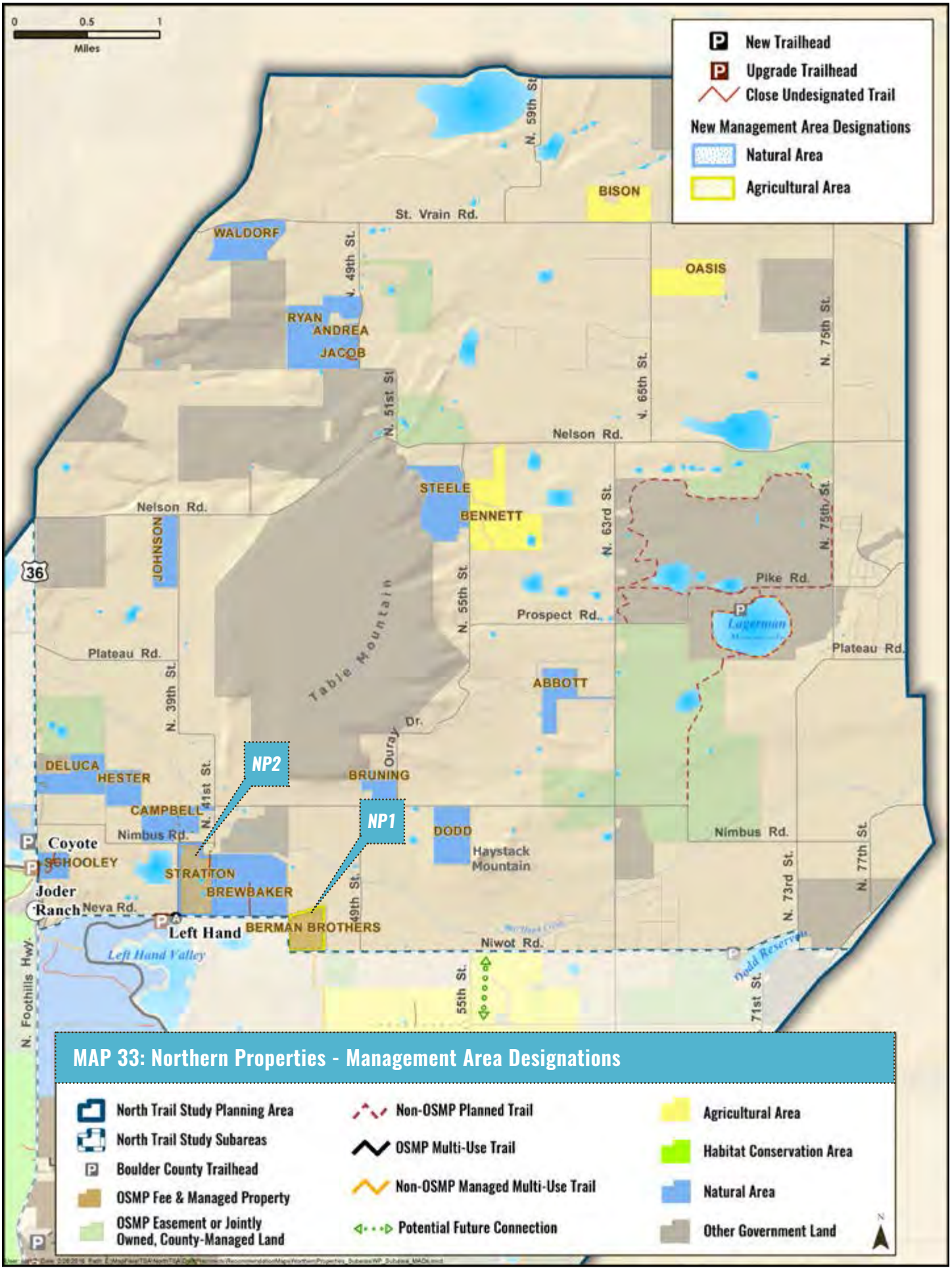
Driving Factors/Benefits

» *Protect important natural resources throughout the property.*

» *Create healthy habitats for native amphibians, native fish and potentially Preble's meadow jumping mouse.*

*See Appendix D for a list of interests met by each action.

North TSA Plan Recommendations: Northern Properties



MAP 33: Northern Properties - Management Area Designations

- North Trail Study Planning Area
- North Trail Study Subareas
- Boulder County Trailhead
- OSMP Fee & Managed Property
- OSMP Easement or Jointly Owned, County-Managed Land
- Non-OSMP Planned Trail
- OSMP Multi-Use Trail
- Non-OSMP Managed Multi-Use Trail
- Potential Future Connection
- Agricultural Area
- Habitat Conservation Area
- Natural Area
- Other Government Land

North TSA Plan Recommendations: Northern Properties

ACTION NP3 Collaborate to create a connection between the North TSA to Boulder County Parks and Open Space's Lagerman/Imel/AHI Open Space Complex.

*Interests Met: 3**

ACTION NP4 Prohibit public access on Waldorf, Ryan, Andrea, Jacob, Bison, Oasis, Steele, Bennett, Stratton, Brewbaker, Berman Brothers, Dodd and Abbott properties.

ACTION NP5 Allow public access on Deluca, Hester and Campbell properties with seasonal closure (May 1 - July 31) for ground nesting bobolinks.

ACTION NP6 Allow public access on Johnson, Bruning and Schooley properties.

*See Appendix D for a list of interests met by each action.

MAP 34: Northern Properties - Subarea-Wide Recommendations

» *As opportunities arise, collaborate with partner agencies to create regional connections in a way that minimizes natural resource impacts.*

Primary Goal

» *Enhance regional connectivity and the creation of safe road crossings and trail connections.*

Driving Factors/Benefits

» *Provide greater opportunities for visitors and interconnectivity among adjacent trail systems.*

» *Coordination/collaboration among OSMP and partner agencies to accomplish regional connections.*

Primary Goal

» *Conserve natural and agricultural resources.*

Driving Factors/Benefits

» *The OSBT supported maintaining the current closed to public access status of these Northern Properties.*

Primary Goal

» *Allow access to properties while protecting bobolinks and their habitat.*

Driving Factors/Benefits

» *The OSBT supported the current access status of the Northern Properties except that the Deluca, Hester and Campbell properties be closed May 1 - July 31 for protection of ground nesting bobolinks.*

Primary Goal

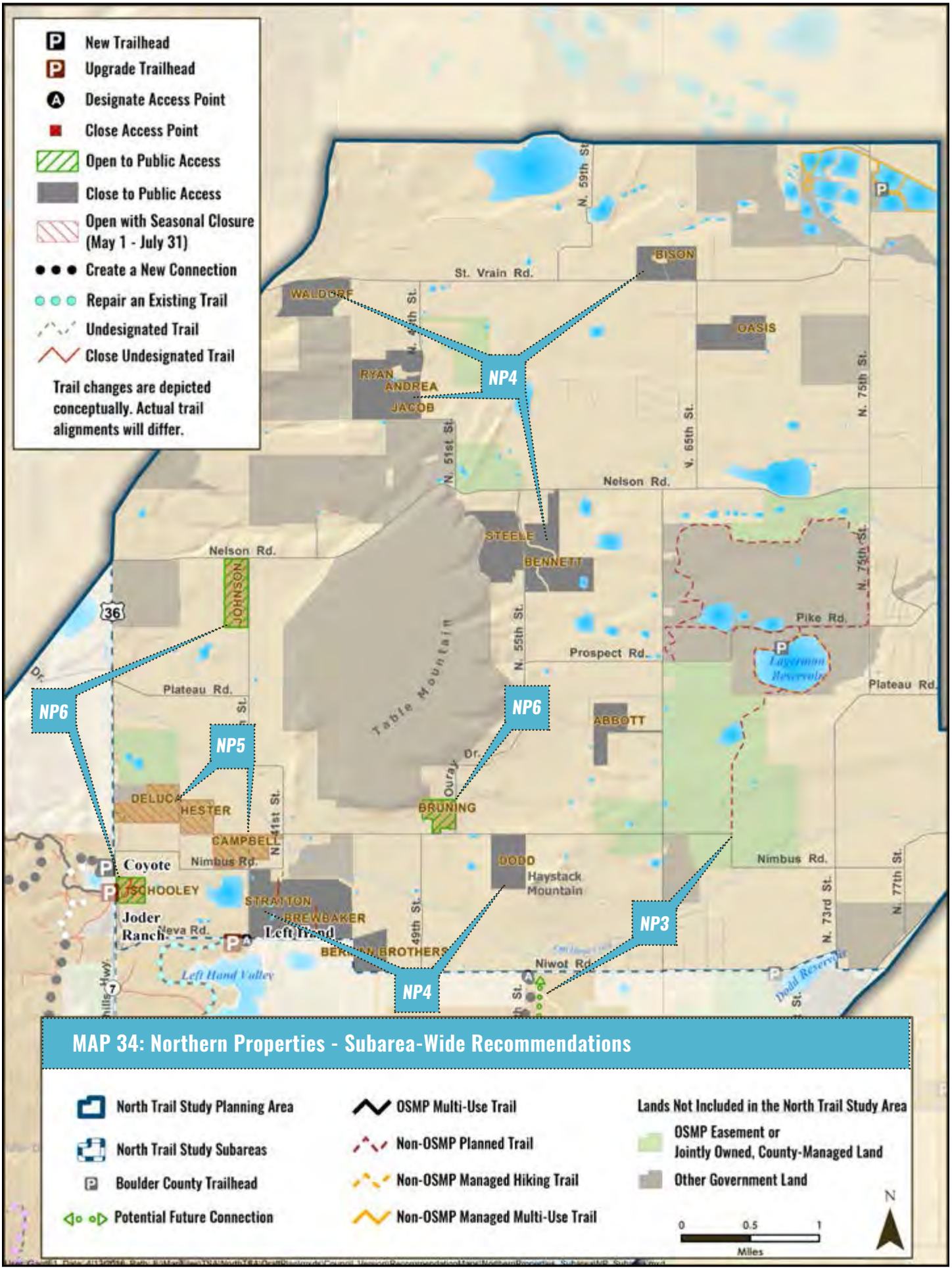
» *Allow access to properties where impacts to natural and agricultural resources are less of a concern.*

Driving Factors/Benefits

» *The OSBT supported maintaining the current open to public access status of these Northern Properties.*

***IMPORTANT NOTE*: The development of undesignated trails will be discouraged in the management of northern properties open to public access. Generally, future trail development on both open and closed northern properties will be evaluated in the context of regional trail connectivity, OSMP resources and be evaluated through regional planning processes to link existing trail networks and conserve important resources.**

North TSA Plan Recommendations: Northern Properties



MAP 34: Northern Properties - Subarea-Wide Recommendations

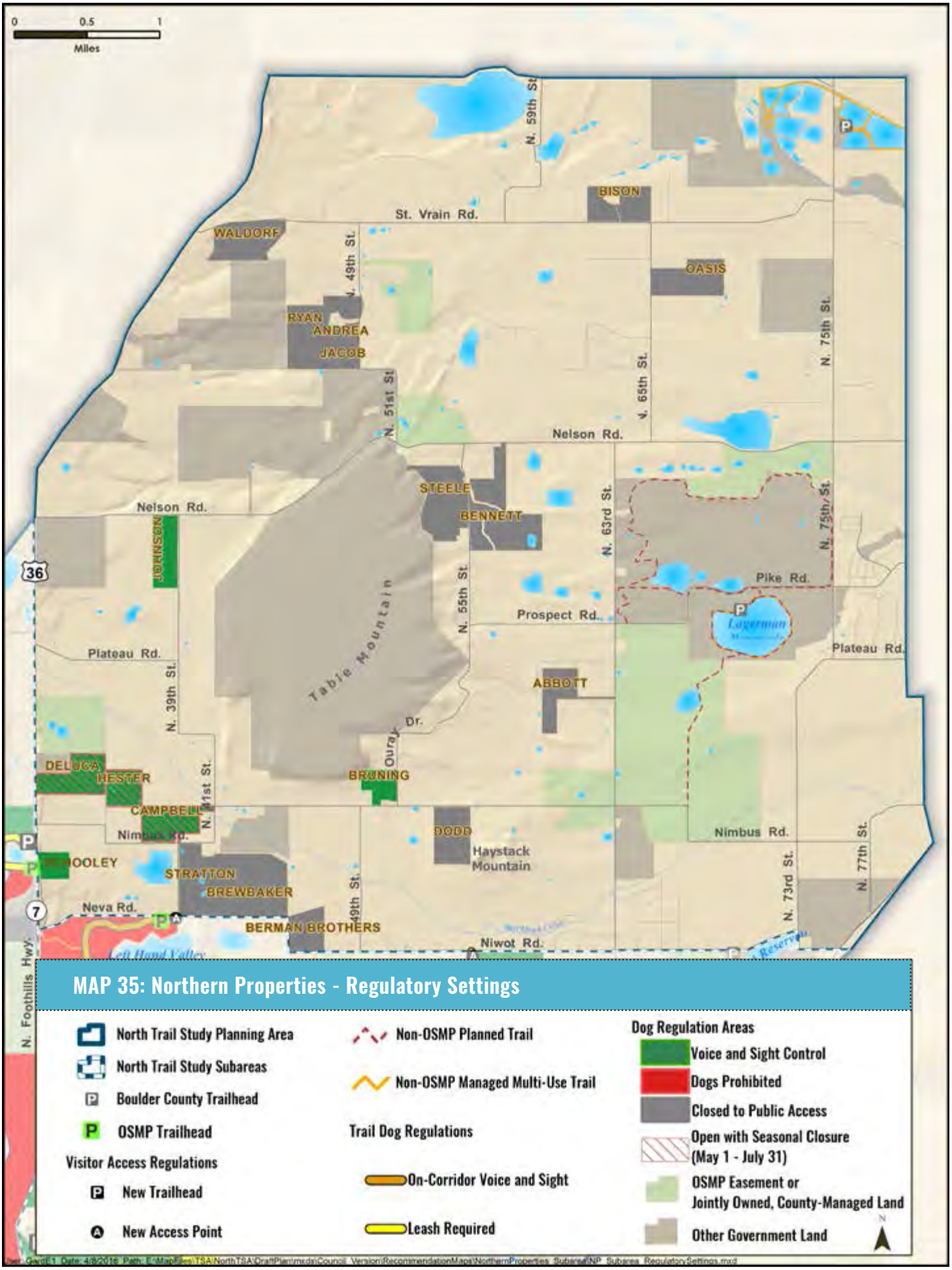
North Trail Study Planning Area
North Trail Study Subareas
Boulder County Trailhead
Potential Future Connection
OSMP Multi-Use Trail
Non-OSMP Planned Trail
Non-OSMP Managed Hiking Trail
Non-OSMP Managed Multi-Use Trail
Lands Not Included in the North Trail Study Area
OSMP Easement or Jointly Owned, County-Managed Land
Other Government Land
0 0.5 1 Miles
N

MAP 35: Northern Properties - Regulatory Settings

Visitor access regulations pertain to the management of activities both on- and off-trail. The regulatory settings map includes on-trail and off-trail specific regulations where public access is restricted year-round, areas with seasonal wildlife closures and on-trail and off-trail dog regulations.

A historic house on the Johnson property.

North TSA Plan Recommendations: Northern Properties



Background photo: Female Northern Harrier flying low over a field. © Dan Baldwin.

North TSA Plan Appendices

APPENDIX A: TSA-Wide and Subarea Maps

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

APPENDIX C: Existing Infrastructure and Recommended Improvements for Trailheads

APPENDIX D: Recommended Actions and Interests Table

APPENDIX E: Scheduling and Estimated Costs for North TSA Projects

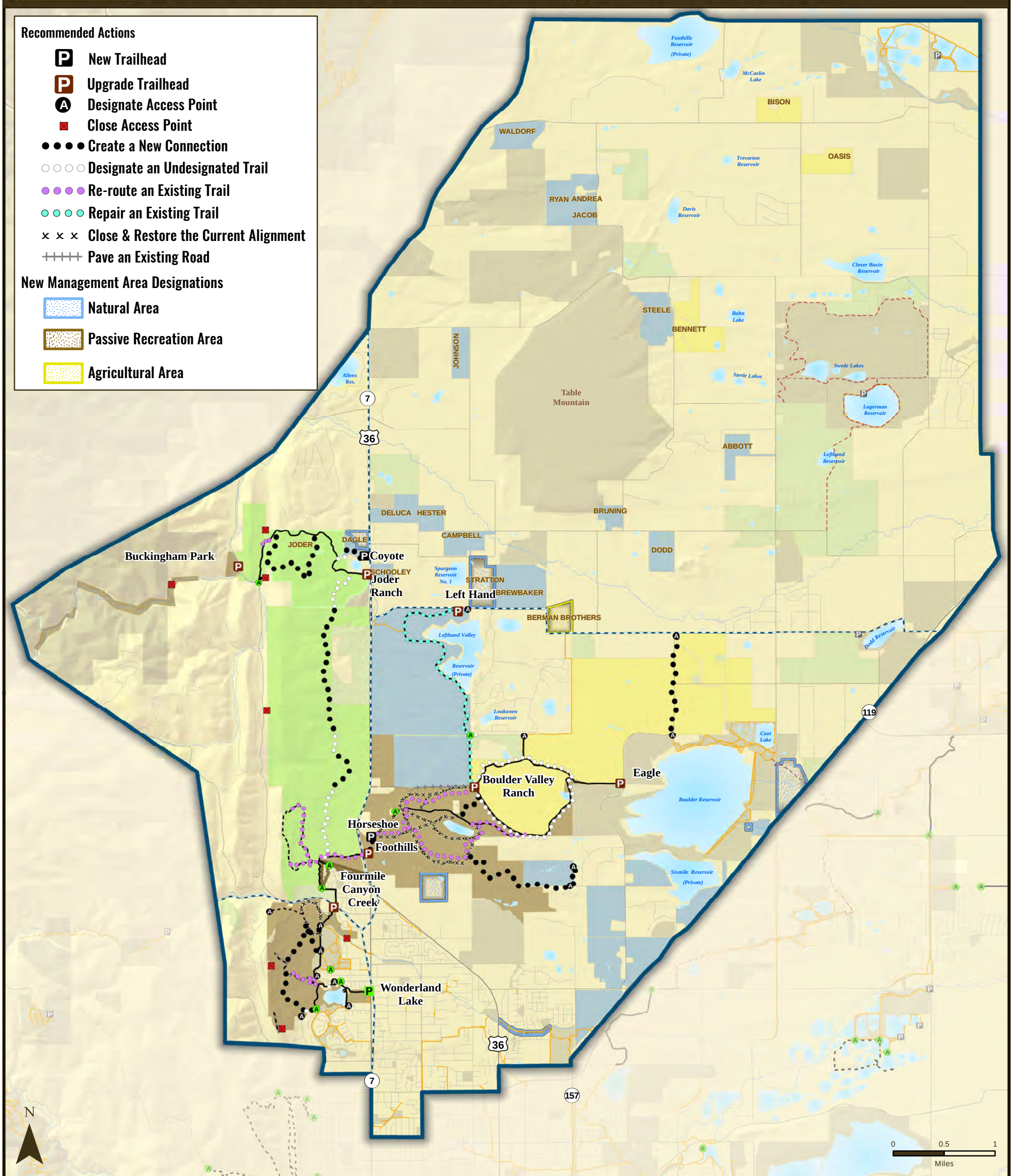
APPENDIX F: Feedback Themes Not Included in the Plan

APPENDIX G: Glossary

Appendix A

City of Boulder Open Space and Mountain Parks

North Trail Study Area Plan



Management Area Designations

- 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
- Agricultural Area
- Habitat Conservation Area
- Natural Area
- Passive Recreation Area
- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land

Trail changes are depicted conceptually. Actual trail alignments will differ.

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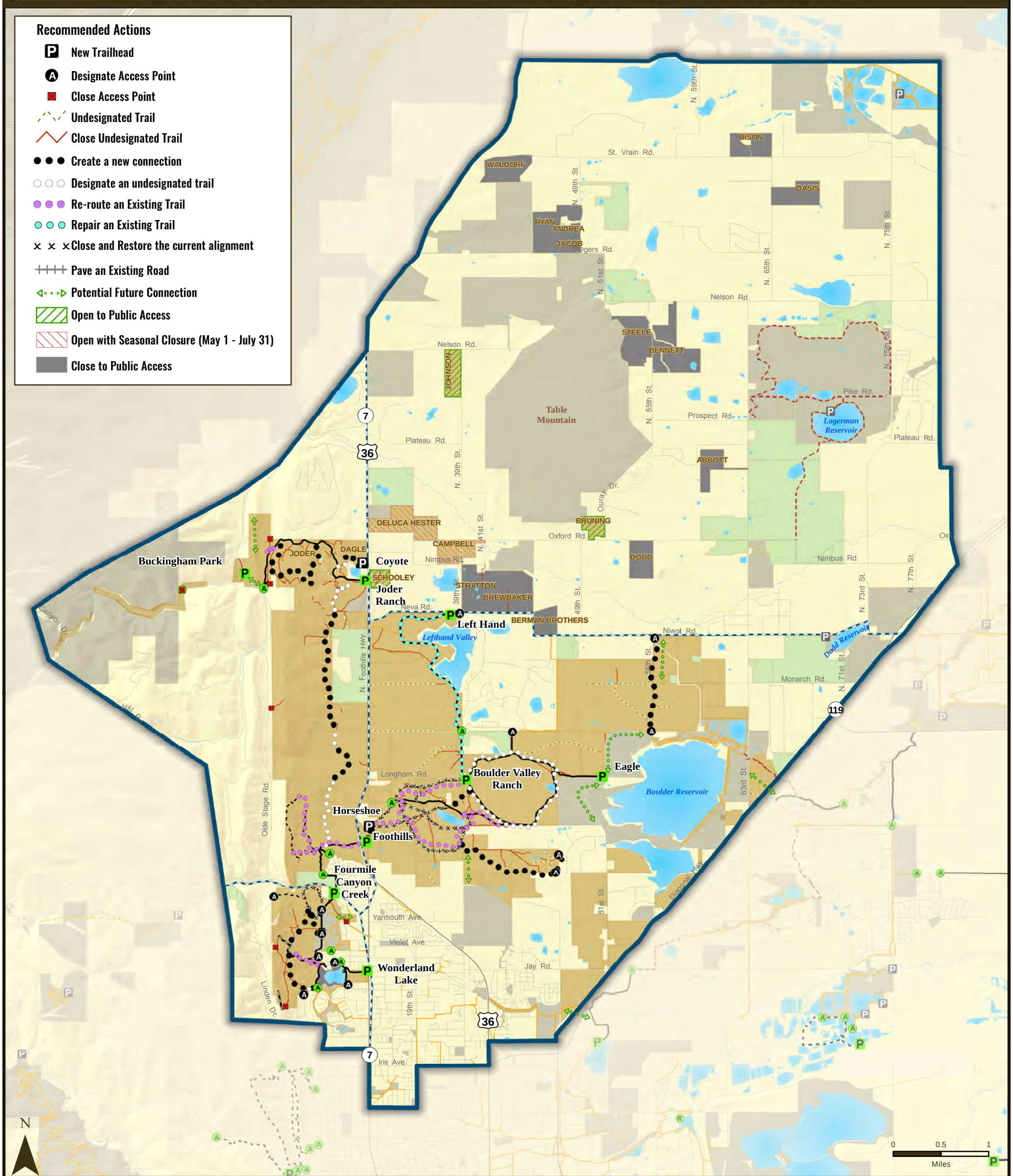
City of Boulder Open Space and Mountain Parks

North Trail Study Area Plan



North Trail Study Area Draft Plan Recommendations

- 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
- OSMP Fee & Managed Property in the North TSA
- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land

Trail changes are depicted conceptually. Actual trail alignments will differ.

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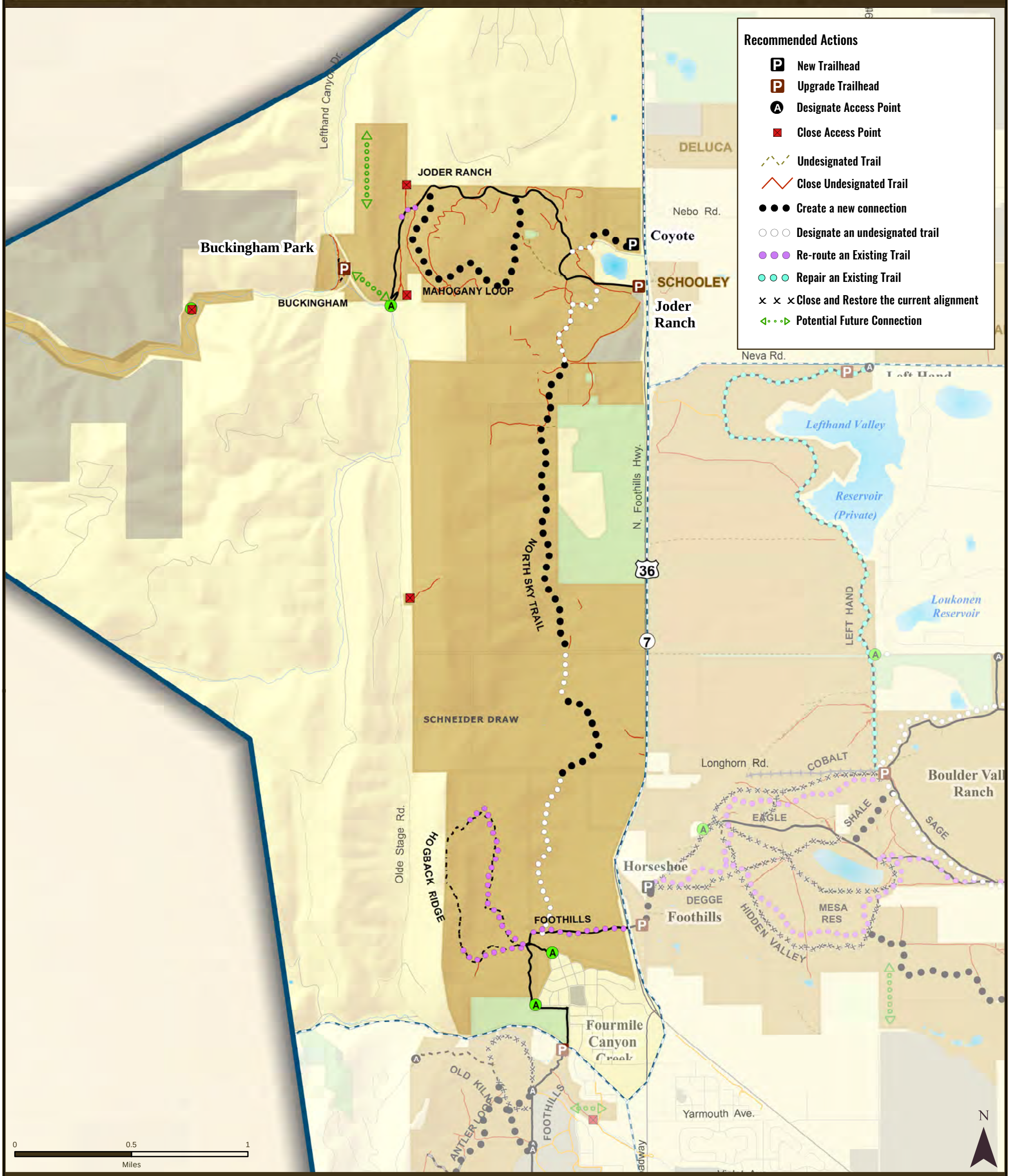
City of Boulder Open Space and Mountain Parks

North Trail Study Area Plan



North Foothills Subarea Recommendations

- 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
- OSMP Fee & Managed Property in the North TSA
- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land

Trail changes are depicted conceptually. Actual trail alignments will differ.

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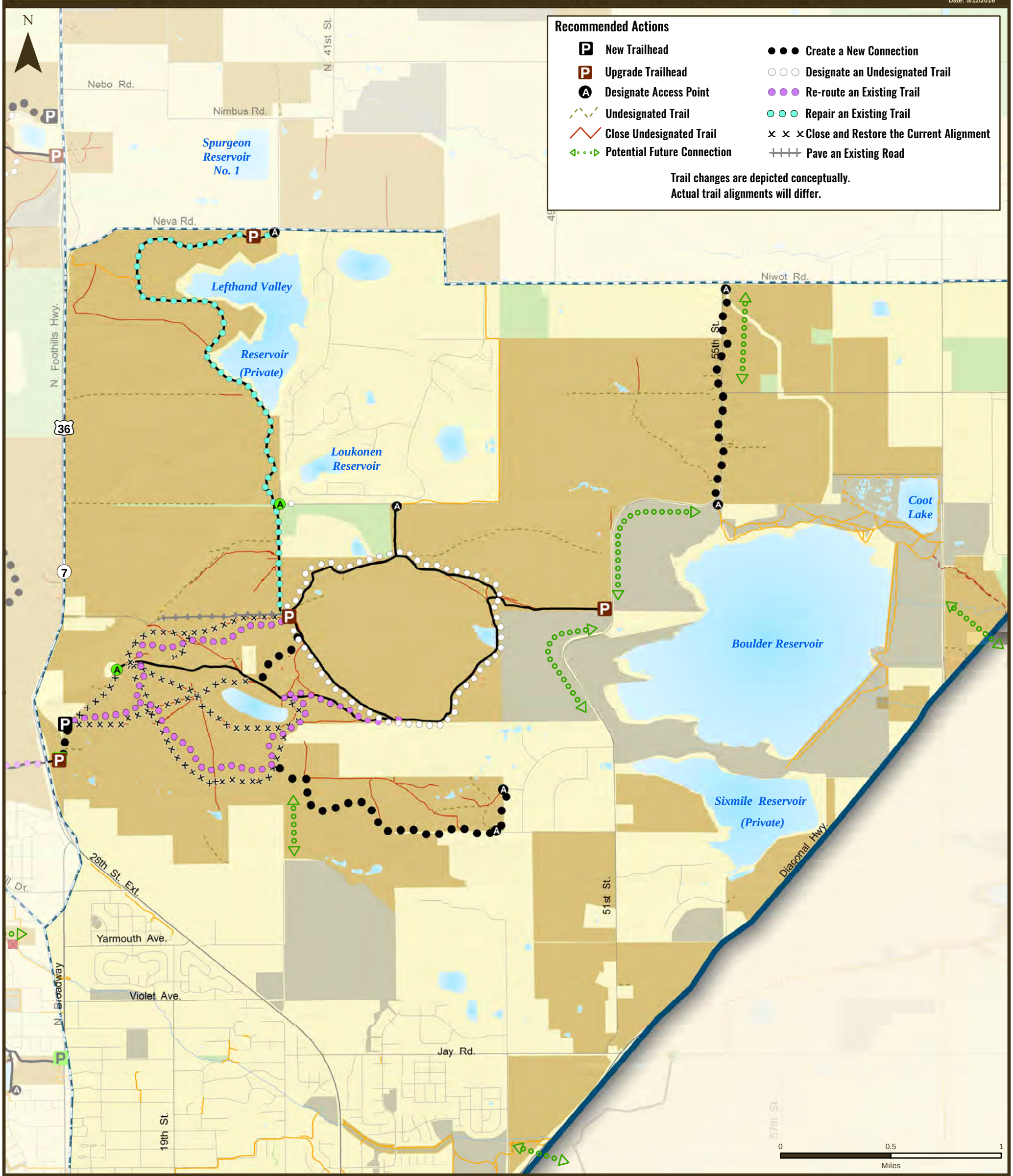
City of Boulder Open Space and Mountain Parks

North Trail Study Area Plan

Date: 5/11/2016



Boulder Valley Ranch Subarea Recommendations

- 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

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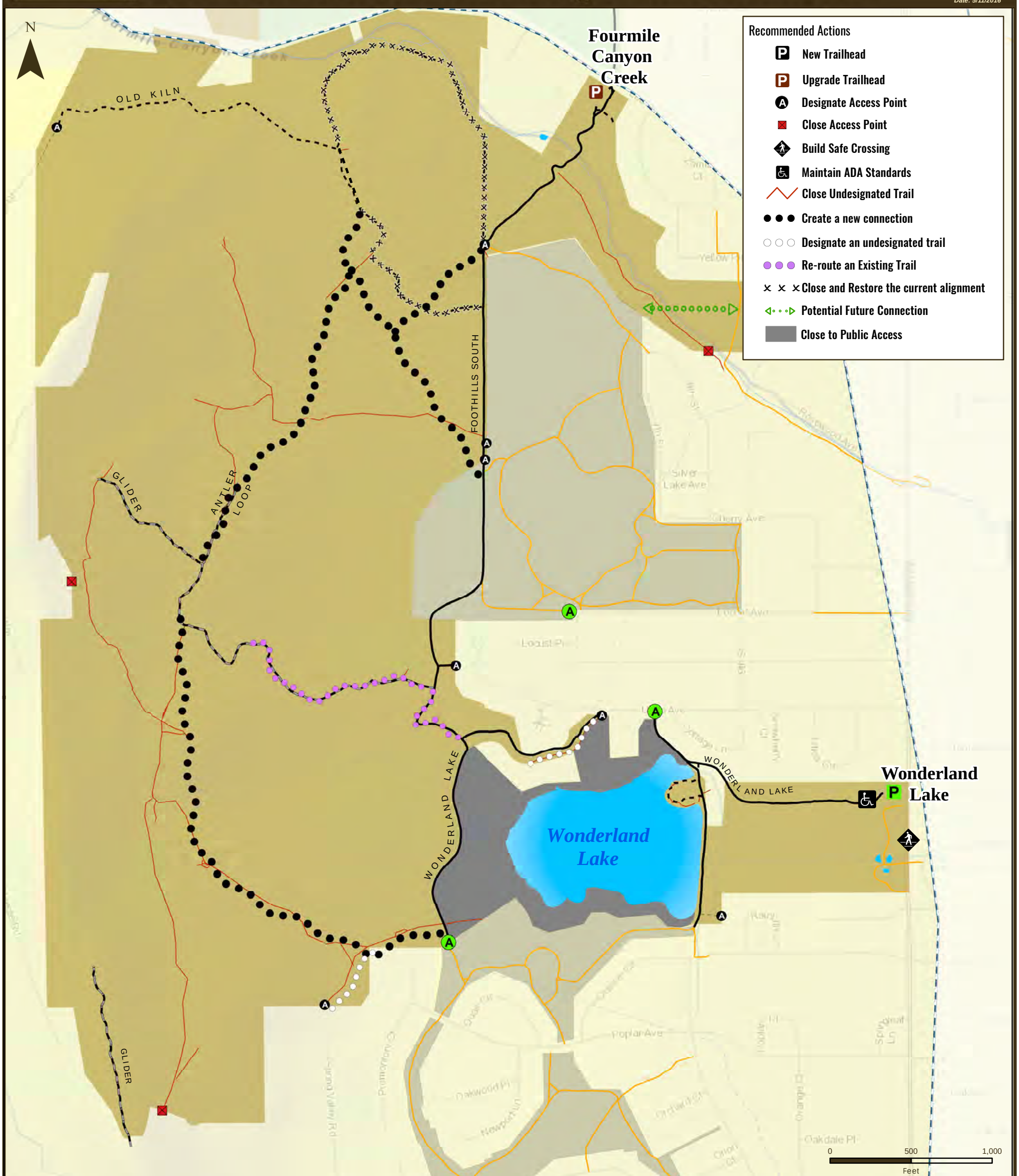
City of Boulder Open Space and Mountain Parks

North Trail Study Area Plan

Date: 5/11/2016



Wonderland Lake Subarea Recommendations

- 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
- OSMP Fee & Managed Property in the North TSA
- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land

Trail changes are depicted conceptually.
Actual trail alignments will differ.

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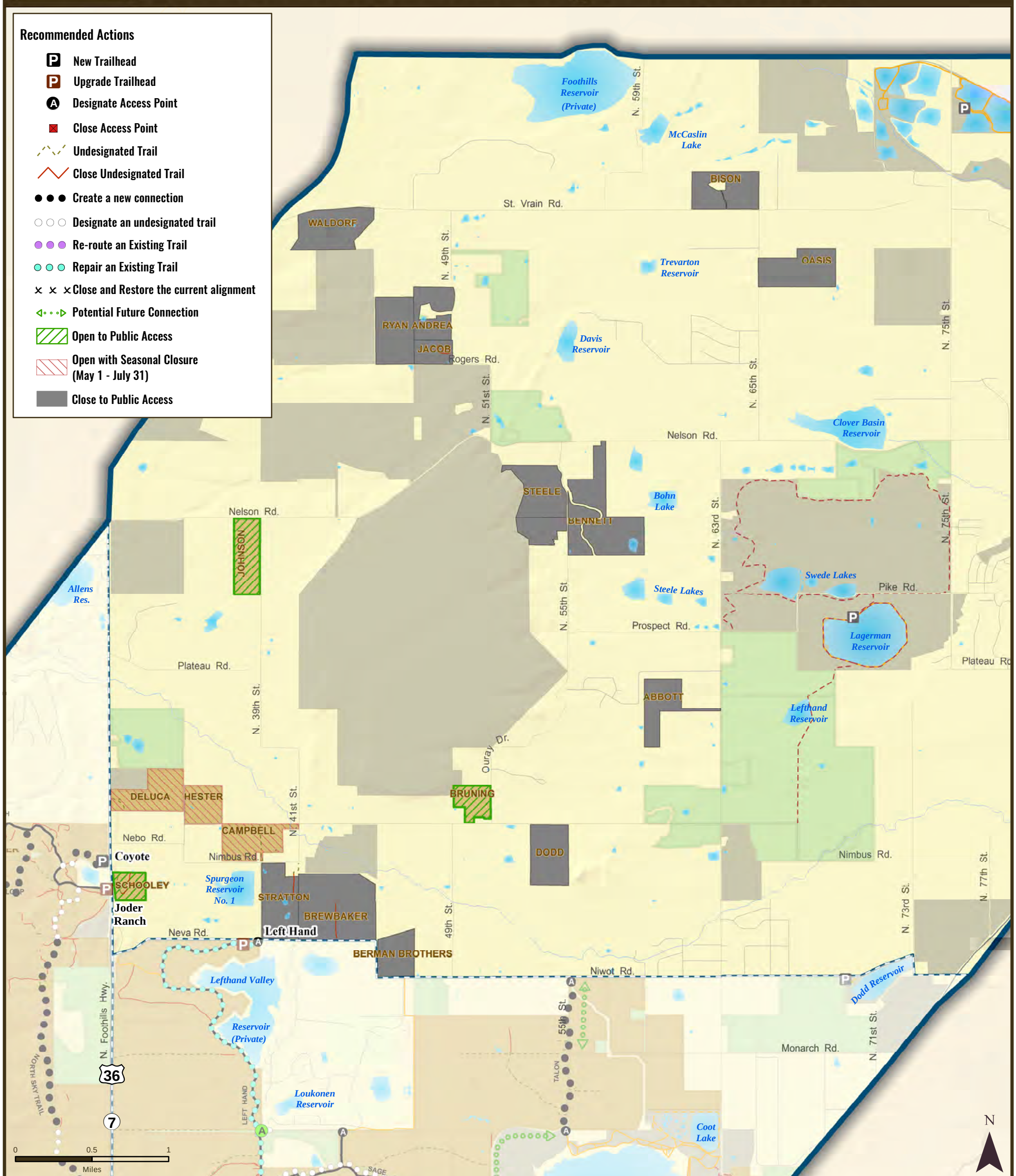
City of Boulder Open Space and Mountain Parks

North Trail Study Area Plan



Northern Properties Subarea Recommendations

- 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
- OSMP Fee & Managed Property in the North TSA
- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land

Trail changes are depicted conceptually. Actual trail alignments will differ.

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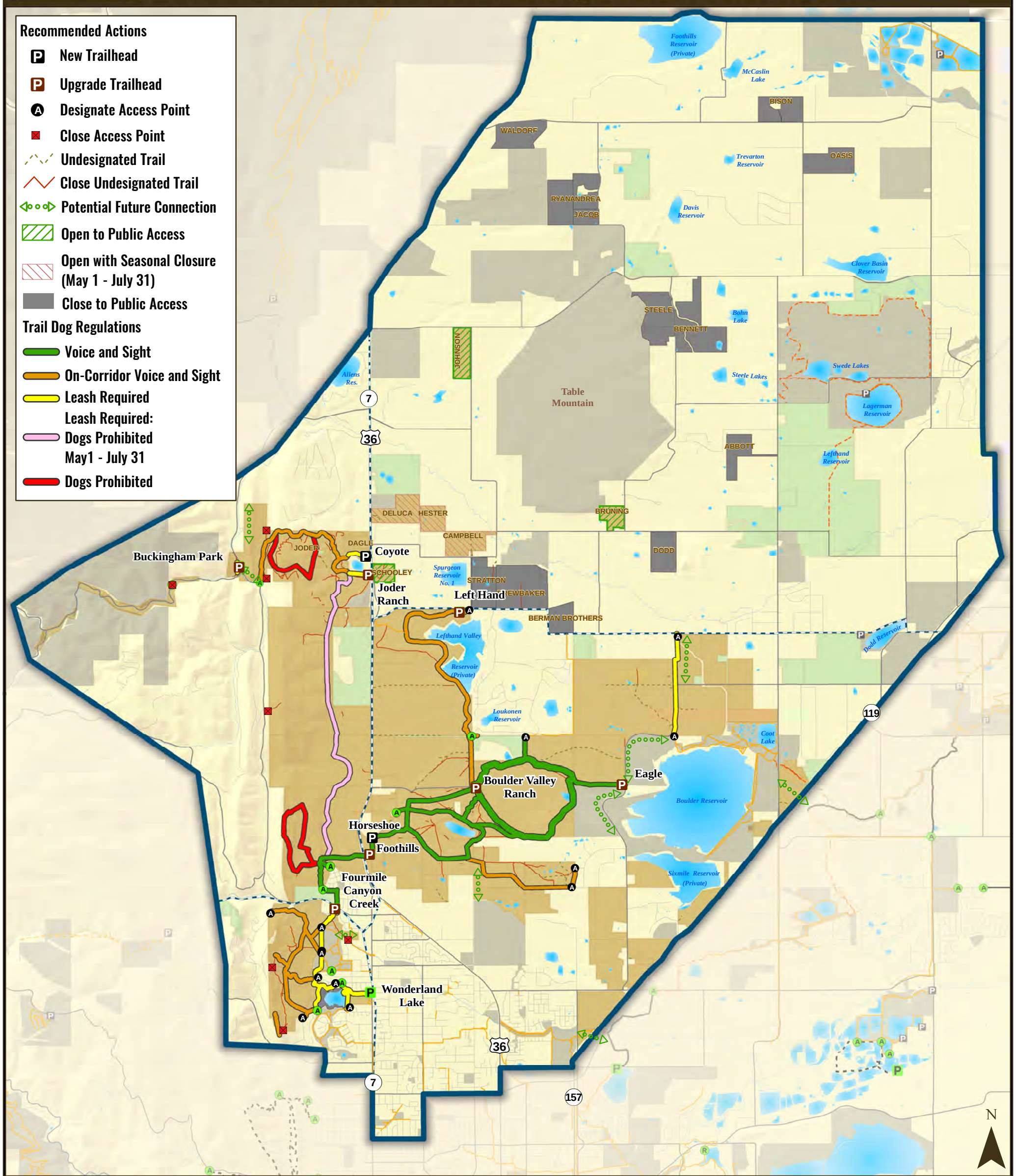
City of Boulder Open Space and Mountain Parks

North Trail Study Area Plan



North Trail Study Area Dog Recommendations

- North Trail Study Planning Area
- North Trail Study Subareas
- OSMP Trailhead
- OSMP Access Point
- OSMP Recreational Feature Access
- Boulder County Trailhead
- 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

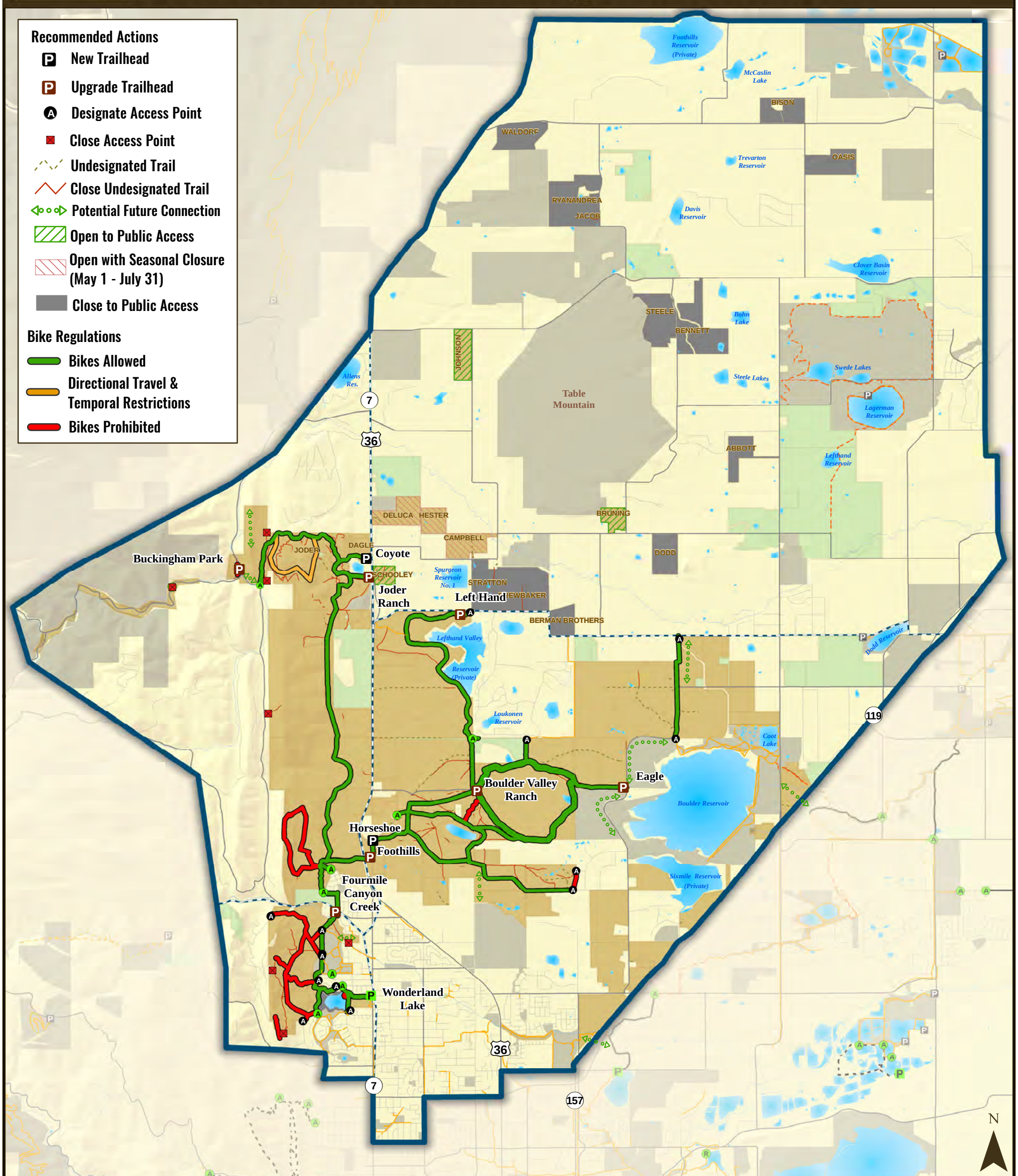
- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land

0 0.5 1
Miles

User: GardE1 Date: 5/11/2016 Path: E:\MapFiles\TSA\NorthTSA\DraftPlan\mxds\Council_Version\RegulationsMaps\TSA_Wide_Appendix\TSA_Wide_Dogs.mxd

City of Boulder Open Space and Mountain Parks

North Trail Study Area Plan



North Trail Study Area Bike Recommendations

- North Trail Study Planning Area
- North Trail Study Subareas
- OSMP Trailhead
- OSMP Access Point
- OSMP Recreational Feature Access
- Boulder County Trailhead
- 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

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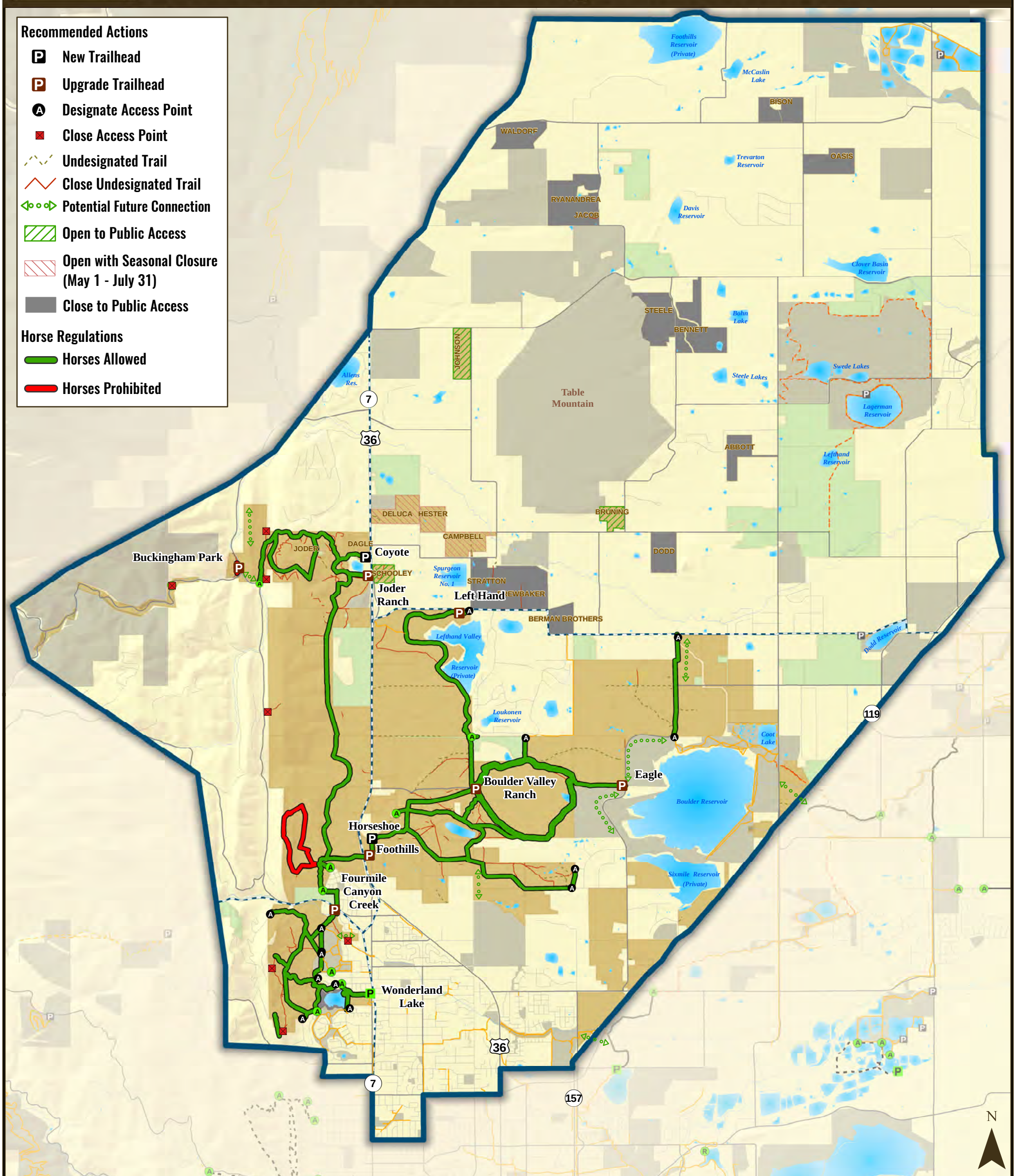
City of Boulder Open Space and Mountain Parks

North Trail Study Area Plan



North Trail Study Area Horse Recommendations

- North Trail Study Planning Area
- North Trail Study Subareas
- OSMP Trailhead
- OSMP Access Point
- OSMP Recreational Feature Access
- Boulder County Trailhead
- 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

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Miles

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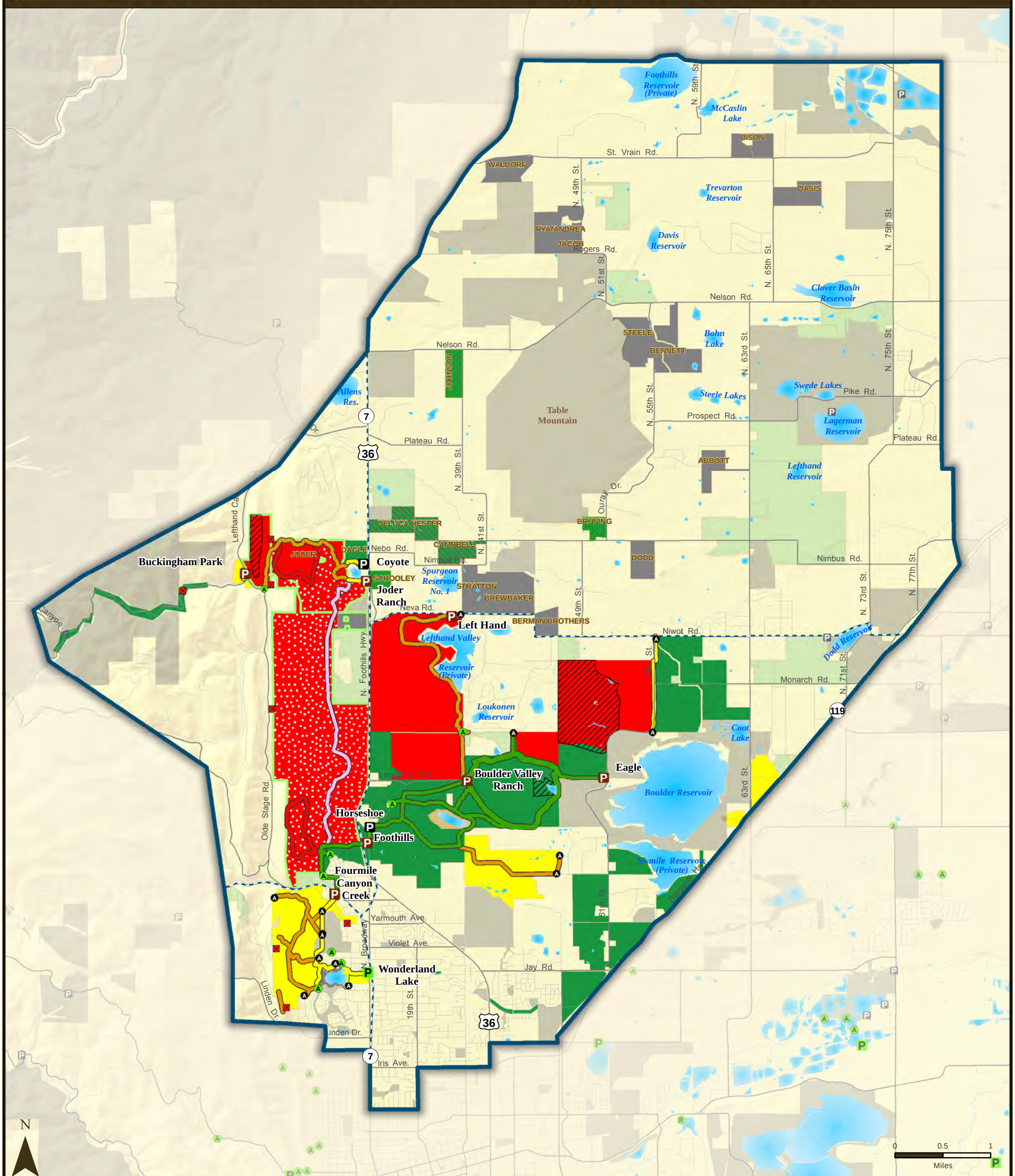
City of Boulder Open Space and Mountain Parks

North Trail Study Area Plan



North Trail Study Area Regulatory Settings

- North Trail Study Planning Area
- North Trail Study Subareas
- HCA Boundary
- OSMP Access Point

Visitor Access Regulations

- New Trailhead
- New Access Point
- Close Access Point

Trail Dog Regulations

- Voice and Sight
- On-Corridor Voice and Sight
- Leash Required
- Leash Required; Seasonal Closure May 1 - July 31
- Dogs Prohibited
- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land

Dog Regulation Areas

- Voice and Sight Control
- Leash Required
- Dogs Prohibited
- Seasonal Raptor Closure
- Open with Seasonal Closure (May 1 - July 31)
- Closed to Off-Trail Public Access
- Closed to Public Access

Appendix B

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

The OSBT hosted the North TSA process and with Open Space and Mountain Parks (OSMP) staff held nine public meetings, four study sessions and three public hearings to gather public input and comment, to provide feedback to staff on the planning process, to evolve plan scenarios, to approve plan sideboards, to determine which scenario to use as the basis for the draft plan and to review and recommend the draft plan for Boulder City Council acceptance.

OSBT Meetings and Study Sessions		
Date	Type of Meeting Discussion	Topic
March 9, 2016	Public Hearing	North TSA Draft Plan
February 10, 2016	Public Hearing	North TSA Updated Refined Scenarios
January 13 and 14, 2016	Study Session	North TSA Refined Scenarios
December 9, 2015	Update	North TSA Update
November 16, 2015	Study Session	North TSA Preliminary Scenarios
October 14, 2015	Update	North TSA Update
September 9, 2015	Update	North TSA Update
August 12, 2015	Study Session	North TSA Interests
July 8, 2015	Update	North TSA and Youth Engagement Update
June 15, 2015	Public Hearing and Update	North TSA Sideboards and Update on North TSA Planning Process and Inventory and Assessment Report
May 15, 2015	Update	North TSA Update
April 8, 2015	Matters	Draft Board Editorial for the North TSA Plan
March 11, 2015	Update	North TSA Update
February 18, 2015	Study Session	North TSA Scope, Goals, Process and Public Engagement Strategy

How the public engaged in the North TSA Plan

- Nine community workshops
- On-site, local store-front, neighborhood and Latino community engagement

- Inspire Boulder, the city's internet-based participatory platform
- Email and social media submissions
- Youth engagement

Community Workshops

Four community workshops were held during which the community shared their thoughts on important resources within the North TSA, the proposed plan sideboards and their interests in the North TSA. Two informational panels were held where experts informed the community about visitor and natural resource management strategies. Two workshops were held to unveil and refine preliminary scenarios and a final workshop was held to unveil and continue to the revise the refined scenarios.

Community Workshops	
Date	Topic
December 10, 2015	Community Information Session and Workshop for Refined Scenarios for the North TSA
October 19, 2015	Community Workshop to Refine Preliminary Scenarios for the North TSA
October 5, 2015	Community Workshop to Learn About and Provide Feedback on Preliminary Scenarios for the North TSA
September 2, 2015	Expert Panel on Natural Resources
August 26, 2015	Expert Panel on Trail Sustainability and Visitor Experience
June 27, 2015	Community Workshop to Discuss Interests in the North TSA
June 24, 2015	Community Workshop to Discuss Interests in the North TSA
May 6, 2015	Community Workshop to Kick Off Development of the North TSA Plan
May 2, 2015	Community Workshop to Kick Off Development of the North TSA Plan

On-site, local store-front, neighborhood and Latino community engagement

OSMP staff conducted on-site engagement in the North TSA and went into the community to collect information from community members at trailheads and local coffee shops. Community members shared what they thought needed to be improved, changed or preserved within the North TSA and why. OSMP staff also engaged with the Latino community by attending an event at Holiday Park.

Written and Electronic Communications

OSMP received close to 1,000 separate comments during the development of the North TSA Plan from the NorthTSA.org web page, e-mails, comments submitted through Inspire Boulder, social media submissions and written letters. OSMP created several compendia of public input containing the individual comments submitted as part of the North TSA planning process.

Youth Engagement

Open Space and Mountain Parks partnered with Growing Up Boulder to engage children and youth in the North TSA planning process through the following events.

Youth Engagement	
Date	Event/Topic
July 11, 2015	Family Day at Wonderland Lake was an opportunity for children and families to provide feedback on what they'd like to see in the North TSA and why.
June - July, 2015	Five OSMP Junior Ranger crews provided feedback on what they do and don't like about the conditions in the North TSA.
June 2015	Boulder Journey School pre-schoolers shared what they value about open space during a fieldtrip to Wonderland Lake.
May 1, 2015	Youth Advisory Board high school students provided input on effective ways to involve youth in the North TSA planning process.

Appendix C

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Appendix C: Existing Infrastructure and Recommended Improvements for Trailheads

In 2008, OSMP classified all trailheads based on visitation levels. Information from the 2004-05 Visitor Survey and staff knowledge was used to estimate the visitation levels. The following table displays types of trailheads. The estimated visitation for each category breaks down as follows: 1-9,999 visits per year were classified as very low, 10-24,999 as low, 25,000-74,999 as medium and ≥75,000 as high.

Types of Trailheads		
Class	Description	Estimated Use
TH1	Simple/Minor Developed Trailhead	Very Low to Low Use
TH2	Developed/Improved Trailhead	Medium Use
TH3	Fully Developed Trailhead	High Use

Each class has associated amenities that must be present to comply with the standard. OSMP inventoried all the trailheads in the North TSA and identified the improvements needed to bring sites up to standards. The following table lists what is currently present at the sites and what is needed.

Trailhead Name	Class	Existing Infrastructure	What is Needed
Joder Interim	T1	Kiosk Dog Station Dog Compost Station Parking Bollard (wooden) Bike Rack Trash Can Parking Spaces (5) Horse Trailer Parking Spaces (2)	Reflector Sticks Near Large Rocks and Other Hazards Fencing
Lefthand	T1	Kiosk Fencing Bike Rack Trash Can Parking Bollard (wooden) Parking Spaces (36)	Reflectors on Fence Parking ADA Parking Space (1) Vehicle Gate at Entry Dog Station Dog Compost Station
Sage/Boulder Valley Ranch	T2	Kiosk	Replace Outhouse

Trailhead Name	Class	Existing Infrastructure	What is Needed
		Dog Station Dog Compost Station Fencing Outhouse (ADA toilet is not up to standards) Bike Rack Trash Can Parking Spaces (18) ADA Parking Space (1)	Parking Bollard Reflectors on Fence Parking No Parking Along Longhorn Road
Eagle	T2	Kiosk Dog Station Dog Compost Station Fencing Bike Rack Trash Can Parking Spaces (24)	ADA Parking Space Parking Bollard Vehicle Gate at Entry Reflectors on Fence Parking Horse Trailer Parking
Foothills	T2	Kiosk Dog Station Fencing Bike Rack Trash Can Parking Spaces (17)	ADA parking space Parking Bollard Reflectors on Fence Parking Larger/wider vehicle entrance Widen Trailhead to the South Dog Compost Station Horse Trailer Parking
Fourmile Canyon Creek	T3	Kiosk Dog Station Fencing Bike Rack Trash Can Parking Spaces (37) ADA Parking Spaces (4)	Resurface Trailhead Parking Bollard Reflector Sticks Near Large Rocks and Other Hazards Reflectors on Fence Parking Larger/wider vehicle entrance Re-align kiosk/dog station Dog Compost Station New Kiosk and Entrance Sign
Wonderland Lake	T2	Kiosk Dog Station Fencing Picnic Tables Bike Rack Trash Can Parking Spaces (20) ADA Parking Spaces (2)	To be determined with Foothills Nature Center site planning.
Buckingham Park	T3	Kiosk Fencing Outhouse (ADA toilet)	Replace Outhouse Parking Bollard Reflectors on Fence Parking

Trailhead Name	Class	Existing Infrastructure	What is Needed
		Picnic Tables (3) Bike Rack Trash Cans (2 sets of 2; 1 recycle) Grills (1) Parking Spaces (35) ADA Parking Space (1)	Reflector Sticks Near Large Rocks and Other Hazards Dog Station Dog Compost Station

Appendix D

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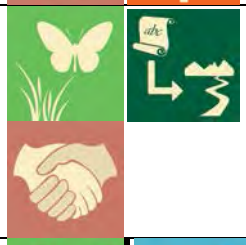
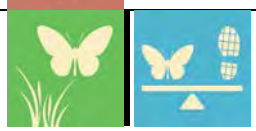
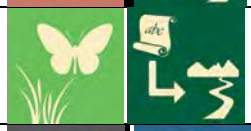
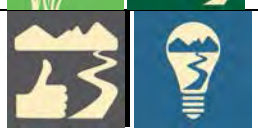
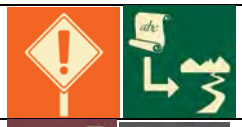
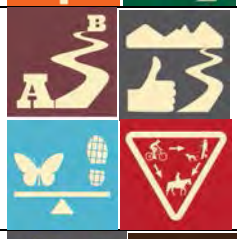
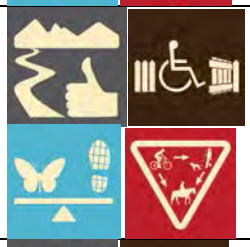
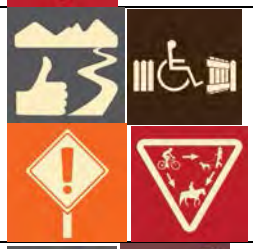
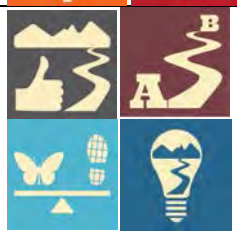
Appendix D: Recommended Actions and Interests Table

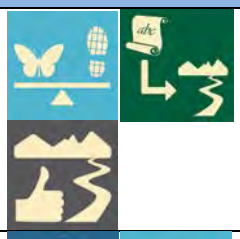
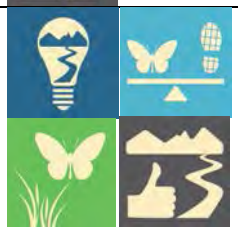
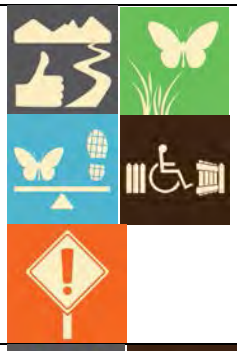
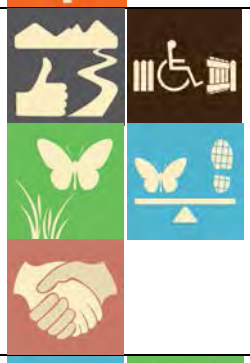
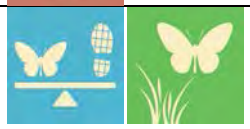
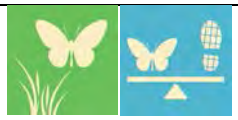
North TSA Interests			
Improved Visitor Experience		Improved Connectivity	
Conservation of Resources (Natural/Agricultural/Cultural)		Balance of Recreation and Resource Conservation	
Improved Access and Accessibility		Increased Safety	
Honoring Community Values and Commitments		Decreased Visitor Conflict	
Increased Education and Understanding		Effective Planning Process and Plan Implementation	

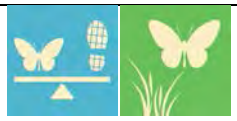
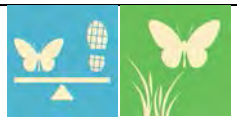
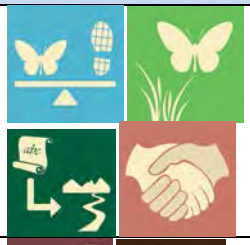
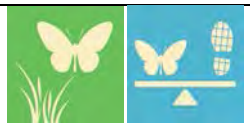
Reference Number(s) and Action Title	Action	Interests
TSA-Wide		
T1 to T9 Provide management area designations for properties without designations to guide management actions.	• Retain the Joder and Cox property designation (T1) as a Habitat Conservation Area (HCA) and implement as part of the North Foothills HCA. • Designate Dagle II (T2), Stratton (T5), Lappin (T6), IBM open space easement (T7), Hart-Jones Exchange (T8) and Palo Park (T9) properties as Natural Areas. • Limit public access to on trail travel on IBM open space easement property. • Designate Dakota Ridge Village (T3) property as a Passive Recreation Area. • Designate Berman Brothers (T4) as an Agricultural Area.	
T10 to T15 Collaborate with partner agencies to create regional connections.	As opportunities arise, collaborate with partner agencies to create the following regional trail connections in a way that minimizes natural resource impacts. • (T10) North TSA to Boulder County Parks and Open Space's Heil Valley Ranch. The North TSA Plan does not preclude future public planning processes to assess a regional connector trail connection to Heil Ranch on the Buckingham property. • (T11) North TSA to Boulder County Parks and Open Space's Lagerman/Imel/AHI Open Space Complex. • (T12) A Boulder-to-Lyons trail connection including the efforts of the Rocky Mountain Greenway Project. • (T13) IBM Connector Trail underpass and trail *(construction pending).* • (T14) Fourmile Canyon Creek Trail underpass to Cottonwood Trail *(construction pending).*	

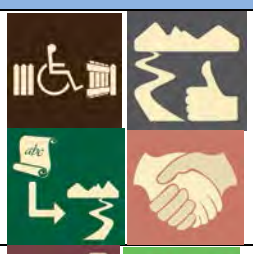
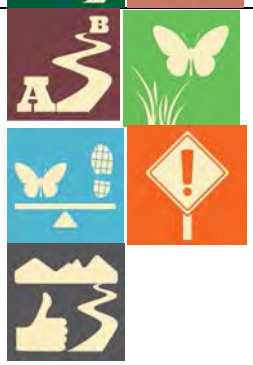
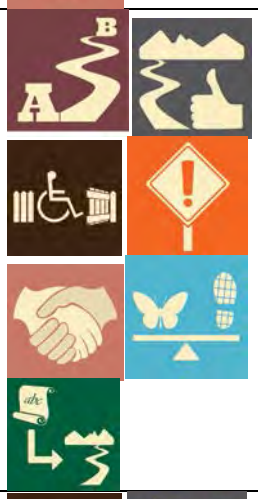
Reference Number(s) and Action Title	Action	Interests
	• (T15) Eagle Trail to the planned Boulder Reservoir Trail.	
T16 to T20 Collaborate with partner agencies to create local trail connections.	As opportunities arise, collaborate with partner agencies to create the following local trail connections in a way that minimizes natural resource impacts. • (T16) Joder Trail to Buckingham Park via Olde Stage Road *(in progress).* • (T17) Joder Ranch and Boulder County's Six-Mile Fold. Boulder County will conduct its own public planning process to determine access and management of visitors on Six Mile Fold. OSMP will coordinate with the county's planning efforts to determine if and where trails could be located in this area. • (T18) City of Boulder's Area III park site to the North TSA. • (T19) Boulder Reservoir to Niwot Road. • (T20) Fourmile Canyon Creek Greenway path to Foothills Community Park.	
T21 Designate undesignated access points that connect with new or existing designated trails.		
T22 Bring all trails up to standards.	Conduct maintenance activities to bring trails up to OSMP sustainable trail guidelines.	
T23 Bring all trailheads and access points up to standards.	Update, replace and install infrastructure to bring existing trailheads and access points up to OSMP standards.	
T24 Remove unnecessary fencing and use wildlife friendly fencing.	Remove fencing that is no longer serving a function and when modifying or installing fencing in implementation of the North TSA, ensure fencing is wildlife friendly.	
T25 Allow natural revegetation or restore all undesignated trails not integrated into designated trail connections.		

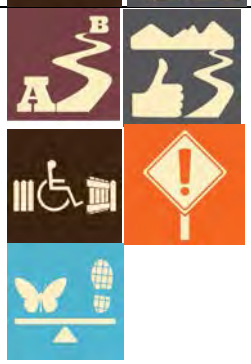
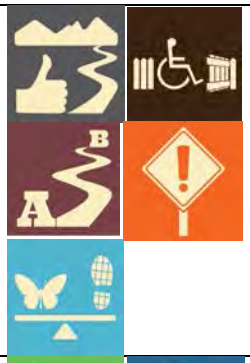
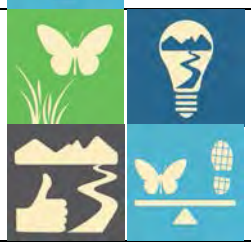
Reference Number(s) and Action Title	Action	Interests
T26 Assess and prevent the introduction and spread of priority invasive plants.	Assess and prevent the introduction and spread of priority invasive plants along new trail connections and decommissioned or undesignated trail sections under restoration.	
T27 Create interpretive information and messages about unique, rare and sensitive resources.		
North Foothills Subarea		
NF1 Retain the Joder property as a Habitat Conservation Area (HCA).	Retain the management area designation and include as part of the North Foothills HCA.	
NF2 Designate Dagle II property as a Natural Area.		
NF3 Designate Dakota Ridge Village property as a Passive Recreation Area.		
NF4 Collaborate to create a trail connection from North TSA to Boulder County Parks and Open Space's Heil Valley Ranch.	As opportunities arise, collaborate with partner agencies to create regional trail connections in a way that minimizes natural resource impacts. The North TSA Plan does not preclude future public planning processes to assess a regional trail connection to Heil Ranch on the Buckingham property.	
NF5 Collaborate to create a connection from Joder Ranch Trail to Buckingham Park via Olde Stage Road (in progress).	As opportunities arise, collaborate with partner agencies to create local trail connections in a way that minimizes natural resource impacts.	
NF6 Collaborate to create a connection between Joder Ranch and Boulder County's Six-Mile Fold property.	As opportunities arise, collaborate with partner agencies to create local trail connections in a way that minimizes natural resource impacts. Boulder County will conduct its own public planning process to determine access and management of visitors onto Six-Mile Fold. OSMP will coordinate with the county's planning efforts to determine if and where trails could be located to provide access to	

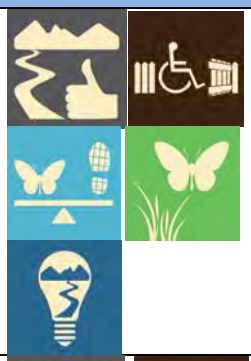
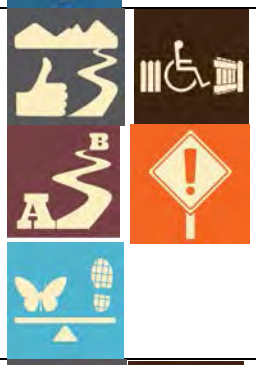
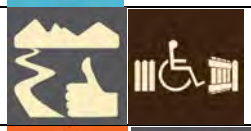
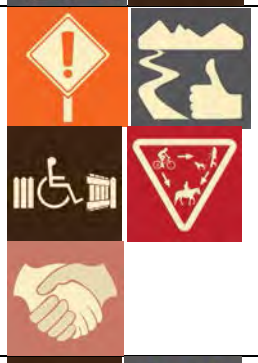
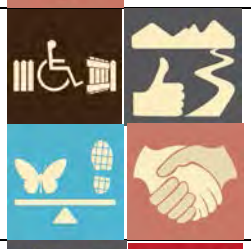
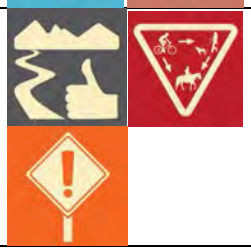
Reference Number(s) and Action Title	Action	Interests
	this area and minimize natural resource impacts.	
NF7 Close Cottonwood Recreation Area.		
NF8 Realign western section of the Interim Joder Trail near the Buckingham property. (Joder Ranch Trail)		
NF9 Construct one loop trail on the northwest section of the Joder property. (Mahogany Loop)		
NF10 Construct a new trailhead for passenger vehicle parking on the Dagle/Wright properties. (Coyote Trailhead)		
NF11 Construct a connector trail from the new trailhead (Coyote Trailhead) on the Dagle property to the Joder Ranch Trail.		
NF12 Retain Interim Joder Trailhead. (Joder Ranch Trailhead)		
NF13 Construct a north-south connector trail from Foothills Trail to the Joder Ranch Trail west of U.S. 36. (North Sky Trail)	Construct a trail from the southern section of the Railroad Grade, west of Foothills Business Park, connecting to the Joder Ranch Trail. Use best efforts to locate connector trail through the conservation easement.	

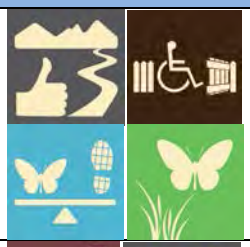
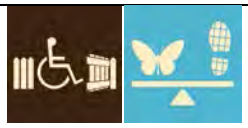
Reference Number(s) and Action Title	Action	Interests
NF14 Include the North Sky Trail in the muddy closure program.		
NF15 Post educational signs about the North Foothills HCA.	Include information about the area's important natural resources as well as safety concerns such as rattlesnakes.	
NF16 Re-route Hogback Trail.		
NF17 Re-route Foothills Trail where it connects to Hogback Trail and eastward to U.S. 36.		
NF18 Do not allow off-trail permits for the area inside the Joder loop trail for two years following the trail's construction. (Mahogany Loop)		
NF19 Do not allow off-trail permits within the North Foothills HCA.	Off-trail permits not allowed in the North Foothills HCA except for areas west and north of Joder Ranch Trail and inside the Mahogany Loop.	
NF20 After City Council approval of the North TSA Plan, staff will return to the		

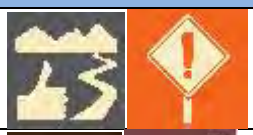
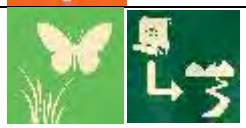
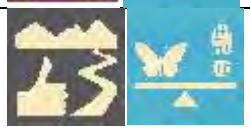
Reference Number(s) and Action Title	Action	Interests
OSBT with monitoring recommendations for the North Foothills HCA, the North Sky Trail and the Joder property.		
No Reference Number: Regulation Change: Leash required with seasonal closure from May 1 – July 31 on Joder connector trail. (North Sky Trail)		
No Reference Number: Regulation Change: Dogs prohibited on the Joder loop trail. (Mahogany Loop)		
Boulder Valley Ranch Subarea		
B1 to B4 Provide management area designations for properties without designations to guide management actions.	Designate Lappin property (B1), IBM open space easement property (B2), Hart-Jones Exchange property (B3) and Palo Park property (B4) as Natural Areas. Limit public access to on-trail travel on IBM open space easement property.	
B5 to B9 Collaborate with partner agencies to create regional trail connections.	As opportunities arise, collaborate with partner agencies to create the following regional trail connections in a way that minimizes natural resource impacts. • (B5) City of Boulder's Area III park site to the North TSA. • (B6) A Boulder-to-Lyons trail connection including the efforts of the Rocky Mountain Greenway Project. • (B7) IBM Connector Trail underpass and trail *(construction pending).* • (B8) Fourmile Canyon Creek Trail underpass to Cottonwood Trail *(construction pending.* • (B9) Eagle Trail to the planned Boulder Reservoir Trail.	
B10 Provide public access to portions of Lappin, Lousberg, Papini and B.L.I.P. properties while protecting sensitive natural resources.	Protect aquatic and wetland resources in and around ponds on these properties by not allowing public access to the ponds.	
B11 Designate access point for where Lefthand Trail connects to Neva Road.		

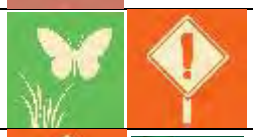
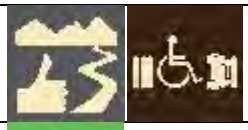
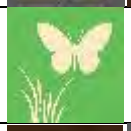
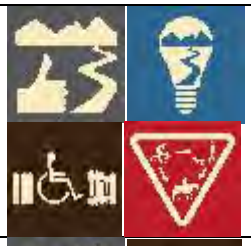
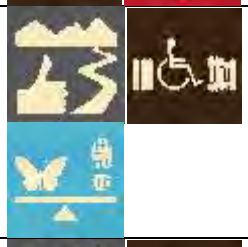
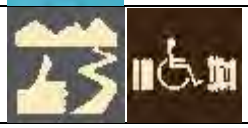
Reference Number(s) and Action Title	Action	Interests
B12 Bring Lefthand Trailhead up to standards.	Include horse trailer parking at Lefthand Trailhead.	
B13 Improve Lefthand Trail.		
B14 Designate a connector trail from Lefthand Trail to the Lake Valley Estates neighborhood.		
B15 Create a connection via the Boulder Reservoir to Niwot Road. (Talon Trail)	Create a regional trail connection in a way that minimizes natural resource impacts. Work with partner agencies to determine the most feasible trail alignment with a preference for an alignment along 55th Street.	
B16 Bring Eagle Trailhead up to standards.	Include horse trailer parking at Eagle Trailhead.	

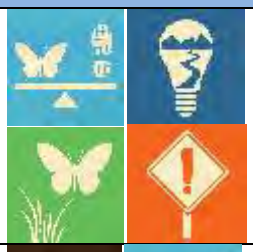
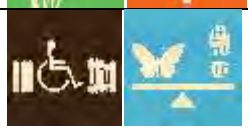
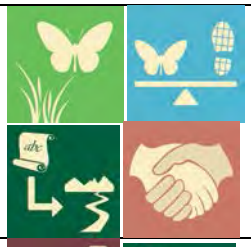
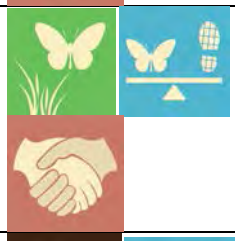
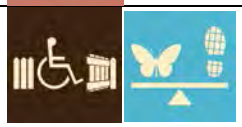
Reference Number(s) and Action Title	Action	Interests
B17 Bring Foothills Trailhead up to standards.		
B18 Add a new trailhead at the Degge Trail access point. (Horseshoe Trailhead)	Provide additional parking capacity and horse trailer parking.	
B19 Create a trail connection between Foothills and Degge trails, re-route Degge Trail.	Provide a trail connection from Foothills Trail to re-routed west end of Degge Trail.	
B20 Replace existing trails north of Mesa Reservoir with new trail connections.	Replace Old Mill and Cobalt trails with a single new trail and replace western section of Eagle Trail and steep, downhill section of Eagle Trail with new re-routed connections.	
B21 Replace undesignated trails through sensitive resources with a single trail. (Shale Trail)	Provide a sustainable connection with Sage Trailhead, by replacing undesignated trails through shale barrens and rare plant habitat with one new designated trail with educational signs for pedestrians and equestrians north of Mesa Reservoir.	

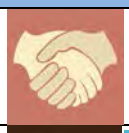
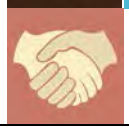
Reference Number(s) and Action Title	Action	Interests
B22 Provide nature-viewing access at Mesa Reservoir.		
B23 Replace existing trails with a new trail connection south of Mesa Reservoir.	Replace southern sections of Mesa Reservoir Trail and the Hidden Valley Trail with a new single trail connection.	
B24 Pave Longhorn Road.	Pave or resurface Longhorn Road with an alternative permeable surface material.	
B25 Bring Sage (BVR) Trailhead up to standards.	Improve restroom facilities.	
B26 Improve Americans with Disabilities Act (ADA) access on Eagle and Sage trails.		
B27 Provide a parallel single track trail at BVR.	Designate and slightly re-route in some locations one parallel single track tread adjacent to the Eagle and Sage loop at BVR.	

Reference Number(s) and Action Title	Action	Interests
B28 Allow fishing access on eastern shore of BVR pond.		
B29 Create new trail connection on the south side of the Papini property. (Wrangler Trail)	Provide a trail connection along the south side of the Papini property connecting Kelso Road to the Mesa Reservoir trail system.	
B30 Continue to follow the terms of the lease regarding public access to the BVR equestrian arena and concurrently develop options for nearby horse trailer parking and/or seek to provide an equivalent and suitable corral option that will be determined in cooperation with stakeholders that will be vetted and approved in a future public process.	The board recommends that staff proactively address any conflict issues resulting from public access in future lease negotiations.	
No Reference Number: Regulation Change: Dogs allowed with On-Corridor Voice and Sight access on Lefthand Trail.		
Wonderland Lake Subarea		
W1 Collaborate with Parks and Recreation to support nature play experiences on their adjacent properties.	Collaborate with Parks and Recreation to support designed nature play experiences on their property and support appropriate passive recreation aspects of this type of experience on adjacent OSMP land.	
W2 Assess vision for Foothills Nature Center.	OSMP is assessing and preparing plans for the future vision of the Foothills Nature Center and associated trailhead.	

Reference Number(s) and Action Title	Action	Interests
W3 Construct shade structure near Wonderland Lake Trailhead.		
W4 Improve safety at Broadway crossing.	Support and encourage improvements to crossing between Sumac Avenue, RTD bus stop and the Foothills Nature Center.	
W5 Revegetate the flood damaged northern loop section of Old Kiln Trail.		
W6 Rename Four Mile Trailhead as Fourmile Canyon Creek Trailhead.		
W7 Collaborate to create a connection from Fourmile Canyon Creek Greenway path to Foothills Community Park.	As opportunities arise, collaborate with partner agencies to create local trail connections in a way that minimizes natural resource impacts.	
W8 Create Wonderland Lake backdrop loop trail connection by re-routing trails. (Antler Loop)	Re-route existing designated and undesignated trails to provide more sustainable connections to the paragliding launch sites and visitors seeking a trail experience on the Wonderland hogback.	
W9 Re-route portion of Wonderland Lake Trail.	Re-route the steep downhill section of trail just north of where it connects into Foothills South Trail.	
W10 Create a second, smaller Wonderland Lake backdrop loop trail. (Glider Access Trail)	Create a more sustainable trail connection to replace the existing glider access trail.	
W11 Improve Americans with Disabilities Act (ADA) access on Wonderland Lake Trail.		

Reference Number(s) and Action Title	Action	Interests
W12 Prohibit boats and belly boats on Wonderland Lake.		
W13 Prohibit ice skating on Wonderland Lake.		
W14 Allow sledding on Wonderland Lake dam.		
W15 Do not provide access to Wonderland Lake's south, west and north shores.		
W16 Provide access to the cattail marsh on north side of peninsula.		
W17 Establish hardened pullout areas on the peninsula for educational programming and a hardened wading access.	Provide increased beach access on the western edge of the peninsula.	
W18 Allow Wonderland Lake wading access from designated areas on the peninsula.		
W19 Create Wonderland Lake fishing pier.		

Reference Number(s) and Action Title	Action	Interests
		
No Reference Number: Regulation Change: Dogs allowed On-Corridor Voice and Sight access on Wonderland Hill loop. (Antler Loop)		
Northern Properties Subarea		
NP1 Designate Berman Brothers property as an Agricultural Area.		
NP2 Designate Stratton property as a Natural Area.		
NP3 Collaborate to create a connection between the North TSA to Boulder County Parks and Open Space's Lagerman/Imel/AHI Open Space Complex.	As opportunities arise, collaborate with partner agencies to create regional trail connections in a way that minimizes natural resource impacts.	
NP4 Prohibit public access on Waldorf, Ryan, Andrea, Jacob, Bison, Oasis, Steele, Bennett, Stratton, Brewbaker, Berman Brothers, Dodd and Abbott properties.		
NP5 Allow public access on Deluca, Hester and Campbell properties with seasonal closure (May 1 - July 31) for ground nesting bobolinks.		

Reference Number(s) and Action Title	Action	Interests
		
NP6 Allow public access on Johnson, Bruning and Schooley properties.		

Appendix E

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Appendix E: Scheduling and Estimated Costs for North TSA Projects

Plan Implementation Costs

The current total estimated cost of implementing the draft plan, not including the personnel expenses of standard employees, is $4.3 million. Costs are estimated and may be subject to change as additional evaluation and planning occurs for project implementation.

OSMP would also look for additional opportunities to fund projects in the Draft Plan, including grants and partnerships. Some projects may also be suitable for completion by or with the assistance of volunteers.

Project Phasing

Project scheduling will be subject to change based on the integration of North TSA projects into future departmental budgeting and work planning.

The draft plan recommendations were ranked by considering the benefits of each strategy based on trail sustainability, visitor experience and environmental benefits. A strategy received a higher ranking if there was greater benefit across all three factors and if that strategy had especially widespread or long-lasting benefit.

Additional factors integrated into project phasing include:

- Project cost, staff capacity or other fiscal constraints.
- Specific timing requirements (i.e. completion of flood related projects for FEMA reimbursement).
- Sequencing (i.e., projects that are necessarily precursors or dependents or that can leverage staff and cost efficiencies through sequencing).
- Prior commitments and projects already planned for completion in upcoming years
- Projects with a high level of community support/anticipation are given greater priority than projects which are otherwise the same.
- The need to coordinate partner agency collaboration.

Smaller scale projects and those that have fewer timing or cost constraints (i.e. management area designations, sign projects, regulatory changes) may be included in annual work plans as opportunity allows and accomplished as a part of ongoing core departmental services and infrastructure maintenance as shown in both Table 1: Ongoing Projects and Actions to Implement North TSA Plan and Table 2: Projects that can be Added as Opportunity, Staffing and Funding Allows to 2016-2022 Timeline.

Projects that require future planning, feasibility studies and coordination with other City departments, Boulder County and other agencies are included in Table 3: Projects that are Dependent on Collaboration with Other Departments, Boulder County and External Entities. Cost estimates are not available for these projects.

The recommended scheduling of remaining North TSA projects is included in Table 4: Recommended Schedule for North TSA Projects and Actions.

Table 1: Ongoing Projects and Actions to Implement North TSA Plan

Action #	Plan Ref #	Action	Estimated Cost	Benefit Rank 0-1 = Low 2-3 = Medium 4-6 = High
1	T1	Provide management area designations for properties without designations to guide management actions: Retain the Joder and Cox property designation as a Habitat Conservation Area (HCA) and implement as part of the North Foothills HCA.	$10,000	Medium
20	T21	Designate undesignated access points that connect with new or existing designated trails.	$12,600	Medium
23	T24	Remove unnecessary fencing and use wildlife friendly fencing.	$17,800	Medium
24	T25	Allow natural revegetation or restore all undesignated trails not integrated into designated trail connections.	$25,500	High
25	T26	Assess and prevent the introduction and spread of priority invasive plants along new trail connections and decommissioned or undesignated trail sections under restoration.	$91,000	High
26	T27	Create interpretive information and messages about unique, rare and sensitive resources.	$31,000	Medium
65	B30	Continue to follow the terms of the lease regarding public access to the BVR equestrian arena and concurrently develop options for nearby horse trailer parking and/or seek to provide an equivalent and suitable corral option that will be determined in cooperation with stakeholders that will be vetted and approved in a future public process. The board recommends that staff proactively address any conflict issues resulting from public access in future lease negotiations.	$20,000	Low
79	NF19	Do not allow off-trail permits within the North Foothills HCA.	Costs combined with HCA designation and implementation	Medium
82	REG	Joder HCA designation and off trail permit implementation	Costs combined with HCA designation and implementation	Low
		TOTAL ESTIMATED COST	$207,900	

Table 2: Projects that can be Added as Opportunity, Staffing and Funding Allows to 2016-2022 Timeline

Action #	Plan Ref #	Action	Estimated Cost	Benefit Rank 0-2 = Low 2-3 = Medium 4-6 = High
34	W10	Create a second, smaller Wonderland Lake backdrop loop trail (Glider Access Trail). Create a more sustainable trail connection to replace the existing glider access trail.	$95,000	High
66	REG	Lefthand Trail: Dogs Voice and Sight On Corridor	$500	Low
		TOTAL ESTIMATED COST	$95,500	

Table 3: Projects that are Dependent on Collaboration with Other Departments, Boulder County and External Entities

Action #	Plan Ref #	Action	Estimated Cost	Benefit Rank 0-3 = Low 2-3 = Medium 4-6 = High
10	T10	Collaborate with partner agencies to create regional connections in a way that minimizes natural resource impacts. North TSA to Boulder County Parks and Open Space's Heil Valley Ranch. The North TSA Plan does not preclude future planning processes to assess and recommend a regional connector trail connection to Heil Ranch on the Buckingham property.	Unknown	Medium
11	T11	Regional Connections: North TSA to Boulder County Parks and Open Space's Lagerman/Imel/AHI Open Space Complex.	Unknown	Medium
12	T12	Regional Connections: A Boulder-to-Lyons trail connection including the efforts of the Rocky Mountain Greenway Project	Unknown	Medium
13	T13	Regional Connections: IBM Connector Trail underpass and trail (construction pending)	Boulder County Project	Low
14	T14	Regional Connections: Fourmile Canyon Creek Trail underpass to Cottonwood Trail (construction pending)	Boulder County Project	Low
15	T15	Regional Connections: Eagle Trail to the planned Boulder Reservoir Trail	Unknown	Medium
17	T17	Local Connections: Joder Ranch and Boulder County's Six-Mile Fold. Boulder County will conduct its own planning process to determine access and management of visitors onto Six-Mile Fold. OSMP will coordinate with the county's planning efforts to determine if and where trails could be located in this area.	Unknown	Low
18	T18	Local Connections: City of Boulder's Area III park site to the North TSA	Unknown	Low
19	T20	Local Connections: Fourmile Canyon Creek Greenway path to Foothills Community Park	City of Boulder Greenways Project	Low
27	W1	Collaborate with City of Boulder Parks and Recreation Department to support designed nature play experiences on their property and support appropriate passive recreation aspects of this type of experience on adjacent OSMP land.	Core Service	Low
29	W4	Improve safety at Broadway crossing between Sumac Avenue, RTD bus stop and the Foothills Nature Center.	Core Service	Medium

Table 4: Recommended Schedule for North TSA Projects and Actions

Action #	Plan Ref #	Action	2016	2017	2018	2019	2020	2021	2022	2023 and Later	Benefit Rank 0-1 = Low 2-3 = Medium 4-6 = High
2	T2	Management Area Designation: Designate Dagle II as a Natural Area.	Core Service								Low
3	T3	Management Area Designation: Designate Dakota Ridge Village property as a Passive Recreation Area.	Core Service								Low
4	T4	Management Area Designation: Designate Berman Brothers property as an Agricultural Area.	Core Service								Low
5	T5	Management Area Designation: Designate Stratton as a Natural Area.	Core Service								Low
6	T6	Management Area Designation: Designate Lappin as a Natural Area.	Core Service								Low
7	T7	Management Area Designation: Designate IBM open space easement as a Natural Area. Limit public access to on trail travel on IBM open space easement property.	Core Service								Low
8	T8	Management Area Designation: Designate Hart-Jones Exchange as a Natural Area.	Core Service								Low
9	T9	Management Area Designation: Designate Palo Park as a Natural Area.	Core Service								Low
16	T16	As opportunities arise, collaborate with partner agencies to create local trail connections in a way that minimizes natural resource impacts. Joder Trail to Buckingham Park via Olde Stage Road (in progress)	$8,500 Underway								Medium
30	W5	Revegetate the flood damaged northern loop section of Old Kiln Trail.	$3,640 Underway								Medium
56	B21	Provide a sustainable connection with Sage Trailhead by replacing undesignated trails through shale barrens and rare plant habitat with one new designated trail with educational signs for pedestrians and equestrians north of Mesa Reservoir.	$140,000 Design	Build							High
80	NF20	After City Council approval of the North TSA Plan, staff will return to the OSBT with monitoring recommendations for the North Foothills HCA, the North Sky Trail and the Joder property.	Core Service								Low
84	NP4	Prohibit public access on Waldorf, Ryan, Andrea, Jacob, Bison, Oasis, Steele, Bennett, Stratton, Brewbaker, Berman Brothers, Dodd and Abbott properties.	$3,000								Medium
85	NP5	Allow public access on Deluca, Hester and Campbell properties with seasonal closure (May 1-July 31) for ground nesting bobolinks.	$1,000								Medium
86	NP6	Allow public access on Johnson, Bruning, and Schooley properties.	$1,000								Low
21	T22	Bring all trails up to standards. (South Foothills Trail)		$100,000							Medium
28	W3	Construct a shade structure near Wonderland Lake Trailhead.		$25,000							Low
35	W11	Improve Americans with Disabilities (ADA) access on Wonderland Lake Trail.		$9,000							Medium
45	B10	Provide public access to portions of Lappin, Lousberg, Papini and B.L.I.P. properties while protecting sensitive natural resources. Protect aquatic and wetland resources in and around ponds on these properties by prohibiting public access to the ponds.		$9,000							Medium
52	B17	Bring Foothills Trailhead up to standards.		$12,500							Medium
61	B26	Improve Americans with Disabilities Act (ADA) access on Eagle and Sage trails.		$130,000							Medium
67	NF7	Close Cottonwood Recreation Area.		$800							Low
69	NF9	Construct one loop trail on the northwest section of the Joder property. (Mahogany Loop)		$131,000 Design	Build	Build					Medium
70	NF10	Construct a new trailhead for passenger vehicle parking on the Dagle/Wright properties. (Coyote Trailhead)		$137,000 Initial Design	Final Design and Permits	Build					Medium
72	NF12	Retain Interim Joder Trailhead. (Joder Ranch Trailhead)		$7,000 Initial Design	Final Design	Build					Low

Action #	Plan Ref #	Action	2016	2017	2018	2019	2020	2021	2022	2023 and Later	Benefit Rank 0-1 = Low 2-3 = Medium 4-6 = High
73	NF13	Construct a north-south connector trail from Foothills Trail to the Joder Ranch Trail west of US 36 (North Sky Trail). Construct a trail from the southern section of the Railroad Grade, west of Foothills Business Park, connecting to the Joder Ranch Trail. Use best efforts to locate connector trail through the conservation easement.		$805,000 Initial Design	Final Design and permitting	Build	Build	Build			Medium
76	NF16	Re-route Hogback Trail.		Initial Design				$146,000 Final Design, Permits	Build		High
77	NF17	Re-route Foothills Trail where it connects to Hogback Trail and eastward to US 36.		Initial Design				$113,000 Final Design, Permits	Build		High
85	NP5	Allow public access on Deluca, Hester and Campbell properties with seasonal closure (May 1-July 31) for ground nesting bobolinks.		$1,000							Medium
36	W12	Prohibit boats and belly boats on Wonderland Lake.			$500						Low
37	W13	Prohibit ice skating on Wonderland Lake.			$500						Low
38	W14	Allow sledding on Wonderland Lake dam.			$500						Low
39	W15	Do not provide access to Wonderland Lake's south, west and north shores.			$3,500						Low
40	W16	Provide access to the cattail marsh on north side of peninsula.			$8,000						Medium
41	W17	Establish hardened pullout areas on the peninsula for educational programming and a hardened wading access. Provide increased beach access on the western edge of the peninsula.			$14,000						Medium
42	W18	Allow Wonderland Lake wading access from designated areas on the peninsula.			$700						Low
43	W19	Create Wonderland Lake fishing pier.			$45,000						Low
60	B25	Bring Sage (BVR) Trailhead up to standards. Improve restroom facilities.			$71,500 Amenity Updates	Design and build outhouse					High
68	NF8	Realign western section of the Interim Joder Trail near the Buckingham Property. (Joder Ranch Trail)			$14,000 Design	Build					Low
53	B18	Add a new trailhead at the Degge Trail access point (Horseshoe Trailhead). Provide additional parking capacity and horse trailer parking.				$97,500 Design	Build				Medium
54	B19	Create trail connection between Foothills and Degge trails, re-route Degge Trail. Provide a trail connection from Foothills Trail to re-routed west end of Degge Trail.				$35,000 Design	Build				Medium
55	B20	Replace existing trails north of Mesa Reservoir with new trail connections. Replace Old Mill and Cobalt trails with a single new trail connection and replace western section of Eagle Trail and steep, downhill eastern portion section of Eagle Trail with new re-routed connections.				$156,000 Initial Design	Final Design and Permits	Build	Build		High
57	B22	Provide nature-viewing access at Mesa Reservoir.				$2,500 Initial Design	Final Design and Permits	Build	Build		Low
58	B23	Replace southern sections of Mesa Reservoir Trail and the Hidden Valley Trail with a new single trail connection.				$176,000 Initial Design	Final Design and Permits	Build	Build		High
62	B27	Designate and slightly re-route in some locations one parallel single track tread adjacent to the Eagle and Sage loop at BVR.				$35,000 Initial Design	Final Design and Permits	Build	Build		Medium
71	NF11	Construct a connector trail from the new trailhead (Coyote Trailhead) on the Dagle property to the Joder Ranch Trail.				Complete with new Coyote Trailhead					Low

Action #	Plan Ref #	Action	2016	2017	2018	2019	2020	2021	2022	2023 and Later	Benefit Rank 0-1 = Low 2-3 = Medium 4-6 = High
78	NF18	Do not allow off-trail permits for the area inside the Joder loop trail for two years following the trail's construction. (Mahogany Loop)				$3,000					Low
83	REG	Mahogany Loop: Dogs Prohibited				$1,000					Low
51	B16	Bring Eagle Trailhead up to standards.					$57,000 Design	Build			High
32	W8	Create Wonderland Lake backdrop loop trail connection by re-routing trails (Antler Loop). Re-route existing designated and undesignated trails to provide more sustainable connections to the paragliding launch sites and visitors seeking a trail experience on the Wonderland hogback.						Initial Design	Final Design and Permits	$131,000 Build	High
47	B12	Bring Lefthand Trailhead up to standards.						$56,500 Design	Build		Medium
74	NF14	Include the North Sky Trail in the muddy closure program.						Core Service			Medium
75	NF15	Post educational signs about the North Foothills HCA. Include information about the area's important natural resources as well as safety concerns such as rattlesnakes.						$20,500			Low
81	REG	N/A North Sky Trail: Dogs Leash Required (August 1 – April 30) and Seasonal Prohibited (May 1 – July 31)						$1,000			Low
46	B11	Designate access point for where Lefthand Trail connects to Neva Road.							$300		Low
59	B24	Pave Longhorn Road.							$ 700,000		Medium
22	T23	Bring all trailheads and access points up to standards.								$128,000	Medium
31	W6	Rename Four Mile Creek Trailhead as Fourmile Canyon Creek Trailhead.								$10,100	Low
33	W9	Re-route portion of Wonderland Lake Trail. Re-route the steep downhill section of trail just north of where it connects into Foothills South Trail.								$10,000	Medium
44	REG	Wonderland Loop (Antler Loop): Voice and Sight On Corridor								$2,000	Low
48	B13	Improve Lefthand Trail.								$145,000	High
49	B14	Designate a connector trail from Lefthand Trail to the Lake Valley Estates neighborhood.								$300	Medium
50	B15	Create a connection via the Boulder Reservoir to Niwot Road (Talon Trail). Create a regional trail connection that minimizes natural resource impacts. Work with partner agencies to determine the most feasible trail alignment with a preference for an alignment along 55th Street.								$200,000	Medium
64	B29	Create a new trail connection on the south side of the Papini property (Wrangler Trail). Provide a trail connection along the south side of Papini property connecting Kelso Road to the Mesa Reservoir trail system.								$75,000	High
		TOTALS	$157,140	$1,367,300	$158,200	$506,000	$57,000	$337,000	$700,300	$701,400	

Appendix F

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Appendix F: Feedback Themes Not Included in the Draft North TSA Plan

Area/Topic	Feedback	Why It Wasn't Included in Draft Plan
Changing the Joder property Management Area Designation from a Habitat Conservation Area	Some community support for Joder property to be designated as a Passive Recreation Area or Natural Area.	The Open Space Board of Trustees (Board) supported a review of the Habitat Conservation Area designation as part of the North TSA Plan. Given the sensitive and rare resources on the Joder property and the broader community, board and staff support for maintaining the Habitat Conservation Area (HCA) designation, it was determined the existing Joder HCA designation would be retained.
Joder dog regulations	Some community support for dogs on leash on Joder Interim Trail (Joder Ranch Trail).	Community support and board support for On-Corridor Voice and Sight access on the Interim Trail (Joder Ranch Trail) resulted in its inclusion in the Draft Plan.
Joder bike regulations	Some community support for spatial and temporal separation for bikes on the Joder loop trail (Mahogany Loop), Joder Ranch Trail and Joder connector trail (North Sky Trail).	Community support and board support for both directional and temporal regulations for bikes on the Joder loop (Mahogany Loop) and no temporal bike restrictions on the North Sky Trail due to the importance of this trail as part of a regional connection resulted in these inclusions in the Draft Plan.
West Beech/North Foothills HCA Management Area Designation	Some community support for changing the North Foothills HCA Management Area Designation to a Natural Area Designation.	The North Foothills HCA was designated by the Visitor Master Plan and is outside the scope of the North TSA Plan.
Railroad grade undesignated trail.	Some community support for closing and restoring this undesignated trail.	Sections of the railroad grade will be incorporated into the North Sky Trail.
Create two stacked loop trails using re-routes of Hogback Trail and/or extend a loop down to the railroad grade.	Some community support for an additional Hogback loop or extension of the trail.	Staff assessment and evaluation of this action indicate that the length of additional trail in the North Foothills HCA, terrain and resource impacts make this an action not recommended in the Draft Plan.
Provide trail connection from Boulder Valley Ranch to Niwot Road by connecting North Rim Trail to 55th Street.	Some community support for providing this trail connection on the Axelson property.	The trail connection across the Axelson property to Niwot Road will not be included in the Draft Plan because this trail would need to be closed eight months out of the year to protect nesting osprey. An alternate connection via 55th St. to Niwot Road is included in the Draft Plan.
Management of the North Rim Trail	County support for OSMP taking over management of the North Rim Trail.	OSMP will not take on management of the North Rim Trail from the county. The low level of community interest for making improvements does not make this a priority for inclusion in the North

Area/Topic	Feedback	Why It Wasn't Included in Draft Plan
		TSA Plan. OSMP and the county will coordinate on improvements to this trail if the need arises in the future.
Dog regulations for Boulder Valley Ranch.	Some community support for retaining on-leash dog access for Lefthand Trail.	Broad community support and Board support for On-Corridor Voice and Sight access being allowed for Lefthand Trail resulted in its inclusion in the Draft Plan.
Fourmile Trailhead	Some community support for horse trailer parking at Fourmile Trailhead.	Staff assessment of this action indicated space constraints, costs for modifications and complexity of access off of Leehill into trailhead make this an action that staff and the Board didn't recommend in the Draft Plan.
Create trail connection from west end of Old Kiln Trail to the Wonderland Hill loop trail (Antler loop).	Some community support for Old Kiln connector trail.	Further staff assessment and evaluation of this action indicate the level of trail construction required, complexity, safety issues and cost make this an action staff and the Board didn't recommend in the Draft Plan.
Create an out-and-back trail on the eastern section of Old Kiln that ends before the section where the trail was extensively damaged from the flood.	Some community support for out-and-back trail.	Further staff evaluation indicated that due to the extensive flood damage there is no way to build a sustainable trail in this area.
Allow bikes on Old Kiln Trail only Monday through Friday.	Some community support for bike access on Old Kiln Trail.	Broad community concern about visitor conflict and the Board's recommendation against allowing bikes on the Old Kiln Trail resulted in this action not being recommended in the Draft Plan.
Dog regulations in Wonderland Lake.	Some community support for retaining the existing dogs on leash regulations in all of the Wonderland Lake area.	The Board recommended On-Corridor Voice and Sight access be allowed on the Wonderland Hill loop trails west of the Foothills Trail.

Appendix G

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Appendix G: Glossary

Boardwalk: An elevated, fixed-planked structure, usually built on pilings in areas of wet soil or water to provide dry crossings.

Braiding: Parallel, redundant trail tread(s) adjacent to an established trail caused by visitors avoiding the established trail and wearing in a new path(s).

Corridor, Trail: The full dimensions of the trail, including the area (2 to 3 feet) on either side of the tread and the space overhead (10 to 12 feet) from which brush and obstacles need to be cleared. The area of passage of the trail, including all cleared and managed parts above, below and adjacent to the tread.

Cultural Resource: A building, structure, district, site or object that is significant in our history, architecture, archaeology or culture.

Designated Trails: Trails which have a way-finding sign with a trail name and are maintained.

Designed Use: Refers to the allowed use (activity) on the trail which dictates how it is designed, built and maintained. All City of Boulder Open Space and Mountain Parks trails fall into one of six designed uses: Official Vehicle, ADA accessible, Equestrian, Biking, Hiking or Climbing Access.

Drainage Structure: A water diversion structure constructed across the trail tread to remove water flowing down the trail tread or to prevent it from entering the tread.

Ecosystem: The dynamic complex of organisms and their environment contained within a specified area during a specified time. Systemic elements include interactions and feedbacks between components.

Ecotones/Ecotonal: A transitional zone between two biological communities containing the characteristics of each.

Erosion: Natural processes (water, wind, ice or other physical processes) by which soil particles are detached from the ground surface and moved down slope, principally by the actions of running water (gully, rill or sheet erosion). The combination of water falling on the trail, running down the trail, and freezing and thawing, and the wear and tear from traffic create significant erosion problems on trails.

Fall Line: Steepest line across a given contour or the direction water flows down a slope (path of least resistance) under most circumstances. Constructing a trail on the fall line encourages water to run down the trail and leads to erosion.

Grade: The vertical distance of ascent or descent of the trail expressed as a percentage of the horizontal distance, commonly measured as a ratio of rise to length or as a percent. For example, a trail that rises 8 vertical feet in 100 horizontal feet has an 8% grade. Grad is different than angle; angle is measured with a straight vertical as 90° and a straight horizontal as 0°. A grade of 100% would have an angle of 45°.

Grade, Sustained: The steepest acceptable grade permitted over the majority of the trail length.

Grade, Trail: The average grade over the length of a trail or long section of trail.

Habitat: The environment where a plant or animal naturally or normally lives and grows.

Habitat Effectiveness: An area that meets a range of required characteristics, including environmental factors and lack of disturbance, and supports all stages of a species lifecycle.

Highly Suitable Habitat: An area in which a species can potentially or does occur due to favorable environmental variables such as vegetation characteristics, slope, aspect, size of habitat patch.

Interpretation: The educational methods by which the history and meaning of historic sites, buildings, objects, districts and structures are explained by use of docents, leaflets, tape recordings, signs, film and other means.

Invasive Species: A species that is non-native (or alien) to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.

Resilience: The ability of a community to prepare for and respond effectively to stress.

Riparian Areas: Areas along streams and rivers, including related vegetation community.

Site Classification: All trailheads, access points and recreation sites on OSMP lands are classified based on visitor use levels. Each class identifies a set of required facilities, optional facilities and a maintenance schedule. For current information about OSMP standards, visit osmp.org

Strategy: A systematic long-term plan to deploy a sequence of actions toward achieving one or more goals and associated set of management objectives.

Sustainable, Trails/Infrastructure: Trails that have negligible erosion, minimal braiding and seasonal muddiness and will not require re-routing and major maintenance over long periods of time. Sustainable trails, trailheads and infrastructure support the current and anticipated uses with minimal impacts to the adjoining natural systems and cultural resources.

Switchback: A sustainable sharp turn on a hillside (usually on a slope of more than 15%) to reverse the direction of travel and to gain elevation. The landing is the turning portion of the switchback. The approaches are the trail sections upgrade and downgrade from the landing.

Trail Infrastructure: Any managed or constructed features or components of those features on or associated with a trail. Examples include: walls, steps, bridges, water bars, culverts (this is not an exhaustive list).

Tread (Treadway): The surface portion of a trail upon which visitors travel excluding backslope, ditch and shoulder. Common tread surfaces are native material, gravel, soil cement, ashalt, concrete or shredded, recycled tires.

Undesignated Trails: Trails created or worn into the landscape by visitors repeatedly walking off of designated trails. Sometimes, undesignated trails begin as wildlife or cattle trails that attract the interest of hikers or other visitors. They are not shown on public trail maps and are not maintained.

Unfragmented Habitat: Habitat across the landscape that is uninterrupted by barriers to movement.

Visitor Survey: Exit survey of people leaving OSMP system and typically repeated every five years. The main purpose of the survey is to obtain demographic information, trip characteristics, and experience evaluations.

Wetlands: Where water is present above or near the surface of soil. Wetlands vary depending on soils, topography, climate, water chemistry and vegetation.

Open Space Board of Trustees North TSA Motions March 9, 2016

1. Shelley Dunbar moved the Open Space Board of Trustees recommend that staff continue to follow the terms of the lease regarding public access to the Boulder Valley Ranch (BVR) equestrian arena and will concurrently develop options for nearby horse trailer parking and/or seek to provide an equivalent and suitable corral option that will be determined in cooperation with stakeholders that will be vetted and approved in a future public process. The Board recommends that staff proactively address any conflict issues resulting from public access in future lease negotiations. Tom Isaacson seconded. This motion passed unanimously.

2. Frances Hartogh moved the Open Space Board of Trustees to ask staff to endeavor to develop and bring back to the Board an ecological monitoring program for the North Sky Trail and the Joder Property in light of the important ecological qualities of these properties. Tom Isaacson seconded. This motion passed unanimously.

3. Tom Isaacson moved the Open Space Board of Trustees affirm the management area designations as shown on page 16 of the North Trail Study Area Draft Plan. Kevin Bracy Knight seconded. This motion passed three to two; Frances Hartogh and Molly Davis dissented.

4. Tom Isaacson moved the Open Space Board of Trustees to support the current access status of the Northern Tier Properties as either open or closed be continued except that the Deluca, Hester, and Campbell Properties be closed May 1 – July 31 for protection of ground-nesting Bobolink. Shelley Dunbar seconded. This motion passed three to two; Frances Hartogh and Molly Davis dissented.

5. Shelley Dunbar moved the Open Space Board of Trustees to amend the language on page 102 of the North Trail Study Area (TSA) Draft Plan to add the word “important” in front of “note” and eliminate “designated” in the first sentence. Kevin Bracy Knight seconded. This motion passed unanimously.

6. Frances Hartogh moved the Open Space Board of Trustees to have the following statement be added to the North Trail Study Area (TSA) Draft Plan on page 7: In fairness to the process, it should be acknowledged that three OSBT members voted for the scenario while two voted against. The main point of contention was whether a north-south connector trail should be constructed through the North Foothills HCA. Molly Davis seconded. This motion passed unanimously.

7. Frances Hartogh moved the Open Space Board of Trustees modify the language on page 36 under primary goal to read: Increase connectivity among North TSA properties while minimizing natural resource impacts to every extent possible. Molly Davis seconded. This motion passed four to one; Kevin Bracy Knight dissented.

8. Shelley Dunbar moved the Open Space Board of Trustees designate areas surrounding the Wrangler Trail (the trail is designated as Voice and Sight on-corridor) be designated as dogs on-leash as similar management to Wonderland Lake. Tom Isaacson seconded. This motion passed unanimously.

9. Shelley Dunbar moved the Open Space Board of Trustees to approve the North Trail Study Area Plan as amended and recommend that the Boulder City Council approve the North Trail Study Area Plan as amended. Kevin Bracy Knight seconded. This motion passed three to two; Frances Hartogh and Molly Davis dissented.

10. Tom Isaacson moved the Open Space Board of Trustees to make the following statement: If City Council does not support the North Sky Trail, the OSBT recommends that City Council direct staff to revise a plan based on Scenario A as modified by OSBT votes at the February and March Board meetings. Shelley Dunbar seconded. This motion passed three to two; Frances Hartogh and Kevin Bracy Knight dissented.

North TSA Plan and Process Summary

Trail Study Area Plans

In 2005, the Boulder City Council approved the Open Space and Mountain Parks (OSMP) Visitor Master Plan (VMP). An integral feature of the VMP was the creation of Trail Study Areas (TSAs). TSA plans were to establish visitor access and recreation resource management priorities and projects for specific areas of OSMP lands.

The North TSA

The North TSA includes lands north of the Diagonal Highway on the east, and lands north of Linden Avenue on the west. The North TSA Plan will include management recommendations for 7,701 acres that OSMP owns and manages. The North TSA planning area includes land with some level of city open space ownership, but where OSMP does not provide or manage public access (conservation easements, lands jointly owned with and managed by Boulder County). Lands not managed by OSMP are outside the scope of the North TSA but do provide important context for plan recommendations. The goal of the North TSA Plan is to improve visitor experiences and increase the sustainability of trails and trailheads while conserving the area's natural, cultural and agricultural resources.

The Planning Process

The planning process has four phases. The first phase focused on collecting and compiling information about current conditions and management practices in the TSA. The primary deliverable for the first phase was the inventory and assessment report which was available on June 15, 2015.

The second phase identified key interests and issues that needed to be addressed in the plan. The interests and issues along with the inventory and assessment information informed and guided the development of alternative scenarios which are ways to meet interests or address issues. This phase resulted in a list of interests and potential actions to help direct the development of 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. This part of the planning process concluded with the completion of a Draft Plan.

The final (current) phase includes the review of the Draft Plan by the community, the OSBT and City Council. On March 9, 2016, the Board approved changes to the Draft Plan and with a vote of 3-2, approved the Draft Plan as amended and recommended that the Boulder City Council approve the North Trail Study Area Plan as amended. The main point of contention for the split vote was whether a north-south connector trail should be constructed through the North Foothills HCA. This phase of the process will conclude when City Council has reviewed and accepted the plan.

Community Engagement
The intent of the planning process and community engagement is to have broad community participation, inclusive dialogue and connect with the community in varied and meaningful ways. Community members have been involved through a range of different approaches including:

- Nine community workshops
- Inspire Boulder, the city's internet-based participatory platform
- On-site and local store-front engagement
- Email and social media submissions
- Youth engagement

Community participation in the assessment, interest and scenario development phases of the process has represented a diversity of perspectives in the community including people visiting trails in the North TSA, neighbors, stakeholder organizations, youth and families. OSMP staff, OSBT members and members of City Council have received public feedback via email from community members on the Draft Plan and its recommendations. Currently, 649 people have signed up to receive email updates about the plan. A complete compendium of comments received is available on the North TSA Website.

Figure 1. Community Engagement Participation Levels

Engagement Approach	Assessment Phase	Interest Phase	Expert Panels	Preliminary Scenarios	Refined Scenarios
Workshop Participation	60	36	65	155	70
In-field, store front, neighborhood and Latino community engagement	167	413	NA	Outreach Only	Outreach Only
Youth engagement	16	57	NA	NA	NA
Totals	**243**	**507**	**65**	**155**	**70**
Comments on Inspire Boulder/online/email/ social media comments	**105**	**115**	**NA**	**196**	**276**

OSBT Hosting of the Process
The OSBT has been involved with the development of the North TSA Plan from the beginning as "host" of the North TSA Plan. The intent of this role is to make it clear that OSBT is the recommending body to the City Council and to raise the Board's visibility in different types of community forums. The role as host also supports community engagement throughout the process, providing an alternative to the three-minute public testimony approach of more traditional public hearings. As host, the Board's participation can clearly be seen by the community and the City Council as the Board primarily welcomes, listens to and observes the community engagement process.

North TSA Plan Interests
The North Trail Study Area Interests and Issues report is a compilation of the perspectives and feedback provided during the interests and issues phase of the North TSA planning process.

Community members were asked to share their interests in the planning area rather than positions. Positions describe what someone wants or needs, while an interest explains why they want or need it. If the community was asked to share ideas about positions, the final result would be distributive, rather than integrative, and a lot of people would not get what they want. Assessing the "why" of what community members want enables staff and the OSBT to better meet the needs of a diverse community and recognizes that individuals carry multiple interests about managing properties, allowing for more win/win opportunities.

Through the various engagement efforts to understand the community and stakeholder interests in the North TSA, ten interests emerged. These interests are consistent with the goal and objectives of the North TSA Plan and provided guidance for staff in the development of the scenarios. The desired plan outcomes or actions that were suggested in the effort to understand interests also informed how potential actions were combined into different scenarios.

North TSA Interests			
Improved Visitor Experience		Improved Connectivity	
Conservation of Resources (Natural/Agricultural/Cultural)		Balance of Recreation and Resource Conservation	
Improved Access and Accessibility		Increased Safety	
Honoring Community Values and Commitments		Decreased Visitor Conflict	
Increased Education and Understanding		Effective Planning Process and Plan Implementation	

North TSA Plan Preliminary Scenarios

Finding ways that the North TSA can be enhanced for the identified plan interests accomplishes the goal of the North TSA Plan. The interests also provided a means to focus the range and types of actions considered in the development of preliminary scenarios. Scenarios are conceptual visions of alternative trail changes, proposals for new trail connections and trailhead improvements for the North TSA that also advance efforts to conserve the area's diverse natural, agricultural and cultural resources. Scenario maps depict concepts of a proposed set of actions that make up the scenario. Staff had three primary factors to guide the development of the scenarios:

1. Consistency with the North TSA Plan Sideboards.
2. How the group of proposed actions achieve the interests.
3. How well the scenario balances the interests.

Staff deliberately avoided the approach of developing scenarios that prioritized specific interests such as scenarios that were best for improving visitor experience or best at protecting natural resources. In determining changes and actions to include in the scenarios, staff considered suggestions made by the community as part of the public engagement effort to understand interests, information from the inventory and assessment report and ideas shared during the expert panels. The fundamental intent of each preliminary scenario is to balance all of the community interests through different combinations of proposed actions.

Balancing Interests in the Preliminary Scenarios

Each of the four preliminary scenarios sought to balance the North TSA interests in different ways. OSMP staff reviewed the inventory and assessment report and the full scope of community input from the assessment phase through the expert panels to propose ideas. The North TSA project team worked hard to listen to each other's ideas and consider different and creative proposals for addressing the interests. Staff also understood that there are a lot of ways proposed actions could be combined to balance the interests. None of the preliminary scenarios had the "right" mix and balance of ideas; however, the four preliminary scenarios provided a good base for integrating community feedback into the scenarios and building the refined scenarios.

To develop the scenarios, staff began with the four subareas and discussed a range of possible actions for each of the subareas. Staff then combined actions in alternative ways so the interests could be balanced across the subareas. The subareas were then combined in different ways to make up the four preliminary scenarios and further adjustments were made to balance interests. Proposed actions that were important to balancing interests across the four scenarios include:

- Regional connections
- New trail connections
- Trail re-development
- Measures to avoid habitat fragmentation and conserve sensitive resources
- Innovative ideas to manage a range of passive recreational activities and decrease visitor conflict
- Trailhead and access improvements
- Education and stewardship opportunities

A table summarizing some of the significant actions and the ways they varied between the scenarios, to balance interests across the scenario, is available in Attachment D of the November 16, 2015 OSBT Study Session Memo. A summary table comparing the preliminary scenarios is available online along with the preliminary scenario maps and tables describing the actions relevant to all scenarios and to each of the individual scenarios. The tables describing the scenario actions identify the intended interests that the recommended actions achieve. The regulation maps for the scenarios reflect the trail changes proposed in the scenarios.

Community Feedback on Preliminary Scenarios

Staff initially presented the preliminary scenarios to the community at a workshop on Oct. 5, 2015 and provided an opportunity for participants to provide initial thoughts about the scenarios and how they did or did not balance the interests. Feedback from break-out groups and from a participant poll is available on the project website. After the workshop, staff posted an online survey to gather additional input. Both the poll and the survey aimed to gather information on community perspectives about how well the preliminary scenarios balanced interests and on which interests the scenarios fell short. They were not designed to determine what changes to make to the scenarios or to select which scenarios should be refined further.

A second workshop on Oct. 19, 2015 sought feedback from participants about which of the scenarios they thought could be improved on how well they balanced the interests and to suggest changes to the scenarios that would improve the balance. Community members were

able to provide feedback online for a week after the workshop. Feedback from the second workshop and online comments were combined together and are available in a detailed table. Included are all comments submitted in response to the questions staff asked for feedback on:

- Which scenario was selected?
- Why was it selected?
- What changes are proposed and how do the changes improve the balance among the interests?

There was substantial community engagement and feedback during both workshops and the associated online community review and comment opportunity for the preliminary scenarios. Staff received many comments including support for the various scenarios, concerns about specific actions and suggestions on how interests could better be accomplished and balanced for particular scenarios.

Staff compiled feedback on the suggested changes to the scenarios in a separate summary table that includes proposed changes, associated rationale and if/how the proposed change(s) were incorporated into the two refined scenarios. This information is available on the North TSA Website.

OSBT Feedback on Preliminary Scenarios

Staff presented the preliminary scenarios as well as the community feedback received on the preliminary scenarios to the OSBT at a Study Session on Nov.16, 2015. Staff asked the Board:

- Does the OSBT have comments on the community input about which of the preliminary scenarios best balances the North TSA interests?
- Which of the preliminary scenarios do OSBT members suggest staff revise and advance as preferred scenarios?
- Are there specific actions or changes to the scenarios OSBT members think important for staff to consider in the development of preferred scenarios that balance the interests better?

Staff compiled the feedback received from the Board in a table that details the feedback as well as if/how it was integrated into the two refined scenarios. This information is available on the North TSA Website.

North TSA Plan Refined Scenarios

Based on community input and Board feedback, staff modified the four preliminary scenarios into two refined scenarios as detailed in the Jan.13, 2016 OSBT Study Session Memo. Feedback by the OSBT at the January study session focused upon the following topics:

- Locating, designing and managing of the Joder connector trail
- Locating, designing and managing loop trails on Joder
- Maintaining the HCA designation for the North Foothills/Joder area
- Developing and modifying access for cyclists
- Developing and modifying access for dogs
- Managing public access to the relatively isolated northern properties

There were also comments unrelated to these primary topics. Topics that generated multiple comments by the Board, but with less overall frequency from community members were mostly about:

- Locating, designing and managing specific trails
- Increasing clarity about how the plan addresses regional trail connections
- Addressing equestrian access and trailer parking at Boulder Valley Ranch

North TSA Plan Updated Scenarios
Staff revised the scenarios discussed at the January study session and requested the Board's approval of the revisions at the Feb. 10, 2016 OSBT meeting. The meeting included a public hearing on this topic. The Board approved several additional revisions to both Scenario A and Scenario B. Staff recommended that only one scenario be used as the basis for the Draft Plan and requested the Board's direction in order to provide the Draft Plan at the March 9, 2016 OSBT meeting. Three OSBT members voted for the amended Scenario B to be used as the basis for the draft North TSA Plan while two OSBT members voted against it. The main point of contention and reason for the split vote was whether a north-south connector trail should be constructed through the North Foothills HCA.

North TSA OSBT Draft Plan
Based on the OSBT's majority vote to use the amended Scenario B as the basis for the Draft Plan, staff developed the recommendations of Scenario B into a Draft Plan. At the March 9, 2016 OSBT meeting, which included a public hearing, staff requested the Board's approval of the Draft Plan. The Trustees made several motions to amend the Draft Plan and then approved these changes to the North TSA Draft Plan.

The OSBT approved the North TSA Plan as amended and recommended that the Boulder City Council approve the North TSA Plan as amended with a 3-2 split vote. Again, the main point of contention was whether a north-south connector trail should be constructed through the North Foothills HCA. The OSBT also approved the following statement with a 3-2 split vote: If City Council does not support the North Sky Trail, the OSBT recommends that City Council direct staff to revise a plan based on Scenario A as modified by the OSBT votes at the February and March Board meetings.

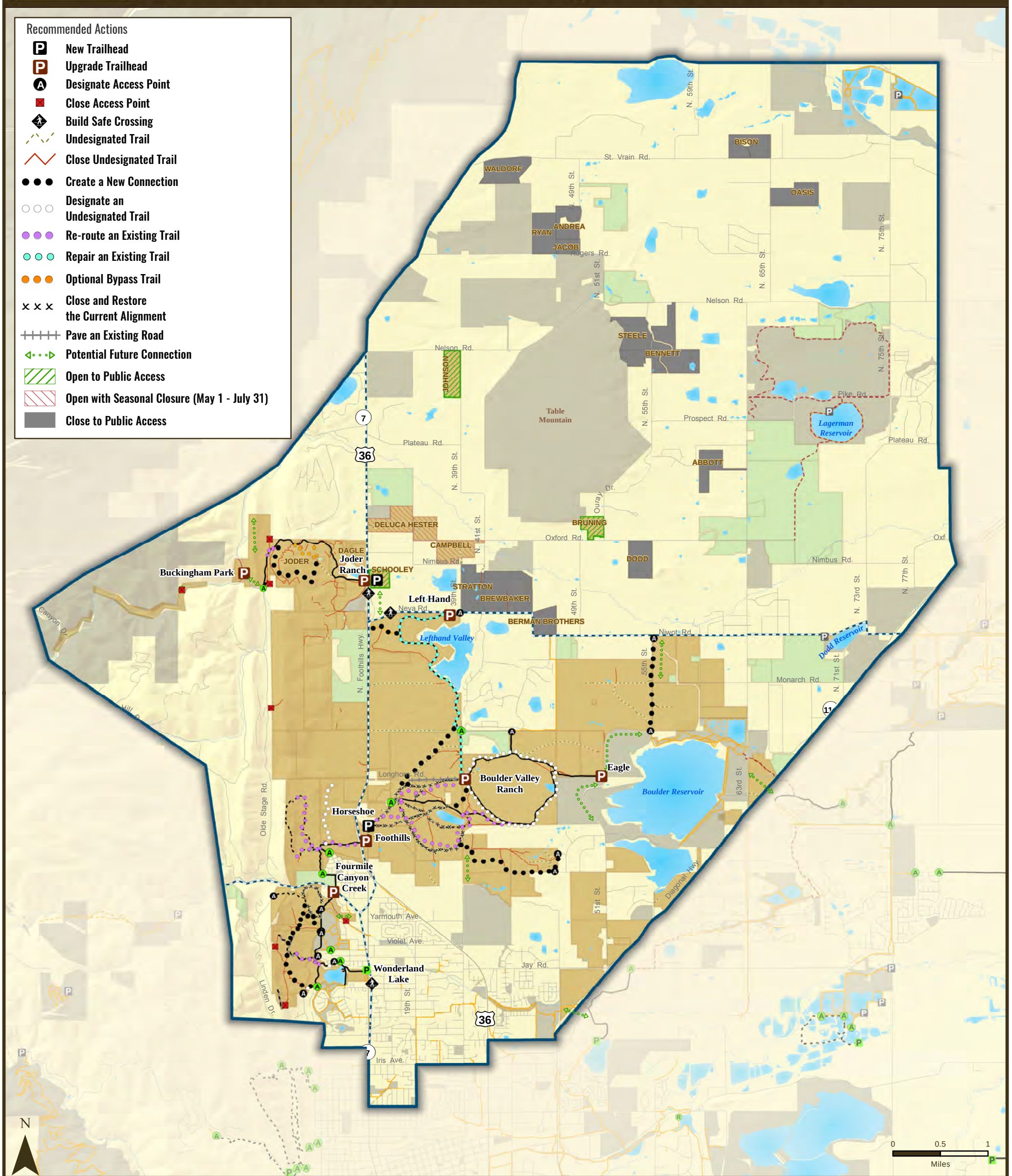
North TSA City Council Tours
A driving tour and virtual tour of the North TSA was provided for City Council on Monday, April 18. These tours allowed staff to point out selected key locations in the North TSA to City Council and discuss specific areas, resources and features of the North TSA. Materials from the driving and virtual tours can be found on the North TSA Driving and Virtual Tour webpage. These materials include information about the Draft Plan as well as the Alternative Scenario and comparisons between the two proposals. City Council also requested arrangements for a limited number of staff to conduct two-by-two hiking tours of the conceptual Joder trail connection routes. Four tours were completed involving seven City Council members.

North TSA City Council Draft Plan
Staff updated the Draft Plan with the OSBT's approved changes and some minor staff edits to add clarity as documented in the City Council Draft Plan - Log of Revisions. A study session on the Draft Plan was held with City Council on May 24.

City of Boulder Open Space and Mountain Parks

Attachment D: North TSA

North Trail Study Area Plan



North Trail Study Area Alternative Scenario Recommendations

OSBT Changes Included

- 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
- OSMP Fee & Managed Property in the North TSA
- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land

Trail changes are depicted conceptually. Actual trail alignments will differ.

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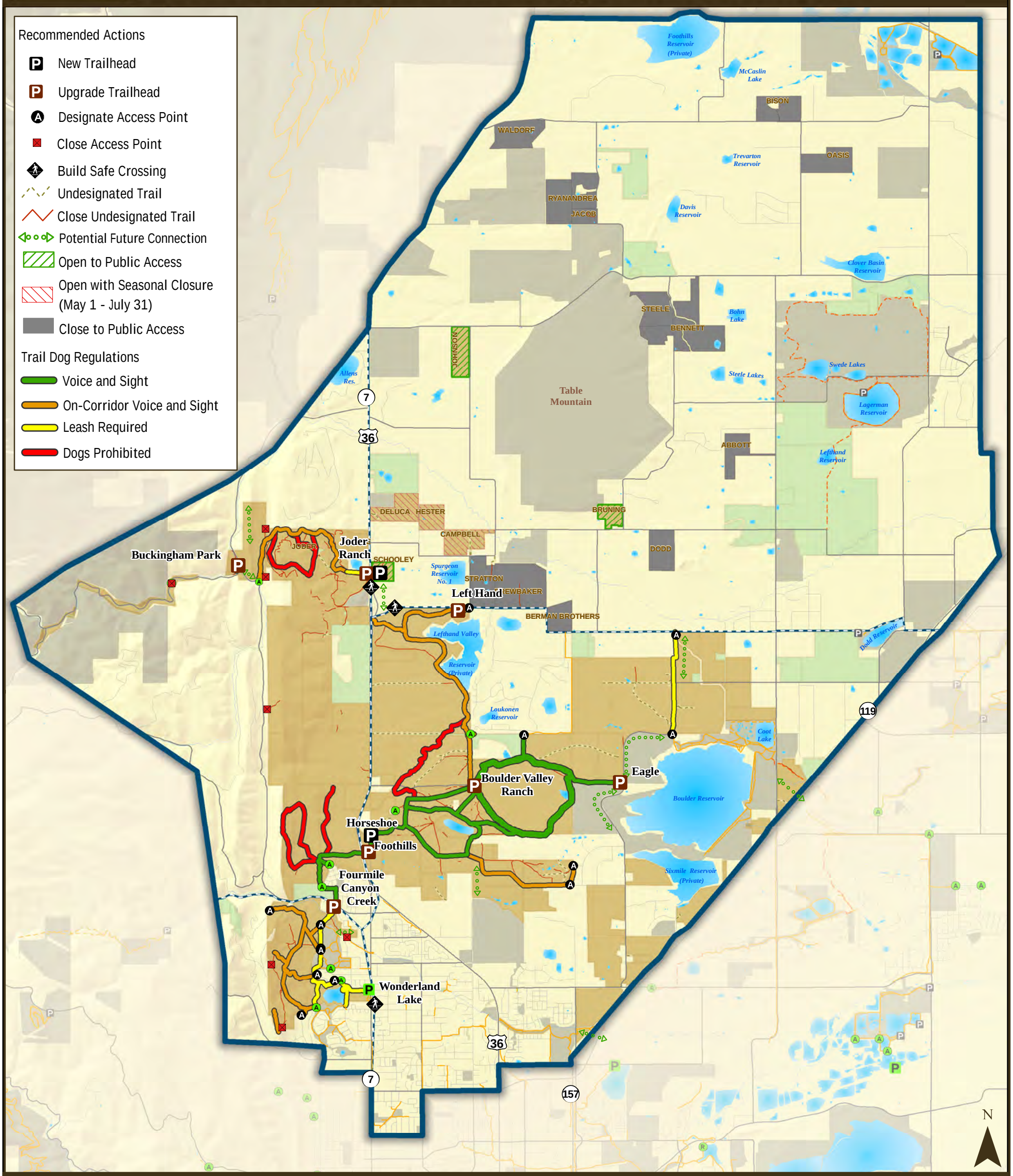
City of Boulder Open Space and Mountain Parks

Attachment D: North TSA

North Trail Study Area Plan



North Trail Study Area Alternative Scenario Dog Recommendations

OSBT Changes Included

- North Trail Study Planning Area
- North Trail Study Subareas
- OSMP Trailhead
- OSMP Access Point
- OSMP Recreational Feature Access
- Boulder County Trailhead
- 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

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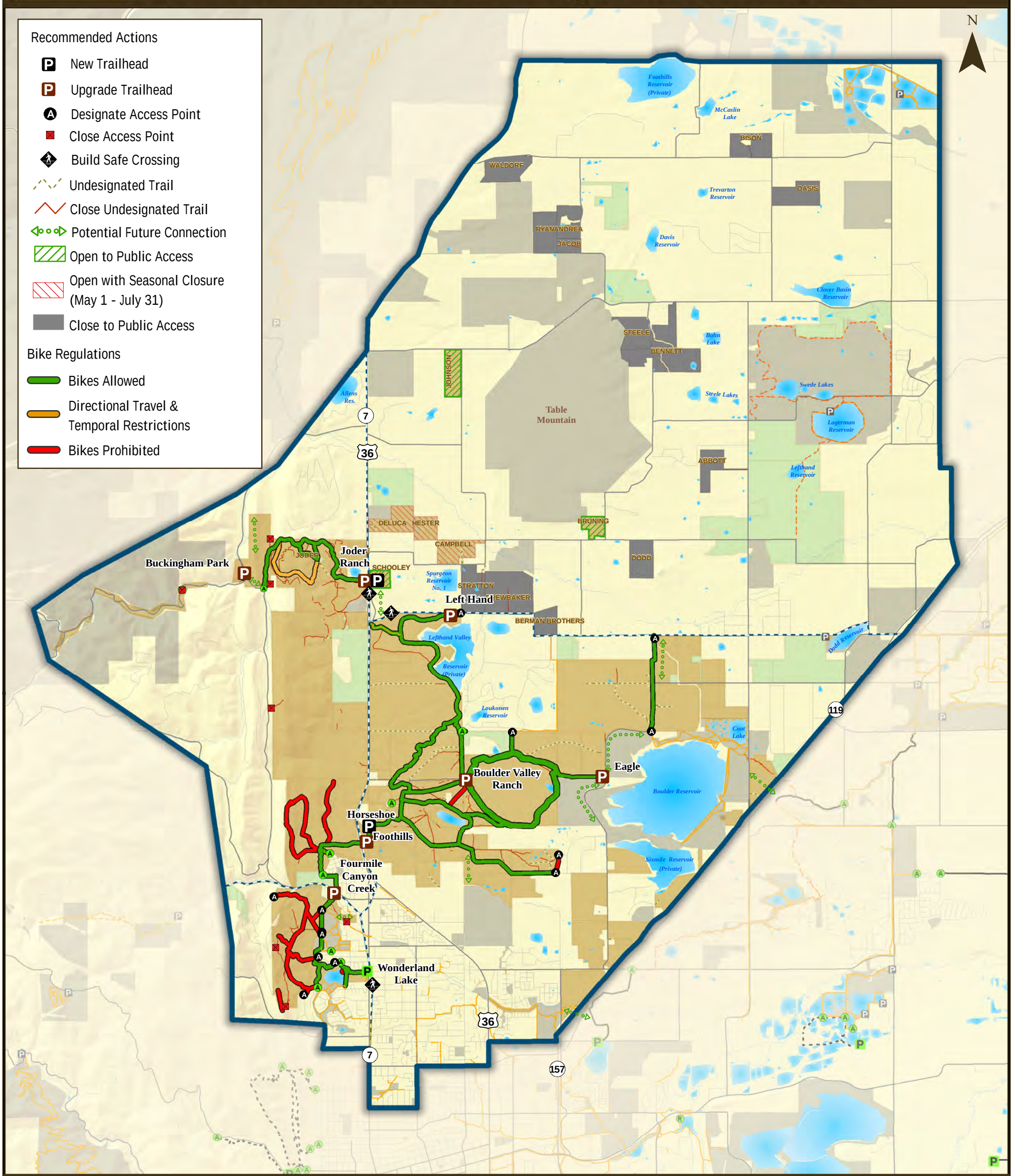
City of Boulder Open Space and Mountain Parks

Attachment D: North TSA

North Trail Study Area Plan



North Trail Study Area Alternative Scenario Bike Recommendations

OSBT Changes Included

- North Trail Study Planning Area
- North Trail Study Subareas
- OSMP Trailhead
- OSMP Access Point
- OSMP Recreational Feature Access
- Boulder County Trailhead
- 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

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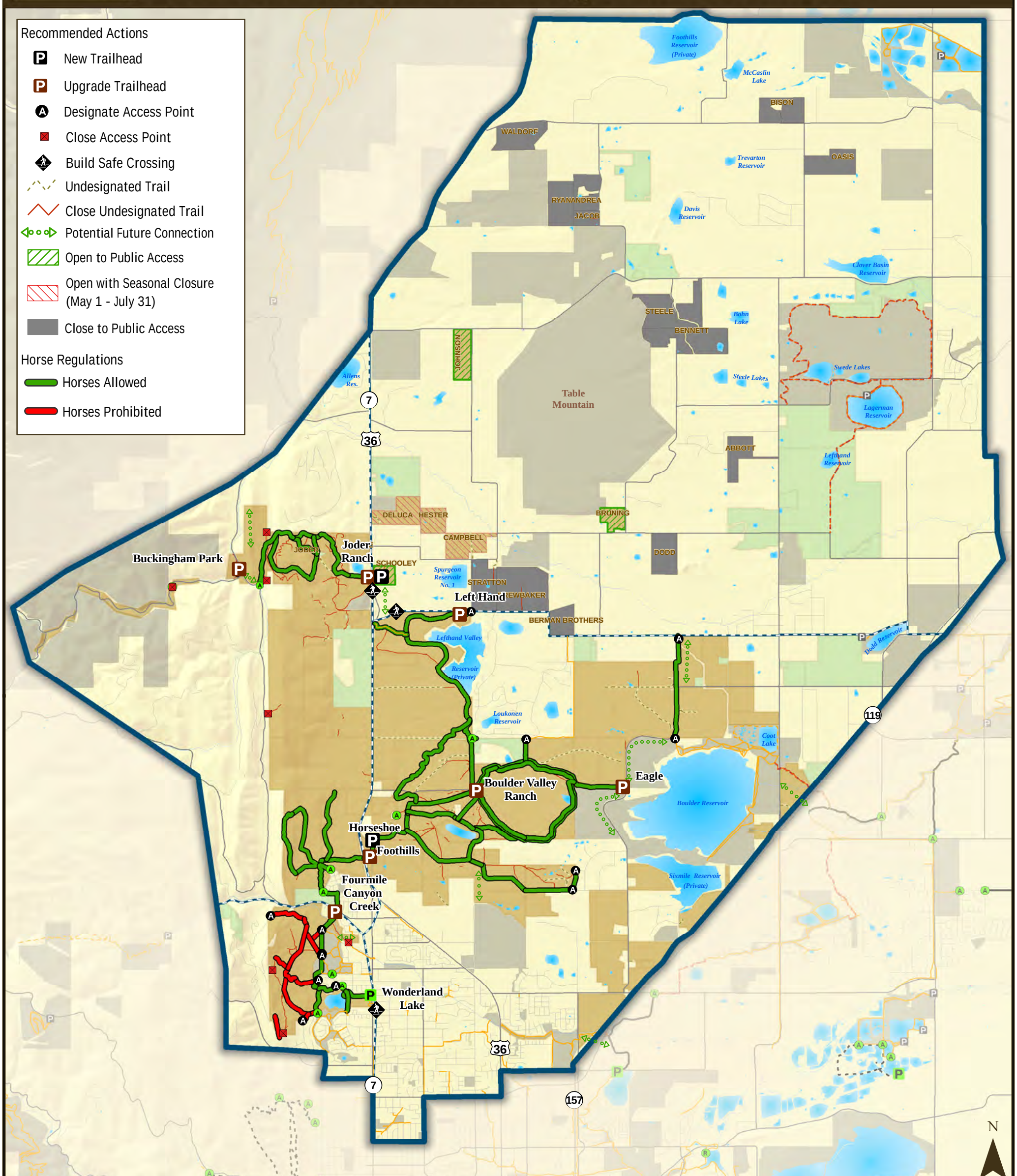
City of Boulder Open Space and Mountain Parks

Attachment D: North TSA

North Trail Study Area Plan



North Trail Study Area Alternative Scenario Horse Recommendations

OSBT Changes Included

- North Trail Study Planning Area
- North Trail Study Subareas
- OSMP Trailhead
- OSMP Access Point
- OSMP Recreational Feature Access
- Boulder County Trailhead
- 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

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Community Meetings. Conduct periodic meetings with community groups and the public to "check in" on plan implementation and adjust as necessary.

Volunteerism. Foster volunteerism as an important component of public involvement.

Management Areas: A Geographic Framework for Implementing the Plan

Open Space and Mountain Parks will use an area management system as a framework for implementing Visitor Master Plan implementation strategies. Key policies, programs, and projects are targeted to area-specific needs throughout the system.

The Open Space and Mountain Parks area management system provides a framework for implementing management strategies and setting priorities for visitor infrastructure improvements and service delivery. Under the umbrella of area management, certain key policies, programs, and projects are targeted to area-specific needs in different parts of the Open Space and Mountain Parks land system. Area management defines the geographic context for deciding which visitor activities are most suitable in a given area and what conditions will minimize impacts on other visitors or resources.

Protection, preservation, and management of city lands and provision of passive recreation opportunities, as defined by the City Charter, are fundamental goals for the Open Space and Mountain Parks Program. Management area designations define a management emphasis for different areas within the Open Space and Mountain Parks land system, based on a primary open space purpose (e.g., provision of quality passive recreational opportunities, preservation of agriculture, and protection and restoration of natural systems). The management designation defines suitable visitor activities in each type of area and under what conditions those activities can occur. The management designation also defines the management strategies needed to enhance visitor experience and ensure compatibility of visitor activities with resource protection.

Specific management strategies are applied in a given management area. The set of strategies applied in a given management area is based on the land characteristics (e.g., physical and ecological qualities, existing and anticipated visitor use patterns, existing and potential visitor infrastructure, and others) and the management needs that exist in that area. A flexible approach for applying strategies to a given management area is necessary, as exceptions may be needed to meet special circumstances.

A Description of the Open Space and Mountain Parks Management Area Designations

The primary goal of area management is to encourage visitor use in areas that can best accommodate the use, which includes areas that can provide a high-quality visitor experience and ensure compatibility of visitor use with natural, agricultural, and cultural resources. Areas with highly vulnerable resources require a higher level of protection: directing people away from sensitive resources, placing conditions on the use that avoids or minimizes impact, or providing visitor infrastructure to ensure acceptable levels of impact.

The quality of the environment--the "naturalness" of an area--is the foundation of the recreational experience on Open Space and Mountain Parks lands. Consequently, both the quality of the environment, and the quality of visitor experience, should be preserved and maintained in all Open Space and Mountain Parks management areas.

Four management area designations are defined on Open Space and Mountain Parks lands: Passive Recreation Areas, Natural Areas, Agricultural Areas, and Habitat Conservation Areas (see Map 4.5). These management area designations provide the overall context for how visitor

activities should occur. See Map 4.6 for a delineation of dog management strategies applied within management areas. Management areas are delineated for each of the designation categories. The characteristics, goals, and criteria used to delineate the management areas are described below.

Passive Recreation Area Designation

Characteristics

- Generally in close proximity to city or county development.
- Higher level of visitor use and density of existing trails.
- More evidence of human use and impacts.
- May include some interspersed patches of high-quality habitat.

Goals

- Provide a high level of public access to destinations and connection through designated trails.
- Maintain or improve passive recreational and educational opportunities, while protecting and preserving natural lands and resources.
- Accommodate high levels of visitor use with appropriate management, trails and trailheads, and services.
- Reduce conflicts among visitor activities.
- Minimize the number of undesignated or "social trails;" eliminate undesignated trails when they are duplicative or damaging to resources.

Criteria for Inclusion of Management Areas in the Passive Recreation Area Designation

- Higher level of visitation.
- Trails and trailheads that accommodate high levels of visitor use.
- High density of trails.
- Offers destinations for a wide range of different passive recreational activities.
- Compatibility with adjacent land use (i.e., opportunities to coordinate with neighboring or nearby landowners/managers in providing recreational services).

Natural Area Designation

Characteristics

- Locations can be both close to and remote from development.
- Varying levels of visitor use, types of activities, and availability of facilities.
- Conditions of natural ecosystems are variable--many areas with ecological systems in good condition, some with evidence of human use and impacts.
- May be in proximity to agricultural production and operations.

Goals

- Accommodate low-impact visitor activities where adequate trails exist or can be built, and resource impacts can be minimized.
- Provide opportunities for passive recreational and educational activities that require topographic relief or a natural setting (e.g., hang/paragliding, climbing/bouldering, nature study, scenic viewing).
- Protect the quality of natural and agricultural resources (especially where high value resources exist).
- Eliminate undesignated trails when they are redundant or damaging to resources.

Criteria for Inclusion of Management Areas in the Natural Area Designation

- Interspersed recreational and natural values require that management determine the appropriate mix of open space purposes and manage multiple uses accordingly.
- Relatively high resource and recreation values.
- Compatibility with adjacent land use (i.e., opportunities for coordinating habitat protection and connections and passive recreational activities/trail linkages).

Agricultural Area Designation

Characteristics

- Rural areas in the Boulder Valley.
- May be in proximity to areas of either high or low visitor use.
- Areas of intensive agricultural production or operation.

Goals

- Maintain the efficiency of agricultural production and operation.
- Manage agricultural production and operation to ensure safety for operators and visitors in the vicinity.
- Provide, where appropriate, public access and passive recreational opportunities that have minimal impacts on agricultural production and operation or other resources.
- Manage visitor access in areas of intensive agricultural production or operation to ensure visitor safety.
- Eliminate undesignated trails when they are redundant or damaging to resources.

Criteria for Inclusion of Management Areas in the Agricultural Area Designation

- Crop production and irrigated hay fields and grazing areas.
- Areas where conflicts with visitors and their pet companions could or do adversely affect the efficiency of agricultural production and operations or endanger visitor safety.
- Compatibility with adjacent land use (i.e., opportunities for coordinating agricultural protection and recreational activities/trail linkages).

  Note: Areas of concentrated livestock activity (corrals, horse boarding, etc.), private residences, machinery storage areas, etc. will be addressed in a separate policy.

Habitat Conservation Area Designation

Characteristics

- Tend to be located in more remote areas.
- Typically represent the largest blocks of an ecosystem type with few, if any, trails or roads.
- Lower level of visitor use; no or few trails and trailheads.
- Naturally functioning ecosystems (but may contain areas with evidence of human use and impacts).

Goals

- Maintain, enhance, and/or restore naturally functioning ecological systems.
- Maintain, enhance, and restore habitat for species of concern identified in the Boulder County and the Boulder Valley Comprehensive Plans.
- Provide public access and passive recreational opportunities that foster appreciation and understanding of ecological systems and have minimal impacts on native plant communities and wildlife habitats or other resources.

- Eliminate all undesignated trails, unless they are made part of the designated trails system or provide specialized access to appropriate low-use destinations.
- Where sustainable infrastructure exists, continue to allow public access to appropriate destinations.

Criteria for Inclusion of Management Areas in the Habitat Conservation Area Designation

- Large habitat blocks with a low density of trails, roads, or development.
- High potential for restoration of natural ecosystems (including areas with restoration underway).
- Plant communities that are rare or unique on Open Space and Mountain Parks lands.
- Habitat for species of concern such as threatened, endangered, rare, and other species.
- Areas with high biodiversity such as wetlands and riparian areas (especially un-trailed riparian reaches).
- Comparatively lower visitation levels.
- Compatibility with adjacent land use (i.e., opportunities for coordinating habitat protection and connections and recreational activities/trail linkages).

Management Area Strategies

The management strategies associated with each management area designation are summarized in Table 4.1.

Note: The following table identifies strategies **normally** applied in specific management area designations. (*That does not preclude localized application in any of the management areas where needed).*

Table 4.1: Management Strategies for Open Space and Mountain Parks Management Areas

Management Issue	Passive Recreation Area Strategies	Natural Area Strategies	Agricultural Area Strategies	Habitat Conservation Area Strategies
On-Trail Visitor Use **Note:** Management *in all areas* may include seasonal or local requirements for visitors to stay on-trail or seasonal/local closures to address environmental sensitivity or trail sustainability. All designated trails will be signed and indicated on trail maps.	Encourage on-trail use. Require on-trail use in sensitive areas and/or at specific times, unless an off-trail permit is obtained.	Encourage on-trail use. Require on-trail use in sensitive areas and/or at specific times, unless an off-trail permit is obtained.	Encourage on-trail use. Require on-trail use in sensitive areas and/or at specific times, unless an off-trail permit is obtained. Consider/provide designated on-trail access to selected destinations.	Require on-trail use except: (1) in a limited number of designated off-trail activity areas; or (2) if an off-trail permit is obtained for OSMP-sponsored activities or other limited and approved public use. Consider/provide designated on-trail access to selected destinations.

- Eliminate all undesignated trails, unless they are made part of the designated trails system or provide specialized access to appropriate low-use destinations.
- Where sustainable infrastructure exists, continue to allow public access to appropriate destinations.

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Table 4.1: Management Strategies for Open Space and Mountain Parks Management Areas				
Management Issue	**Passive Recreation Area Strategies**	**Natural Area Strategies**	**Agricultural Area Strategies**	**Habitat Conservation Area Strategies**
Trail Functions, New Trails, and Interconnected Trail System **Note**: In all management areas, OSMP will provide different classes of trails. Trail classes are matched to the specific travel needs / opportunities and the environmental context in a given area. Trails will provide different levels of access, offer different types of travel experiences / challenges, and use different physical designs and materials. Trails will accommodate different types and levels of use, but all are intended to accommodate use without undue maintenance demands and to minimize impacts on the environment. OSMP will make management decisions based upon the best available information and evaluate the appropriateness and effectiveness of management actions.	Build and maintain a hierarchy of trails that encourage visitors to travel on-trail and minimize impacts. New trails to important destinations will be considered. Improve and construct sustainable trail linkages to create an interconnected trail system.	Build and maintain a hierarchy of trails that encourage visitors to travel on-trail and minimize impacts. New trails to important destinations will be considered. Improve and construct sustainable trail linkages to create an interconnected trail system.	Minimize new trails and trail density; locate new trails to minimize impacts on agricultural operations. Consider designating/building trails that: • Do not impinge upon agricultural operations • Provide appropriate access • Include appropriate linkages and connections	Minimize new trails and trail density; locate new trails to minimize impacts on habitat quality. Consider designating/building trails that: • Do not impinge upon ecological systems • Provide appropriate access • Include appropriate linkages and connections
Trail Design for Level of Use	Design and construct trails and other facilities to sustain a higher level of visitor use.	Design and construct trails and other facilities to sustain a variable level of visitor use.	Design and construct trails and other facilities to sustain a variable level of visitor use.	Design and construct trails and other facilities to sustain a low level of visitor use.

Table 4.1: Management Strategies for Open Space and Mountain Parks Management Areas				
Management Issue	**Passive Recreation Area Strategies**	**Natural Area Strategies**	**Agricultural Area Strategies**	**Habitat Conservation Area Strategies**
Undesignated Trails	Lower priority for management of undesignated trails. Minimize new undesignated trails. Management actions for existing undesignated trails include: • Evaluate best management actions • Designate • Re-route • Close and reclaim • Retain undesignated trails • Monitor newly established or developing undesignated trails	Variable priority for management of undesignated trails. Minimize new undesignated trails. Management actions for existing undesignated trails include: • Evaluate best management actions • Designate • Re-route • Close and reclaim • Retain undesignated trails • Monitor newly established or developing undesignated trails	Variable priority for management of undesignated trails. Minimize new undesignated trails. Management actions for existing undesignated trails include: • Evaluate best management actions • Designate • Re-route • Close and reclaim • Retain undesignated trails	High priority for management of undesignated trails. Minimize new undesignated trails. Management actions for existing undesignated trails include: • Evaluate best management actions • Designate • Re-route • Close and reclaim
Access to Areas Normally Closed to Visitors	Provide guided educational hikes in areas normally closed to visitors.	Provide guided educational hikes in areas normally closed to visitors.	Provide guided educational hikes in areas normally closed to visitors.	Provide guided educational hikes in areas normally closed to visitors or require permits for off-trail use.

Table 4.1: Management Strategies for Open Space and Mountain Parks Management Areas				
Management Issue	**Passive Recreation Area Strategies**	**Natural Area Strategies**	**Agricultural Area Strategies**	**Habitat Conservation Area Strategies**
Dog Management	Visitors are strongly encouraged to keep dogs on-trail. Dog management is predominantly voice–and-sight control. Dogs on-leash, dogs prohibited, or seasonal dog requirements may be implemented.	Visitors are strongly encouraged to keep dogs on-trail. Dog management is predominantly voice-and-sight control. Dogs on-leash, dogs prohibited, or seasonal dog requirements may be implemented.	Visitors are strongly encouraged to keep dogs on-trail. Dog management is predominantly voice-and-sight control. Dogs on-leash, dogs prohibited, dogs on-corridor voice-and-sight control, or seasonal dog requirements may be implemented.	Dogs are required to be on-trail, with some exceptions allowing on-corridor voice-and-sight control. Dog management is predominantly on-leash. Dogs on-leash, dogs prohibited, dogs on-corridor voice-and-sight control, or seasonal dog requirements may be implemented.
Nighttime Use	Trailhead parking prohibited 11 p.m. to 5 a.m. (except Panorama Point and Halfway House).	Trailhead parking prohibited 11 p.m. to 5 a.m.	Trailhead parking prohibited 11 p.m. to 5 a.m.	Trailhead parking prohibited 11 p.m. to 5 a.m. and a nighttime curfew encouraged one hour after dusk to one hour before dawn.
Emphasis for Education and Enforcement Activities	Target educational and enforcement services to reduce visitor conflict, foster appreciation and protection of the OSMP environment, and support resource protection.	Target educational and enforcement services to reduce visitor conflict, foster appreciation and protection of the OSMP environment, and support resource protection.	Target educational and enforcement services to support on-trail visitor use and foster appreciation and protection of agricultural resources.	Target educational and enforcement services to support on-trail visitor use and foster appreciation and protection of natural resources.
Visitor Services and Facilities Matched to Level of Use	Provide a level of visitor services and facilities to support <u>higher use levels</u> and a quality visitor experience (interpretive signs, scenic pull-outs, picnic tables, toilets, etc.).	Provide a moderate level of visitor services and facilities.	Provide a variable level of visitor services and facilities matched to the levels of use encountered.	Provide a low level of visitor services and facilities, except those supporting basic protection and maintenance services.

Policies

Geographic Targeting. Delineate management areas that provide a framework for implementing area-specific policies, programs, and projects, based on the visitor use, infrastructure, and resource characteristics of each area.

Passive Recreation. Provide a higher level of visitor services and more durable facilities in those areas where accommodating passive recreation is emphasized.

Resource Protection. Provide a higher level of resource protection in those areas that are most vulnerable to adverse impacts from visitor use.

Variable Access. Designate management areas that help Open Space and Mountain Parks manage the land for varying purposes. To achieve this, a continuum of public access options will be implemented (e.g., on-trail or off-trail, seasonal or permanent) as well as dog management options (e.g., voice-and-sight control, on-leash, on-trail, on-corridor, seasonal or permanent).

Integration with Capital Improvements Program and Service Delivery Decisions. Integrate the varied management emphases of the different management areas into decisions on trail and facility improvements and changes in delivery of visitor services.

Management Actions

Phased Implementation. Begin phased implementation of the management areas and associated strategies and actions.

Education and Enforcement. Develop and phase in education and enforcement activities related to area management.

- Education and outreach activities will communicate the rationale and requirements for changes in visitor use allowed in various management areas (including media coverage, new signs, trailhead board information, brochures, Open Space and Mountain Parks website, public presentations, etc.). A Visitor Master Plan public outreach program will be created that specifically includes information about the area management system.
- Enforcement activities will be designed to induce compliance with new area management requirements.

Integration with Capital Improvements Program and Service Delivery Decisions. Integrate the management emphases of the different management areas into decisions on trail and facility improvements and changes in delivery of visitor services.

Regulatory Changes. Make regulatory changes that will implement the area management requirements.

Comparison of Construction and Maintenance Costs and Factors for Joder Connector Trails

Draft Plan ***West Side Joder Connector (North Sky Trail)***	**Alternative Scenario** ***East Side Joder Connector (Lefthand Trail and new connections)***
Construction Cost Estimate: $805,000 Estimate includes trail design, permitting and construction including several bridges.	**Construction Cost Estimate: $2.25 million** Estimate includes $250,000 for new diagonal link trail design, permitting and construction (including one bridge) as well as improvements to the existing Lefthand Trail and $2 million for a box culvert underpass at U.S. Highway 36. The **estimate does *not* include the cost** for the trail connection between Niwot Road and the U.S. Highway 36 underpass. Such a connection would require acquisition of or a trail easement over private property.
Construction and Maintenance Soil and Slope Factors: Variable soil conditions including some clay soils. Larger cross slopes for the entire length of the trail and overall more well-drained soils provides better drainage and allows for the use native material for the trail tread.	**Construction and Maintenance Soil and Slope Factors:** Clay heavy soils on shallow (less than 25%) cross slopes contribute to poor drainage and the need to import surface material for both the new diagonal link trail and the Lefthand Trail.
Maintenance Cost Factors: • Several bridges are anticipated for drainage crossings. Inspecting and maintaining bridges to standards is typically less expensive for annual maintenance than maintaining trails through drainages. The eventual cost of replacing bridges once the useable life span has ended is a periodic cost (20-40 years). • Unless redesigned for sustainability, trail segments constructed on railroad grade and vehicular access roads will require greater ongoing maintenance due to inadequate cross slope. • A “conservation first” approach to trail design may reduce the physical sustainability of some sections of the trail. These areas will require increased maintenance.	**Maintenance Cost Factors:** • One new bridge will replace an existing bridge and drainage crossing on the Lefthand Trail. Inspecting and maintaining this bridge is likely to be less expensive than maintaining the existing crossing which has consistently been the most costly maintenance item for the Lefthand Trail. • Repairs are needed on the Lefthand Trail in poorly drained areas underlain by clay soils where muddy conditions occur after rainfall and snowmelt. • While surfacing the trail is a construction cost, periodic repairs and ongoing maintenance of the trail surface are additional maintenance costs. • This alignment creates a new underpass to maintain.

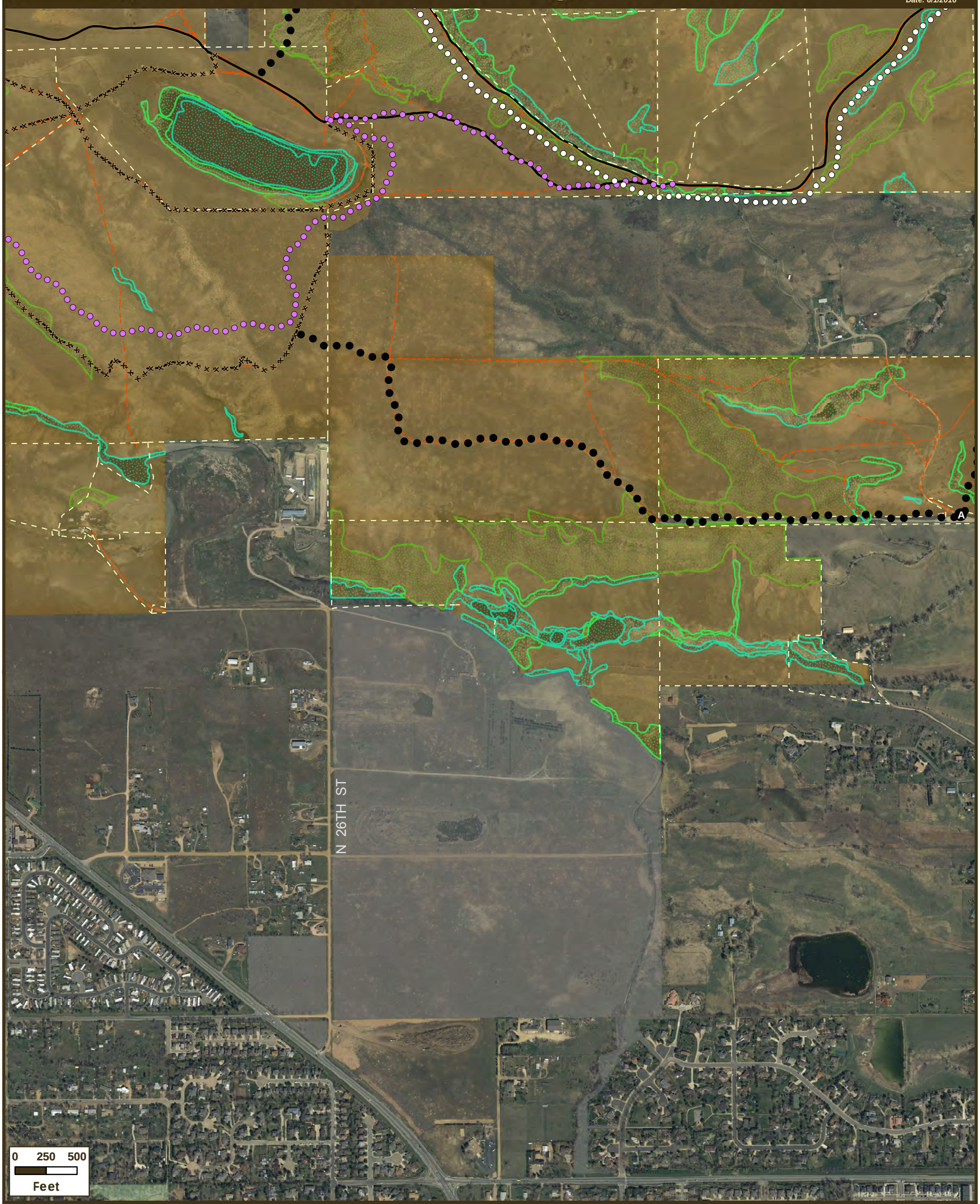
• Foothill hogbacks and soils can be prone to soil slumps during extreme weather/flooding events as occurred across the OSMP trail system in 2013. In the advent of extreme weather, trail repair is likely to require one crew for one week to clear the tread and build retaining walls as necessary for each damaged site. While this area did not experience significant slumping, staff would include geotechnical evaluation of this area in addition to other technical analyses when as part of design and implementation.	• The trail is not prone to soil slumps during extreme weather/flooding events.

Annual Maintenance Activities
• One crew for four weeks annually maintaining trail and making repairs.
  o Semi-annual maintenance sweep
  ▪ clear drains,
  ▪ clear obstructions
  ▪ steps or risers will be replaced or repaired every one or two years.
• Several places where trail corridor requires clearing in areas of tall and dense vegetation.
	Annual Maintenance Activities:
	• One crew for four-six weeks annually maintaining trail and making repairs.
	  o Semi-annual maintenance sweep
	  ▪ clear drains,
	  ▪ repair infrastructure
	  ▪ repair tread surface
	  ▪ maintenance and repair of "pavers" used to improve/harden the tread during muddy conditions.
	• Replace tread surfacing material *Frequency dependent upon occurrence of heavy rains, but potentially every five years in problem locations.*
	• Few locations will require trail corridor clearing.

City of Boulder Open Space and Mountain Parks

North Trail Study Area Plan

Date: 6/1/2016



OSMP Land Adjacent to Area III Planning Reserve and Future Park Site

- Designate Access Point
- Rare Plants & Communities
- Wetlands & Riparian Area
- Create a new alignment
- Designate an undesignated trail
- Re-route an Existing Trail
- Close Existing Trails
- Fence
- Undesignated Trails
- OSMP Hiking/Equestrian Trail
- OSMP Multi-Use Trail
- OSMP Fee and Managed Property
- Other Government Land

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Cost Sharing Factors for U.S. Highway 36 Underpass

Cost Sharing

Cost sharing opportunities for the "Joder underpass" are most related to the degree to which the underpass helps other entities achieve their goals. The agencies that are most likely to have an interest in the safety and trail connections of the underpass are Boulder County, the Colorado Department of Transportation and Great Outdoors Colorado (GOCO).

The County Trails Map, found in the Boulder County Comprehensive Plan, shows an east-west regional trail concept connecting the City of Longmont with Lagerman Reservoir, the Lefthand Trailhead and Joder Ranch. The conceptual alignment shows a crossing of U.S. Highway 36 in the vicinity of the Joder Ranch Trailhead. None of the sections of this conceptual alignment near U.S. Highway 36 have been built or designed. Furthermore, this trail is not among the priority projects identified in Boulder County's Regional Trails program or the county's Transportation Master Plan. Given the focus of Boulder County on flood repair and priority trail connections elsewhere (including several joint projects with the city) as well as the absence of an existing regional trails system from the east, it may be difficult to attract county funding to cost share this underpass in the near term.

Boulder County and the Colorado Department of Transportation (CDOT) have discussed a future project to reconfigure the U.S Highway 36/Neva Road intersection. Boulder county staff has indicated a willingness to work with CDOT to see if that project could be done concurrent with an underpass design. The county has no funds assigned to such a project. City staff has only had preliminary conversations with CDOT regarding this project and roadway improvements associated with the Joder Trailhead. At this point staff is not aware of any other planned improvements for U.S. Highway 36 in the area of the proposed underpass, and consequently, no other potential opportunities for cost sharing with CDOT. Staff was unable to confirm this information with CDOT between the May 24 City Council study session and the due date for this memorandum, but hopes to have more information by the June 7 meeting.

GOCO offers grants for large and small trail projects and trail planning and maintenance through the Colorado State Recreational Trails Grant Program. This partnership among the Colorado Division of Parks and Wildlife, Great Outdoors Colorado, the Colorado Lottery, the federal Recreational Trails Program and the Land and Water Conservation Fund helps develop trails for non-motorized activities including hiking, biking, wildlife-watching, horseback riding, cross-country skiing and snowshoeing. Staff will continue to consider any grant funding opportunities including the GOCO trail grants to increase our capacity to implement the workplan, including any new direction in the North TSA plan.

In 2005, the Boulder City Council approved the Open Space and Mountain Parks Visitor Master Plan, which among other things, identified the need to **address safety issues** facing hikers, bikers, and equestrians on OSMP trails. One of the safety issues identified in the plan were **at-grade road crossings.** And the **Community Ditch crossing of Colorado Highway 93** because of poor sight lines, width and high traffic speeds was identified as one of the most dangerous crossings of all.

After several years of planning and work with potential partners, conditions aligned in 2012 when the city, Boulder County and the Colorado Department of Transportation (CDOT) had common interests in the improvements to the trails and roadway and partnered and combined projects to reduce the underpass costs for the city by combining the underpass costs with highway improvements.

The **$6.7 million highway and underpass project costs** were:

Boulder County	**$3 million**
CDOT	**$2.6 million**
City of Boulder	**$1.1 million**

Work began on the underpass in July of 2013, and the underpass was opened in November of 2014.

Implementation Timing, Costs, and Benefit Ranks of North TSA Draft Plan Recommendations

Action #	Plan Ref #	Action	Project Timing	Timing Notes	Estimated Cost	Capital Project	Benefit Rank 0-1 = Low 2-3 = Medium 4-6 = High
1	T1	Provide management area designations for properties without designations to guide management actions: Retain the Joder and Cox property designation as a Habitat Conservation Area (HCA) and implement as part of the North Foothills HCA.	To be determined	Timing to implement the North Foothills HCA to be determined after approval of plan.	$10,000		Medium
2	T2	Management Area Designation: Designate Dagle II as a Natural Area.	2016		Core Service		Low
3	T3	Management Area Designation: Designate Dakota Ridge Village property as a Passive Recreation Area.	2016		Core Service		Low
4	T4	Management Area Designation: Designate Berman Brothers property as an Agricultural Area.	2016		Core Service		Low
5	T5	Management Area Designation: Designate Stratton as a Natural Area.	2016		Core Service		Low
6	T6	Management Area Designation: Designate Lappin as a Natural Area.	2016	Open property when pond closure and fencing are in place	Core Service		Low
7	T7	Management Area Designation: Designate IBM open space easement as a Natural Area. Limit public access to on-trail travel on IBM open space easement property.	2016		Core Service		Low
8	T8	Management Area Designation: Designate Hart-Jones Exchange as a Natural Area.	2016		Core Service		Low
9	T9	Management Area Designation: Designate Palo Park as a Natural Area.	2016		Core Service		Low
10	T10	Collaborate with partner agencies to create regional connections in a way that minimizes natural resource impacts. North TSA to Boulder County Parks and Open Space's Heil Valley Ranch. The North TSA Plan does not preclude future planning processes to assess and recommend a regional connector trail connection to Heil Ranch on the Buckingham property.		External collaboration required	External collaboration required		Medium
11	T11	Regional Connections: North TSA to Boulder County Parks and Open Space's Lagerman/Imel/AHI Open Space Complex.		External collaboration required	External collaboration required		Medium
12	T12	Regional Connections: A Boulder-to-Lyons trail connection including the efforts of the Rocky Mountain Greenway Project		External collaboration required	External collaboration required		Medium
13	T13	Regional Connections: IBM Connector Trail underpass and trail (construction pending)		External collaboration required	Underway		Low
14	T14	Regional Connections: Fourmile Canyon Creek Trail underpass to Cottonwood Trail (construction pending)		External collaboration required	Underway		Low
15	T15	Regional Connections: Eagle Trail to the planned Boulder Reservoir Trail			External collaboration required	Y	Medium
16	T16	As opportunities arise, collaborate with partner agencies to create local trail connections in a way that minimizes natural resource impacts. Joder Trail to Buckingham Park via Olde Stage Road (in progress)	2016, 2017		$ 8,500	Y	Medium
17	T17	Local Connections: Joder Ranch and Boulder County's Six-Mile Fold. Boulder County will conduct its own planning process to determine access and management of visitors onto Six-Mile Fold. OSMP will coordinate with the county's planning efforts to determine if and where trails could be located in this area.			External collaboration required	Y	Low
18	T18	Local Connections: City of Boulder's Area III park site to the North TSA			External collaboration required		Low
19	T20	Local Connections: Fourmile Canyon Creek Greenway path to Foothills Community Park			External collaboration required		Low
20	T21	Designate undesignated access points that connect with new or existing designated trails.	As opportunity allows		$12,600	Y	Medium
21	T22	Bring all trails up to standards. (South Foothills)	2017		$100,000	Y	Medium
22	T23	Bring all trailheads and access points up to standards.	After 2022		$128,000	Y	Medium
23	T24	Remove unnecessary fencing and use wildlife friendly fencing.	As opportunity allows		$17,800		Medium
24	T25	Allow natural revegetation or restore all undesignated trails not integrated into designated trail connections.	As opportunity allows		$ 25,500		High
25	T26	Assess and prevent the introduction and spread of priority invasive plants along new trail connections and decommissioned or undesignated trail sections under restoration.	As opportunity allows		$91,000		High
26	T27	Create interpretive information and messages about unique, rare and sensitive resources.	As opportunity allows		$31,000		Medium
27	W1	Collaborate with City of Boulder Parks and Recreation Department to support designed nature play experiences on their property and support appropriate passive recreation aspects of this type of experience on adjacent OSMP land.	As opportunity allows		Core Service		Low
28	W3	Construct a shade structure near Wonderland Lake Trailhead.	2017	Time with Improve ADA access (W11)	$25,000	Y	Low

Action #	Plan Ref #	Action	Project Timing	Timing Notes	Estimated Cost	Capital Project	Benefit Rank 0-1 = Low 2-3 = Medium 4-6 = High
29	W4	Improve safety at Broadway pedestrian crossing between Sumac Avenue, RTD bus stop and the Foothills Nature Center.	As opportunity allows	Requires collaboration with Transportation Department and other partners	Core Service		Medium
30	W5	Revegetate the flood damaged northern loop section of Old Kiln Trail.	2016, 2017		$3,640		Medium
31	W6	Rename Four Mile Creek Trailhead as Fourmile Canyon Creek Trailhead.	After 2022	Time with Fourmile Canyon Creek Trailhead upgrades	$10,100		Low
32	W8	Create Wonderland Lake backdrop loop trail connection by re-routing trails (Antler Loop). Re-route existing designated and undesignated trails to provide more sustainable connections to the paragliding launch sites and visitors seeking a trail experience on the Wonderland hogback.	2021-2023	Design Wonderland Trail switchback (W9)	$131,000	Y	High
33	W9	Re-route portion of Wonderland Lake Trail. Re-route the steep downhill section of trail just north of where it connects into Foothills South Trail.	Build after 2022	Design with Antler Loop	$10,000	Y	Medium
34	W10	Create a second, smaller Wonderland Lake backdrop loop trail (Glider Access Trail). Create a more sustainable trail connection to replace the existing glider access trail.	As opportunity allows		$95,000	Y	High
35	W11	Improve Americans with Disabilities (ADA) access on Wonderland Lake Trail.	2017		$9,000	Y	Medium
36	W12	Prohibit boats and belly boats on Wonderland Lake.	2018		$500		Low
37	W13	Prohibit ice skating on Wonderland Lake.	2018		$500		Low
38	W14	Allow sledding on Wonderland Lake dam.	2018		$500		Low
39	W15	Do not provide access to Wonderland Lake's south, west and north shores.	2018		$3,500		Low
40	W16	Provide access to the cattail marsh on north side of peninsula.	2018 Design and build		$8,000	Y	Medium
41	W17	Establish two hardened pullout areas on the peninsula for educational programming and a hardened wading access. Provide increased beach access on the western edge of the peninsula.	2018 Design and build		$14,000	Y	Medium
42	W18	Allow Wonderland Lake wading access from designated areas on the peninsula.	2018		$700		Low
43	W19	Create Wonderland Lake fishing pier.	2018 Design and build		$45,000	Y	Low
44	REG	Wonderland Loop (Antler Loop): Voice and Sight On Corridor	2023	Time with completion of trail	$2,000		Low
45	B10	Provide public access to portions of Lappin, Lousberg, Papini and B.L.I.P. properties while protecting sensitive natural resources. Protect aquatic and wetland resources in and around ponds on these properties by prohibiting public access to the ponds.	Lappin pond in 2016, 2017 so property can open in 2017		$9,000		Medium
46	B11	Designate access point for where Lefthand Trail connects to Neva Road.	After 2022	Time with Lefthand Trailhead improvements	$300		Low
47	B12	Bring Lefthand Trailhead up to standards.	2021 Design and Permits; 2022 Build		$56,500	Y	Medium
48	B13	Improve Lefthand Trail.	After 2022		$145,000	Y	High
49	B14	Designate a connector trail from Lefthand Trail to the Lake Valley Estates neighborhood.	After 2022		$300	Y	Medium
50	B15	Create a connection via the Boulder Reservoir to Niwot Road (Talon Trail). Create a regional trail connection that minimizes natural resource impacts. Work with partner agencies to determine the most feasible trail alignment with a preference for an alignment along 55th Street.	After 2022; also requires completion of trail on west side of Boulder Reservoir		$200,000	Y	Medium
51	B16	Bring Eagle Trailhead up to standards.	2020 Design and Permit; 2021 Build		$57,000	Y	High
52	B17	Bring Foothills Trailhead up to standards.	2017		$12,500	Y	Medium
53	B18	Add a new trailhead at the Degge Trail access point (Horseshoe Trailhead). Provide additional parking capacity and horse trailer parking.	2019 Design and Permit; 2020 Build		$97,500	Y	Medium
54	B19	Create a trail connection between Foothills and Degge trails, re-route Degge Trail. Provide a trail connection from Foothills Trail to re-routed west end of Degge Trail.	2019 Design; 2020 Build	Time with Horseshoe Trailhead completion	$35,000	Y	Medium
55	B20	Replace existing trails north of Mesa Reservoir with new trail connections. Replace Old Mill and Cobalt trails with a single new trail connection and replace western section of Eagle Trail and steep, downhill eastern portion section of Eagle Trail with new re-routed connections.	2019-2020 Design; 2020-2021 Build	Complete design plan for adjacent BVR trail improvements and time construction together	$156,000	Y	High
56	B21	Provide a sustainable connection with Sage Trailhead by replacing undesignated trails through shale barrens and rare plant habitat with one new designated trail with educational signs for pedestrians and equestrians north of Mesa Reservoir.	2016 Design; 2017 Build	Completed before other BVR improvements to increase natural resource protection	$140,000	Y	High
57	B22	Provide nature-viewing access at Mesa Reservoir.	2019-2020 Design; 2020-2021 Build	Complete design plan for adjacent BVR trail improvements and time construction together	$2,500	Y	Low
58	B23	Replace southern sections of Mesa Reservoir Trail and the Hidden Valley Trail with a new single trail	2019-2020 Design; 2020-	Complete design plan for adjacent	$176,000	Y	High

Action #	Plan Ref #	Action	Project Timing	Timing Notes	Estimated Cost	Capital Project	Benefit Rank 0-1 = Low 2-3 = Medium 4-6 = High
		connection.	2021 Build	BVR trail improvements and time construction together			
59	B24	Pave Longhorn Road.	2022		$ 700,000	Y	Medium
60	B25	Bring Sage (BVR) Trailhead up to standards. Improve restroom facilities.	2018 Trailhead upgrades, 2019 design/build outhouse		$71,500	Y	High
61	B26	Improve Americans with Disabilities Act (ADA) access on Eagle and Sage trails.	2017		$130,000	Y	Medium
62	B27	Designate and slightly re-route in some locations one parallel single track tread adjacent to the Eagle and Sage loop at BVR.	2019-2020 Design; 2020-2021 Build	Complete design plan for adjacent BVR trail improvements and time construction together	$35,000	Y	Medium
63	B28	Allow fishing access on eastern shore of BVR pond.	As opportunity allows				Low
64	B29	Create a new trail connection on the south side of the Papini property (Wrangler Trail). Provide a trail connection along the south side of Papini property connecting Kelso Road to the Mesa Reservoir trail system.	After 2022 and completion of BVR trails	Time dog regulation changes with completion of trail	$75,000	Y	High
65	B30	Continue to follow the terms of the lease regarding public access to the BVR equestrian arena and concurrently develop options for nearby horse trailer parking and/or seek to provide an equivalent and suitable corral option that will be determined in cooperation with stakeholders that will be vetted and approved in a future public process. The Board recommends that staff proactively address any conflict issues resulting from public access in future lease negotiations.	As opportunity allows	Scheduling public access is underway as is assessment of parking opportunities	$20,000	Y	Low
66	REG	Lefthand Trail: Dogs Voice and Sight On Corridor	As opportunity allows		$500		Low
67	NF7	Close Cottonwood Recreation Area.	2017	Complete after Lefthand road flood improvements	$800		Low
68	NF8	Realign western section of the Interim Joder Trail near the Buckingham Property. (Joder Ranch Trail)	2018 Design, 2019 Build	Time with construction of Mahogany Loop (NF9)	$14,000	Y	Low
69	NF9	Construct one loop trail on the northwest section of the Joder property. (Mahogany Loop)	2017 Design, 2018-19 Build		$131,000	Y	Medium
70	NF10	Construct a new trailhead for passenger vehicle parking on the Dagle/Wright properties. (Coyote Trailhead)	2017-2018 Design, 2019 Build	Time with construction of Mahogany Loop (NF9)	$137,000	Y	Medium
71	NF11	Construct a connector trail from the new trailhead (Coyote Trailhead) on the Dagle property to the Joder Ranch Trail.	2019	Time with completion of Coyote Trailhead	Included in Coyote Trailhead costs		Low
72	NF12	Retain Interim Joder Trailhead. (Joder Ranch Trailhead)	2017-2018 Design, 2019 Build	Time with other Joder property improvements	$7,000	Y	Low
73	NF13	Construct a north-south connector trail from Foothills Trail to the Joder Ranch Trail west of US 36 (North Sky Trail). Construct a trail from the southern section of the Railroad Grade, west of Foothills Business Park, connecting to the Joder Ranch Trail. Use best efforts to locate connector trail through the conservation easement.	2017 Site assessment / design, 2018 permitting, 2019-2021 Build		$805,000	Y	Medium
74	NF14	Include the North Sky Trail in the muddy closure program.	2021	Time with completion of North Sky Trail (NF13)	Core Service		Medium
75	NF15	Post educational signs about the North Foothills HCA. Include information about the area's important natural resources as well as safety concerns such as rattlesnakes.	2021	Time with completion of North Sky Trail (NF13)	$20,500	Y	Low
76	NF16	Re-route Hogback Trail.	2017 design; 2021 permits, 2022 Build	Time construction with Foothills Trail Reroute (NF17)	$146,000	Y	High
77	NF17	Re-route Foothills Trail where it connects to Hogback Trail and eastward to US 36.	2018 design; 2021 permits, 2022 Build		$113,000	Y	High
78	NF18	Do not allow off-trail permits for the area inside the Joder loop trail for two years following the trail's construction. (Mahogany Loop)	2019	Time with completion of Mahogany Loop (NF9)	$3,000		Low
79	NF19	Do not allow off-trail permits within the North Foothills HCA.	To be determined	Timing to implement the North Foothills HCA to be determined after approval of plan.	Costs combined with HCA designation and implementation		Medium
80	NF20	After City Council approval of the North TSA Plan, staff will return to the OSBT with monitoring recommendations for the North Foothills HCA, the North Sky Trail and the Joder property.	2016	OSBT commitment after approval of North TSA Plan	Core Service		Low
81	REG	North Sky Trail: Dogs Leash Required (August 1 – April 30) and Seasonal Prohibited (May 1 – July 31)	2021	Time with completion of North Sky Trail (NF13)	$1,000		Low
82	REG	Joder HCA designation and implementation	To be determined	Timing to implement the North Foothills HCA to be determined after	Combined with North Foothills HCA implementation costs		Low

Action #	Plan Ref #	Action	Project Timing	Timing Notes	Estimated Cost	Capital Project	Benefit Rank 0-1 = Low 2-3 = Medium 4-6 = High
				approval of plan.			
83	REG	Mahogany Loop: Dogs Prohibited	2019	Time with completion of Mahogany Loop (NF9)	$1,000		Low
84	NP4	Prohibit public access on Waldorf, Ryan, Andrea, Jacob, Bison, Oasis, Steele, Bennett, Stratton, Brewbaker, Berman Brothers, Dodd and Abbott properties.	2016		$3,000		Medium
85	NP5	Allow public access on Deluca, Hester and Campbell properties with seasonal closure (May 1-July 31) for ground-nesting bobolinks.	2017	Time implementing seasonal closure with 2017 bird-nesting season	$1,000		Medium
86	NP6	Allow public access on Johnson, Bruning, and Schooley properties.	2016		$1,000		Low
				Total	$3,984,340		

Ongoing Projects and Actions to Implement North TSA Plan

Action #	Plan Ref #	Action	Estimated Cost
1	T1	Provide management area designations for properties without designations to guide management actions: Retain the Joder and Cox property designation as a Habitat Conservation Area (HCA) and implement as part of the North Foothills HCA.	$10,000
20	T21	Designate undesignated access points that connect with new or existing designated trails.	$12,600
23	T24	Remove unnecessary fencing and use wildlife friendly fencing.	$17,800
24	T25	Allow natural revegetation or restore all undesignated trails not integrated into designated trail connections.	$25,500
25	T26	Assess and prevent the introduction and spread of priority invasive plants along new trail connections and decommissioned or undesignated trail sections under restoration.	$91,000
26	T27	Create interpretive information and messages about unique, rare and sensitive resources.	$31,000
65	B30	Continue to follow the terms of the lease regarding public access to the BVR equestrian arena and concurrently develop options for nearby horse trailer parking and/or seek to provide an equivalent and suitable corral option that will be determined in cooperation with stakeholders that will be vetted and approved in a future public process. The Board recommends that staff proactively address any conflict issues resulting from public access in future lease negotiations.	$20,000
79	NF19	Do not allow off-trail permits within the North Foothills HCA.	Costs combined with HCA designation and implementation
82	REG	Joder HCA designation and off trail permit implementation	Costs combined with HCA designation and implementation
		Total	$207,900

Projects that can be added as opportunity, staffing and funding allows to 2016-2022 timeline

Action #	Plan Ref #	Action	Estimated Cost
34	W10	Create a second, smaller Wonderland Lake backdrop loop trail (Glider Access Trail). Create a more sustainable trail connection to replace the existing glider access trail.	$95,000
66	REG	Lefthand Trail: Dogs Voice and Sight On Corridor	$500
		Total	$95,500

Projects that are Dependent on Collaboration with Other Departments, Boulder County and External Entities

Action #	Plan Ref #	Action	Estimated Cost
10	T10	Collaborate with partner agencies to create regional connections in a way that minimizes natural resource impacts. North TSA to Boulder County Parks and Open Space's Heil Valley Ranch. The North TSA Plan does not preclude future planning processes to assess and recommend a regional connector trail connection to Heil Ranch on the Buckingham property.	Unknown
11	T11	Regional Connections: North TSA to Boulder County Parks and Open Space's Lagerman/Imel/AHI Open Space Complex.	Unknown
12	T12	Regional Connections: A Boulder-to-Lyons trail connection including the efforts of the Rocky Mountain Greenway Project	Unknown
13	T13	Regional Connections: IBM Connector Trail underpass and trail (construction pending)	Boulder County Project
14	T14	Regional Connections: Fourmile Canyon Creek Trail underpass to Cottonwood Trail (construction pending)	Boulder County Project
15	T15	Regional Connections: Eagle Trail to the planned Boulder Reservoir Trail	Unknown
17	T17	Local Connections: Joder Ranch and Boulder County's Six-Mile Fold. Boulder County will conduct its own planning process to determine access and management of visitors onto Six-Mile Fold. OSMP will coordinate with the county's planning efforts to determine if and where trails could be located in this area.	Unknown
18	T18	Local Connections: City of Boulder's Area III park site to the North TSA	Unknown
19	T20	Local Connections: Fourmile Canyon Creek Greenway path to Foothills Community Park	City of Boulder Greenways Project
27	W1	Collaborate with City of Boulder Parks and Recreation Department to support designed nature play experiences on their property and support appropriate passive recreation aspects of this type of experience on adjacent OSMP land.	Core Service
29	W4	Improve safety at Broadway crossing between Sumac Avenue, RTD bus stop and the Foothills Nature Center.	Core Service

North TSA Draft Plan Project Phasing

Action #	Plan Ref #	Action	2016	2017	2018	2019	2020	2021	2022	2023 and Later
2	T2	Management Area Designation: Designate Dagle II as a Natural Area.	Core Service							
3	T3	Management Area Designation: Designate Dakota Ridge Village property as a Passive Recreation Area.	Core Service							
4	T4	Management Area Designation: Designate Berman Brothers property as an Agricultural Area.	Core Service							
5	T5	Management Area Designation: Designate Stratton as a Natural Area.	Core Service							
6	T6	Management Area Designation: Designate Lappin as a Natural Area.	Core Service							
7	T7	Management Area Designation: Designate IBM open space easement as a Natural Area. Limit public access to on trail travel on IBM open space easement property.	Core Service							
8	T8	Management Area Designation: Designate Hart-Jones Exchange as a Natural Area.	Core Service							
9	T9	Management Area Designation: Designate Palo Park as a Natural Area.	Core Service							
16	T16	As opportunities arise, collaborate with partner agencies to create local trail connections in a way that minimizes natural resource impacts. Joder Trail to Buckingham Park via Olde Stage Road (in progress)	$8,500 Underway							
30	W5	Revegetate the flood damaged northern loop section of Old Kiln Trail.	$3,640 Underway							
56	B21	Provide a sustainable connection with Sage Trailhead by replacing undesignated trails through shale barrens and rare plant habitat with one new designated trail with educational signs for pedestrians and equestrians north of Mesa Reservoir.	$140,000 Design	Build						
80	NF20	After City Council approval of the North TSA Plan, staff will return to the OSBT with monitoring recommendations for the North Foothills HCA, the North Sky Trail and the Joder property.	Core Service							
84	NP4	Prohibit public access on Waldorf, Ryan, Andrea, Jacob, Bison, Oasis, Steele, Bennett, Stratton, Brewbaker, Berman Brothers, Dodd and Abbott properties.	$3,000							
85	NP5	Allow public access on Deluca, Hester and Campbell properties with seasonal closure (May 1-July 31) for ground-nesting bobolinks.	$1,000							
86	NP6	Allow public access on Johnson, Bruning, and Schooley properties.	$1,000							
21	T22	Bring all trails up to standards. (South Foothills Trail)		$100,000						
28	W3	Construct a shade structure near Wonderland Lake Trailhead.		$25,000						
35	W11	Improve Americans with Disabilities (ADA) access on Wonderland Lake Trail.		$9,000						
45	B10	Provide public access to portions of Lappin, Lousberg, Papini and B.L.I.P. properties while protecting sensitive natural resources. Protect aquatic and wetland resources in and around ponds on these properties by prohibiting public access to the ponds.		$9,000						
52	B17	Bring Foothills Trailhead up to standards.		$12,500						
61	B26	Improve Americans with Disabilities Act (ADA) access on Eagle and Sage trails.		$130,000						
67	NF7	Close Cottonwood Recreation Area.		$800						
69	NF9	Construct one loop trail on the northwest section of the Joder property. (Mahogany Loop)		$131,000 Design	Build	Build				
70	NF10	Construct a new trailhead for passenger vehicle parking on the Dagle/Wright properties. (Coyote Trailhead)		$137,000 Initial Design	Final Design and Permits	Build				
72	NF12	Retain Interim Joder Trailhead. (Joder Ranch Trailhead)		$7,000 Initial Design	Final Design	Build				
73	NF13	Construct a north-south connector trail from Foothills Trail to the Joder Ranch Trail west of US 36 (North Sky Trail). Construct a trail from the southern section of the Railroad Grade, west of Foothills Business Park, connecting to the Joder Ranch Trail. Use best efforts to locate connector trail through the		$805,000 Initial Design	Final Design and permitting	Build	Build	Build		

Action #	Plan Ref #	Action	2016	2017	2018	2019	2020	2021	2022	2023 and Later
		conservation easement.								
76	NF16	Re-route Hogback Trail.		Initial Design				$ 146,000 Final Design, Permits	Build	
77	NF17	Re-route Foothills Trail where it connects to Hogback Trail and eastward to US 36.		Initial Design				$113,000 Final Design, Permits	Build	
85	NP5	Allow public access on Deluca, Hester and Campbell properties with seasonal closure (May 1-July 31) for ground-nesting bobolinks.		$1,000						
36	W12	Prohibit boats and belly boats on Wonderland Lake.			$500					
37	W13	Prohibit ice skating on Wonderland Lake.			$500					
38	W14	Allow sledding on Wonderland Lake dam.			$500					
39	W15	Do not provide access to Wonderland Lake's south, west and north shores.			$3,500					
40	W16	Provide access to the cattail marsh on north side of peninsula.			$8,000					
41	W17	Establish hardened pullout areas on the peninsula for educational programming and a hardened wading access. Provide increased beach access on the western edge of the peninsula.			$14,000					
42	W18	Allow Wonderland Lake wading access from designated areas on the peninsula.			$700					
43	W19	Create Wonderland Lake fishing pier.			$45,000					
60	B25	Bring Sage (BVR) Trailhead up to standards. Improve restroom facilities.			$71,500 Amenity Updates	Design and build outhouse				
68	NF8	Realign western section of the Interim Joder Trail near the Buckingham Property. (Joder Ranch Trail)			$14,000 Design	Build				
53	B18	Add a new trailhead at the Degge Trail access point (Horseshoe Trailhead). Provide additional parking capacity and horse trailer parking.				$97,500 Design	Build			
54	B19	Create trail connection between Foothills and Degge trails, re-route Degge Trail. Provide a trail connection from Foothills Trail to re-routed west end of Degge Trail.				$35,000 Design	Build			
55	B20	Replace existing trails north of Mesa Reservoir with new trail connections. Replace Old Mill and Cobalt trails with a single new trail connection and replace western section of Eagle Trail and steep, downhill eastern portion section of Eagle Trail with new re-routed connections.				$156,000 Initial Design	Final Design and Permits	Build	Build	
57	B22	Provide nature-viewing access at Mesa Reservoir.				$2,500 Initial Design	Final Design and Permits	Build	Build	
58	B23	Replace southern sections of Mesa Reservoir Trail and the Hidden Valley Trail with a new single trail connection.				$176,000 Initial Design	Final Design and Permits	Build	Build	
62	B27	Designate and slightly re-route in some locations one parallel single track tread adjacent to the Eagle and Sage loop at BVR.				$35,000 Initial Design	Final Design and Permits	Build	Build	
71	NF11	Construct a connector trail from the new trailhead (Coyote Trailhead) on the Dagle property to the Joder Ranch Trail.				Complete with new Coyote Trailhead				
78	NF18	Do not allow off-trail permits for the area inside the Joder loop trail for two years following the trail's construction. (Mahogany Loop)				$3,000				
83	REG	Mahogany Loop: Dogs Prohibited				$1,000				
51	B16	Bring Eagle Trailhead up to standards.					$57,000 Design	Build		
32	W8	Create Wonderland Lake backdrop loop trail connection by re-routing trails (Antler Loop). Re-route existing designated and undesignated trails to provide more sustainable connections to the paragliding launch sites and visitors						Initial Design	Final Design and Permits	$131,000 Build

Action #	Plan Ref #	Action	2016	2017	2018	2019	2020	2021	2022	2023 and Later
		seeking a trail experience on the Wonderland hogback.								
47	B12	Bring Lefthand Trailhead up to standards.						$56,500 Design	Build	
74	NF14	Include the North Sky Trail in the muddy closure program.						Core Service		
75	NF15	Post educational signs about the North Foothills HCA. Include information about the area's important natural resources as well as safety concerns such as rattlesnakes.						$20,500		
81	REG	N/A North Sky Trail: Dogs Leash Required (August 1 – April 30) and Seasonal Prohibited (May 1 – July 31)						$1,000		
46	B11	Designate access point for where Lefthand Trail connects to Neva Road.							$300	
59	B24	Pave Longhorn Road.							$ 700,000	
22	T23	Bring all trailheads and access points up to standards.								$128,000
31	W6	Rename Four Mile Creek Trailhead as Fourmile Canyon Creek Trailhead.								$10,100
33	W9	Re-route portion of Wonderland Lake Trail. Re-route the steep downhill section of trail just north of where it connects into Foothills South Trail.								$10,000
44	REG	Wonderland Loop (Antler Loop): Voice and Sight On Corridor								$2,000
48	B13	Improve Lefthand Trail.								$145,000
49	B14	Designate a connector trail from Lefthand Trail to the Lake Valley Estates neighborhood.								$300
50	B15	Create a connection via the Boulder Reservoir to Niwot Road (Talon Trail). Create a regional trail connection that minimizes natural resource impacts. Work with partner agencies to determine the most feasible trail alignment with a preference for an alignment along 55th Street.								$200,000
64	B29	Create a new trail connection on the south side of the Papini property (Wrangler Trail). Provide a trail connection along the south side of Papini property connecting Kelso Road to the Mesa Reservoir trail system.								$75,000
		TOTALS	$157,140	$1,367,300	$158,200	$506,000	$57,000	$337,000	$700,300	$701,400