



STUDY SESSION MEMORANDUM

TO: Mayor and Members of City Council

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DATE: May 24, 2016

SUBJECT: North Trail Study Area (TSA) Draft Plan

EXECUTIVE SUMMARY

The purpose of the study session is for the City Council and staff to discuss the North TSA Draft Plan (Draft Plan-**Attachment A**) and for the council to provide feedback on the Draft Plan. The goal of the North TSA planning process is to provide the management direction and implementation actions which will improve the visitor experience, 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 since February 2015 collecting and compiling information about the North TSA, identifying issues and interests, developing alternative management scenarios, and deciding on a preferred scenario to recommend to City Council. Working with the OSBT and community members, staff initially developed four scenarios to address and balance community issues and interests for the North TSA in different ways. Using community feedback and input from the OSBT, staff narrowed the range of scenarios to two. These two refined scenarios and associated public comment formed the basis of an OSBT study session on Jan. 13 and Jan. 14, 2016. At this study session, OSBT members shared feedback about improvements to the scenarios. Staff updated the two refined scenarios, and the revised scenarios were discussed at a public hearing during the Feb. 10, 2016 OSBT meeting. At this meeting, the OSBT recommended additional refinements and selected one of the updated refined scenarios as the basis for the Draft Plan. On March 9,

2016, the OSBT approved the Draft Plan with several modifications by a 3-2 vote. Attachment A includes staff's revisions to the Draft Plan addressing the OSBT's approved modifications.

The evaluation and recommendations regarding proposed routing of a trail connection between the Foothills Trail and the new Joder Ranch Trail was the dominant focus of public comment and disagreement during the planning process. This topic is a point of focus for the memo.

Questions for Council

1. Do City Council members have any questions or comments about the process or recommended actions included in the Draft Plan or the Alternative Scenario?
2. Are there changes to the Draft Plan or additional actions City Council members consider desirable and feasible to better balance community interests?

BACKGROUND

The North TSA

The [North TSA](#) is a geographic area that includes Open Space and Mountain Parks (OSMP) lands north of the Diagonal Highway and Linden Avenue. The North TSA Plan will include management recommendations for 7,701 acres that OSMP manages in this area. 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. Additional background on the plan and process used to develop it is available in **Attachment B**.

The Planning Process

The North TSA planning process began in February of 2015 and included 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 and Appendices](#) in June 2015.
2. **Identifying key issues and interests** that need to be addressed in the plan, which were summarized in the [Interests and Issues Report](#). The report was distributed in July 2015.
3. **Assessing and improving scenarios** and selecting one scenario to use as the basis of the plan. Staff created [four preliminary scenarios](#) for the North TSA Plan to balance community interests and address issues through 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. At a January study session with the OSBT, staff asked the Board for feedback on ways that the refined scenarios could be further improved. Their feedback led staff to develop [updated scenarios](#). During the February OSBT meeting, the Board recommended additional revisions to the scenarios and selected the scenario that should be used as the basis of the Draft Plan and the Alternative Scenario.

4. **Developing the Draft Plan** based on the preferred scenario selected by the OSBT. Staff presented the Draft Plan to the OSBT for approval and recommendation to City Council. The OSBT approved the Draft Plan with several modifications by a 3-2 vote (**Attachment C**). Staff integrated the OSBT-approved changes into a revised Draft Plan that is being presented to City Council (**Attachment A**). The revised version includes wording and map edits, and updates to background content. Board changes were also integrated into an Alternative Scenario (**Attachment D**). A summary of recommended actions included in the Draft Plan and Alternative Scenario is included in **Attachment E**.

North TSA Sideboards

The North TSA planning process included [sideboards](#) approved by OSBT to define the decision space for public engagement and the plan. The sideboards clarified what was “on the table” for discussion, and what was considered beyond the scope of the plan. One of the sideboards (No. 3) was to integrate existing commitments.

During the development and refinement of the two final scenarios, some community members expressed concern about whether the inclusion of a trail connection in the North Foothills Habitat Conservation Area (HCA) is consistent with the sideboards. This concern was based on natural resource guidance from plans, such as the Grassland Management Plan, Visitor Master Plan, North Boulder Valley Area Management Plan (NBVAMP) and the Open Space Long Range Management Policies. An example where such guidance was thought to be inconsistent with proposing a trail connection to the Joder property in the Foothills HCA is from the NBVAMP which suggests in trail planning to “minimize the risk of invasive plant species introduction and spread.”

The sideboards include a variety of OSBT and City Council approved and accepted plans that have competing purposes and require reconciliation. This reconciliation is anticipated during the development of TSA plans. The need for the Draft Plan to do this is addressed specifically in the sideboard document:

Guidance from the different plans and policies are generally compatible, but there may be situations where guidance from plans’ directions conflict. This requires reconciliation in the TSA planning process.

The Visitor Master Plan and the Grassland Plan also identify TSA planning as the forum where conflicting policy guidance affecting visitor access on OSMP lands is resolved.

Staff adhered to the North TSA sideboards in the development of the Draft Plan. Doing so was both a fundamental commitment of the North TSA process and one of the most significant challenges—with the community, OSBT and staff spending considerable time balancing recommendations through the development and revisions to scenarios and the Draft Plan.

Regional Trail Connections

OSMP is committed to working with other city departments, Boulder County and other partner agencies to advance regional trail connections envisioned in City Council-adopted plans. Regional trail connections for areas not managed by OSMP require collaborative planning, which is beyond the scope of a TSA Plan. The Draft Plan identifies trail gaps and recommends connections in the North TSA for lands managed by OSMP. The Draft Plan also acknowledges opportunities for future collaboration with partner agencies on regional trails.

Discussions with the Parks and Recreation Department and Boulder County identified improving connectivity as a joint interest for the North TSA. An example for future collaboration with the Parks and Recreation Department is connecting the Eagle Trailhead with a trail around the west side of the reservoir as proposed in the Boulder Reservoir Master Plan. Staff also continues to pursue connections with Boulder County's trail and open space system. Examples include linkages to Heil Valley Ranch, the regional desire for trail connection(s) from Boulder to Lyons and the possibility of future connections from Boulder trails to the expanding county Lagerman Reservoir trail system. The Draft Plan identifies these and other trail connections as important future opportunities for OSMP to pursue with partner agencies. Some of these connections are also envisioned as part of larger scale regional trails such as the Rocky Mountain Greenway. Due to the less developed nature of some of these regional initiatives and the wide latitude in how they might be implemented, the North TSA Plan is unable to be specific on how these connections may ultimately relate to the Rocky Mountain Greenway. These preferred connections will be the subject of future planning efforts.

Northern Properties

The Northern Properties in the North TSA include 19 dispersed OSMP-managed properties that primarily have had an agricultural history. Many remain in agricultural production. Some of these are recent acquisitions while others have been through some level of planning to integrate them into the OSMP system. The North TSA Plan has provided a planning process to determine how these properties contribute to visitor access opportunities and the conservation of natural, cultural and agricultural resources.

Currently, six Northern Properties are open to public access and 13 are not. Staff evaluated and presented a range of different combinations of partially opened, opened, and closed options. Community feedback either generally supported closing all the properties or supported a range of having some of the properties open to public access.

The OSBT sought additional public feedback about the Northern Properties leading up to their consideration of the Draft Plan on March 9. Based on community feedback and public testimony, the OSBT recommended maintaining the current access status of the properties as being open or closed. The Board also supported adding a seasonal bird nesting closure from May 1 through July 31 on the Deluca, Hester, and Campbell properties.

A concern that was raised through public comment is whether the closure of a Northern Property would prevent consideration of future trail connections on the property. A statement included in the Draft Plan clarifies that future trail development on both open and closed properties will be evaluated in the context of regional public planning processes.

ANALYSIS

Joder Connector Trail

The addition in 2013 of the Joder property to the city's open space lands in the North TSA added ecologically rich lands to the North Foothills HCA. The Joder trail connecting U.S. Highway 36 and Olde Stage Road provided a much sought after trail segment to further a regional trail linking Boulder to Lyons through Boulder County's Heil Valley Ranch. An important component of the North TSA Plan is completing another missing link in this regional trail, connecting between the Foothills Trail and the new Joder trail. Options to complete this link ("the Joder Connector") ended up being focused on two trail routes – one west of U.S. Highway 36 (the "North Sky Trail"), the other east of the highway using Lefthand Trail and a new diagonal link from Longhorn Road ("East Side Route"). The evaluation and decision making around the Joder Connector was a dominant focus of public comment and disagreement during the planning process.

Routing Options

In developing the preliminary and refined scenarios, a wide range of different routing options were extensively explored. Important natural resources considered in assessing routes included riparian and wetland areas, shale barrens, rare plants and communities, and high-quality native grass and shrub communities and the wildlife communities they support. Visitor experience factors included terrain, trail design/sustainability, ability to see plants and wildlife, scenic views, and safety.

Staff assessed west side conceptual routes in the North Foothills HCA to reduce natural resource impacts and to locate the trail near the edge of the HCA as much as possible. Routes along the edge of the west side of the HCA were considered, but staff was unable to locate options with lower risk of impacts to ecological resources. Alternative routes east of the railroad grade were also assessed; however, they required additional impacts to intact native grasslands and extensive structural improvements to maintain a trail surface on low lying and poorly drained soils. The final conceptual route was developed as the best balance to provide a good visitor experience while reducing resource impact

as much as possible. This included integrating large portions of the existing disturbed railroad grade and social trail into the trail, but deviating if necessary to minimize resource impacts at Schneider Draw. The remainder of the route climbs from the railroad grade to follow along the east boundary of the HCA and the border of the adjacent Foothills Business Park Conservation Easement before connecting with the Joder property.

East side conceptual trail routes that were considered included developing a more direct connection to Neva Road providing a better visitor experience west of the existing Lefthand Trail. Staff also investigated options adjacent to U.S. Highway 36, a connection between Lefthand Trail and U.S. Highway 36 and ways of linking from the west end of Longhorn Road to Lefthand Trail. Considerations on the east side included reducing resource impacts to the extensive needle-and-thread mixed grass prairie and riparian corridors, and avoiding the need for extensive structural design to maintain a trail surface on clay soils. The recommendation to add a link trail along a diagonal drainage from Longhorn Road to Lefthand Trail was identified as the best option to address the evaluation criteria.

Attachment F includes detailed information comparing the factors assessed for the Joder Connector conceptual routes.

Actions Linked with the Joder Connector Options

Though the focus of much of the public comment on the plan and an important element of the plan, the Joder Connector was just one of many management recommendations that figured into the scenarios developed for the Draft Plan. Table No.1 provides examples of the associated actions that coincide with the location of the Joder Connector. The Draft Plan and the Alternative Scenario include actions that differ in the way they address tradeoffs for the Joder Connector being located east or west of the highway. For example, certain actions are included in the Alternative Scenario but not the Draft Plan:

- Allowing off-trail permits in the HCA.
- Retaining existing access along part of the railroad grade for only pedestrians and equestrians.
- Adding a new bypass trail for a steep section of the Joder Ranch Trail.
- The addition of new link trail connection to Lefthand Trail on which dogs would not be allowed.

Table 1: Linked actions associated with the Joder Connector

Draft Plan	Alternative Scenario
<ul style="list-style-type: none"> ● Off-trail permits <u>not allowed</u> in North Foothills HCA between Foothills Trail and Joder trails. Allowed north of Joder trails. ● Dogs required to be on leash on the North Sky Trail with a seasonal dog closure for nesting birds from May 1 through July 31. 	<ul style="list-style-type: none"> ● Off-trail permits <u>allowed</u> in North Foothills HCA. ● Add a new diagonal link trail section between Longhorn Road and Lefthand Trail. Dogs prohibited on this section of trail.

Draft Plan	Alternative Scenario
<ul style="list-style-type: none"> ● Passenger vehicle parking at Dagle/Wright property (west side of U.S. Highway 36). 	<ul style="list-style-type: none"> ● Designation of part of the railroad grade social trail as a designated (out and back) trail in the North Foothills HCA. ● Take on management of the Beech Pavilion from Boulder County. Work with partner agencies to provide a trail connection from Neva Road to the Schooley Property ● Add an optional bypass trail to a steep section of the Joder Ranch Trail ● Passenger vehicle parking at Schooley property (east side of U.S. Highway 36); underpass at the highway to connect trail and trailhead to Joder property

Implementing the Joder Connector

The OSBT approved the Draft Plan with a 3-2 vote. The Board’s vote reflects the difficulty in identifying a Joder Connector that fully addresses all community interests. With the Board recommendation of the Joder Connector (North Sky Trail) west of U.S. Highway 36 and in a HCA, Trustees took additional actions to bolster resource protection and reduce natural resource impacts. These actions included not allowing off-trail permits in the area surrounding the trail, an opportunity normally allowed in HCAs, and closing the trail seasonally to dogs during the bird-nesting season (May 1-July 31). Additionally, the OSBT requested conservation-first trail design that emphasizes reduced ecological impacts even if it means that cyclists would need to dismount for short distances. The OSBT also strongly supported staff’s ongoing investigation of opportunities to place part of the North Sky Trail on adjacent private property where the city and county own a conservation easement. Such a routing would reduce ecological impacts and trail construction costs but is not essential for meeting the goals of the Draft Plan.

As with trails in other HCAs, an important resource concern with constructing and extending a trail is the potential for increasing the rate of introduction and spread of weeds. The Draft Plan includes an action supporting the assessment and treatment of invasive plants with new trail construction or trail improvements. The elevated importance of this effort in the HCA ensures close adherence to OSMP’s Ecological Best Management Practices (EBMPs) for trail construction and maintenance related to invasive plant management.

Staff has identified a number of *additional* objectives and actions to further enhance ecological values to improve the very high biodiversity of the area. Opportunities exist within the North Foothills HCA and adjacent areas to restore and improve areas with marginalized natural resource condition. The OSMP Grassland Ecosystem Management Plan (GMAP), approved by City Council in 2010, sets conservation objectives, strategies and measurable standards for grassland and plains riparian habitats across OSMP. Restoration planning in the North TSA is conducted within the framework of the GMAP

which identifies areas of best opportunity for conservation and restoration. Regional and local information regarding conservation of biological diversity from the Colorado Natural Heritage Program, the Boulder Valley Comprehensive Plan and the Boulder County Comprehensive Plan is incorporated into the GMAP and is also used to inform restoration objectives and priorities.

Staff has identified several examples where investment in the restoration of natural resources and habitat enhancement work can make significant improvements and help offset the impacts of providing a trail connection in the HCA. These opportunities include:

- **Restoring hydrology and riparian vegetation** along Schneider Draw and other drainages– taking actions to reduce down-cutting and erosion and reestablishing riparian hydrology to create conditions suitable for native trees and shrubs to expand. Planting native trees and shrubs and seeding native grasses and forbs
- **Restoring native grassland** east of the railroad grade. A range of strategies could be employed, including prescriptive grazing, prescribed fire, invasive plant management techniques and the conversion of non-native grassland patches to native vegetation.
- **Designing trails strategically** to minimize trampling and trail widening in areas of Bell’s twinpod habitat. Eliminating undesignated trails and minimizing the width of new trail construction in Bell’s twinpod habitat. Enhancing and restoring habitat for Bell’s twinpod on Boulder Valley Ranch properties, including but not limited to the BLIP properties north and south of Longhorn Road.
- **Developing a prescribed fire plan** and implementing prescribed fires to maintain and improve the condition of native grassland vegetation.

Monitoring

During its study session and public hearings in January, February and March, OSBT members discussed monitoring of both ecological conditions and effectiveness of visitor management strategies. Some Board members expressed an interest in monitoring the degree to which invasive species might become established along the North Sky Trail or in adjacent grasslands. Others suggested that OSMP monitor the levels of visitor conflict and consider establishing temporal restrictions on the North Sky Trail if levels exceeded some threshold. There was also discussion about monitoring the area’s important ecological resources and sedimentation in the drainages along the trail and learning more about the levels of and changes to visitation on trails.

OSMP’s capacity to implement new monitoring is limited and will need to be factored in with the overall objectives and purpose of existing monitoring projects. OSMP has a robust on-going, systemwide monitoring program focused on management plan indicators (Visitor Master Plan, Grassland Ecosystem Management Plan and Forest Ecosystem Management Plan), providing information about the degree to which the department is meeting its overall management objectives. Objectives, indicators, and monitoring projects flow from master and resource management plans to address priority

resources and services that have been vetted through a community planning process. The ability to provide information about the status of these systemwide priorities is a fundamental business practice, which supports decision making for resource allocation, annual budget requests and work plan development. The highest priority for developing monitoring projects is for staff to develop protocols for projects called for in established plans. Consequently, developing additional objectives and monitoring plans for site specific questions, like those identified in North TSA discussions would likely come at the cost of progress on existing systemwide priorities.

The OSBT recommended that staff “endeavor to return to the Board with a recommendation for ecological monitoring for the North Sky Trail and Joder property.” Staff will do so following acceptance of the plan by City Council.

Implementing the Draft Plan

Progressing from Conceptual Trails to Completed Trails

The Draft Plan includes conceptual routes for new trails and for existing trails that will be redesigned. The progression from a conceptual route to a construction-ready trail project includes detailed site analysis and evaluation, trail design, development of construction documents and obtaining required permits. 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 interest in design plans (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, signage, etc.).
 - Other visitor infrastructure improvements (education amenities, fishing pier, shade structure, boardwalk, etc.).
 - New and improved trailheads (parking, outhouses, kiosks, bike and horse amenities, signage, 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 G**. 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.

Project Phasing

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.

NEXT STEPS

Collectively, the recommendations in the North TSA Plan will improve trail connectivity, accomplish improvements for natural resource protection, trail sustainability, allow for the revegetation of undesignated trails and improve the experience for many visitors who enjoy a variety of activities. When fully implemented, the Draft Plan adds eight new trails and reroutes nine trails. Approximately 23 miles of undesignated trails will be revegetated and five miles of undesignated trails will be integrated into the city's system of designated trails.

With council acceptance of the plan, staff would:

1. Review project phasing and costing to affirm project priorities, and include high-priority projects in CIP budgets and department annual budgets. Projects aligned to budgets and annual work plans will include a combination of trail and trailhead improvements, visitor experience enhancements (recreation activity, volunteer opportunity, regulation changes, education projects, etc.) and natural and cultural resource management projects (restoration, conservation, weed management, etc).
2. Return to council recommending an approach for establishing the North Foothills HCA by ordinance which would include the approved visitor off-trail travel restrictions.

ATTACHMENTS

Attachment A: North Trail Study Area Draft Plan

Attachment B: North TSA Plan and Process Summary

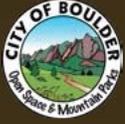
Attachment C: OSBT Supported Changes to the North TSA Draft Plan (March 9, 2016)

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City of Boulder Open Space and Mountain Parks

North Trail Study Area Plan



DRAFT PLAN

May 2016



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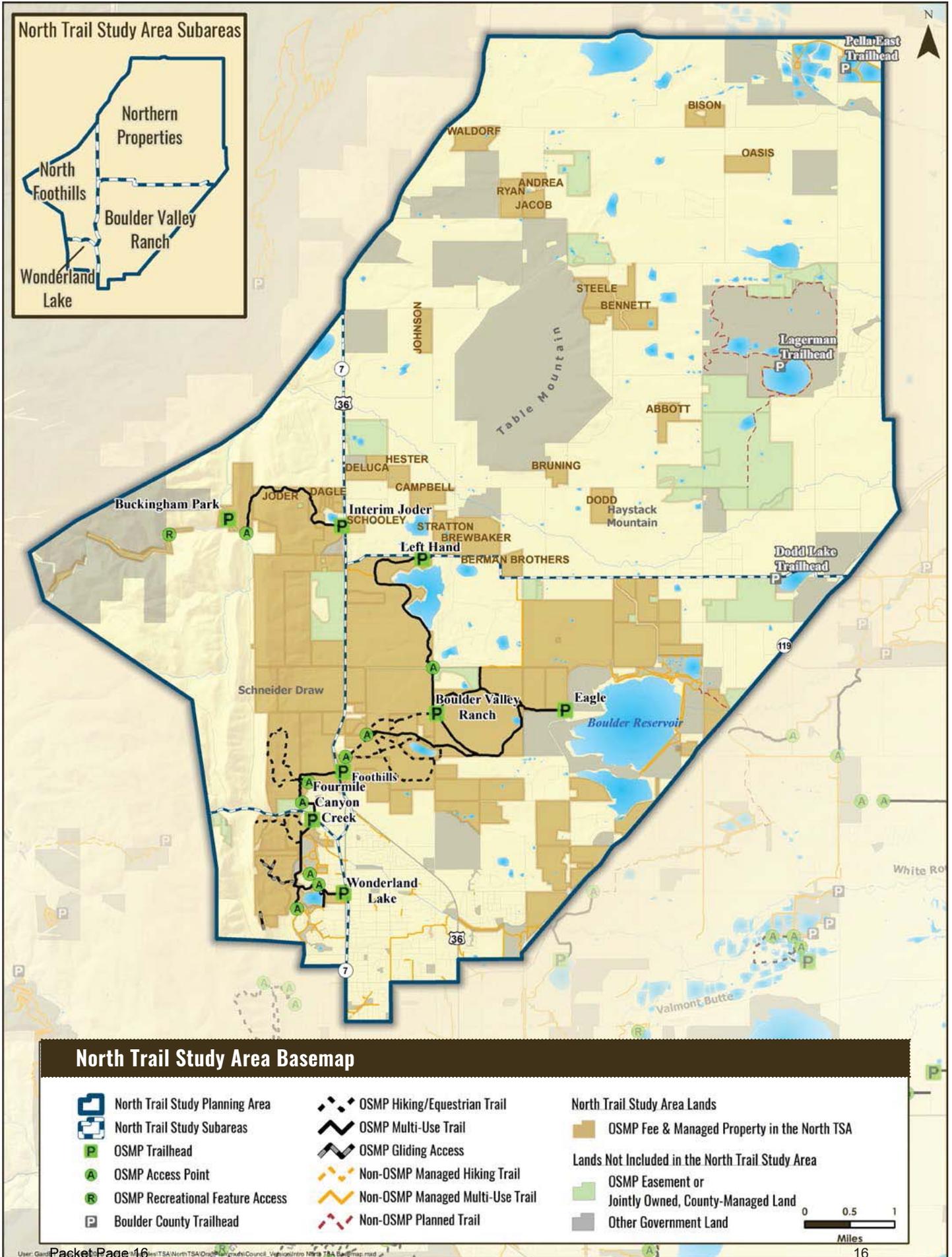
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Fossil of a smooth oyster shell, found in a marine sedimentary rock layer in the North TSA. © Gary Stevens
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Purpose and Goals

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.

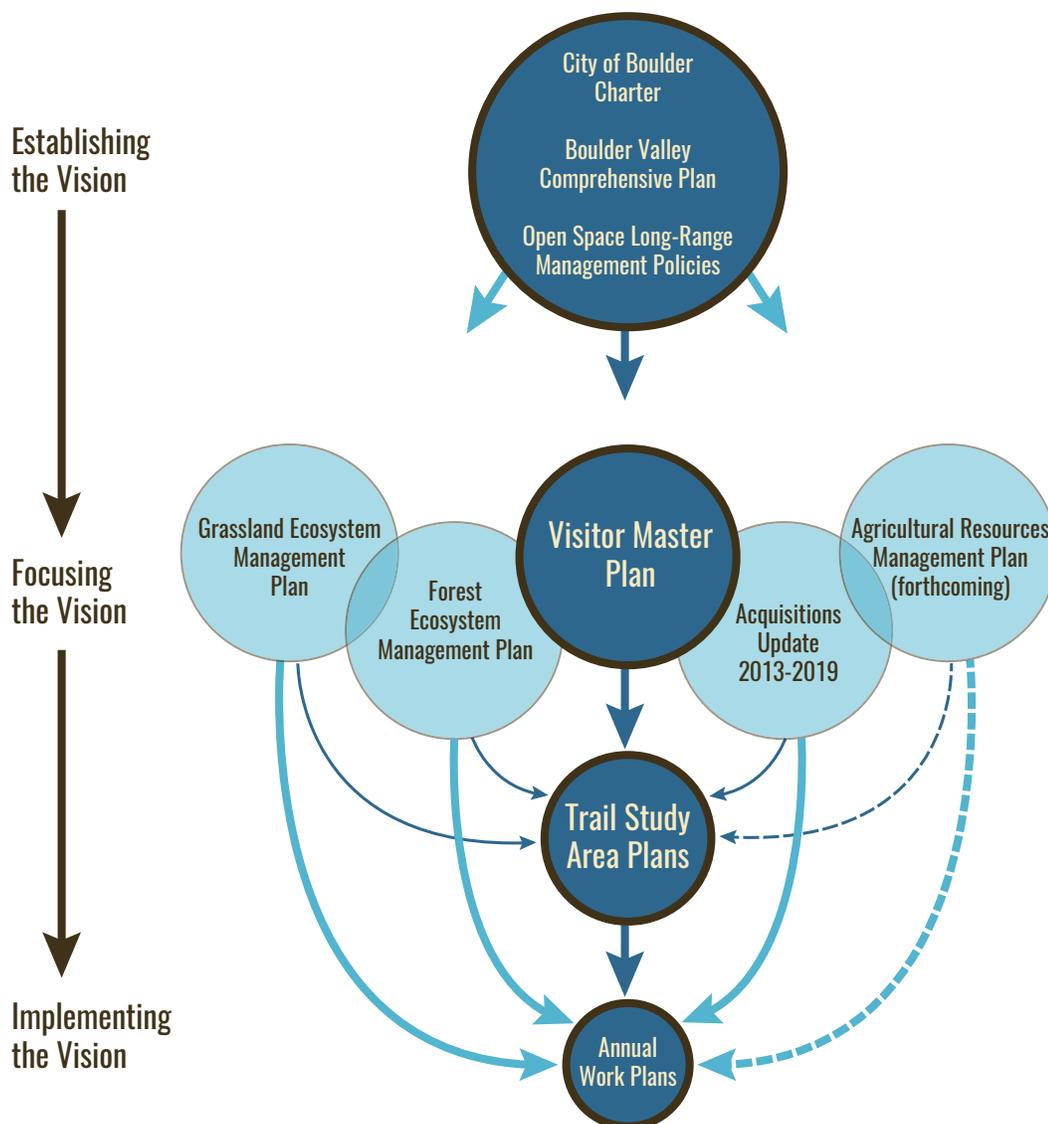


Existing Planning and Policy Guidance

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.

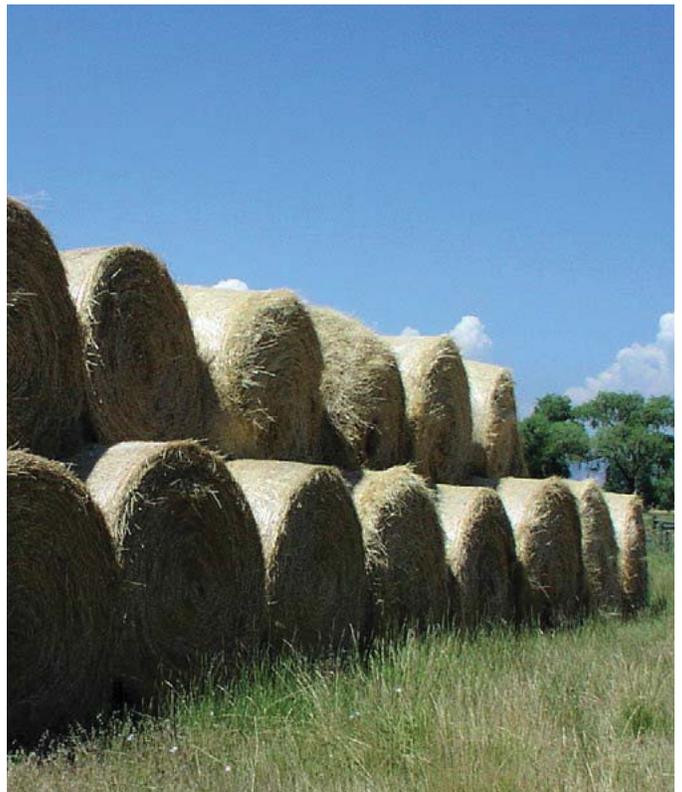
Some of these rare or uncommon species can be threatened by visitor activities. A focus of the North TSA Plan is to maintain or increase the level of natural resource protection and restoration so OSMP can continue to achieve the community's natural resource conservation goals. The Grassland Ecosystem 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.

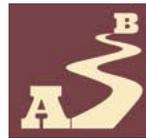


North TSA Interests for Plan Outcomes

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



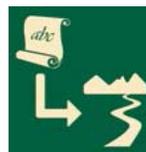
*Honoring Community Values
and Commitments*



Decreased Visitor Conflict



*Increased Education and
Understanding*



*Effective Planning Process
and Plan Implementation*

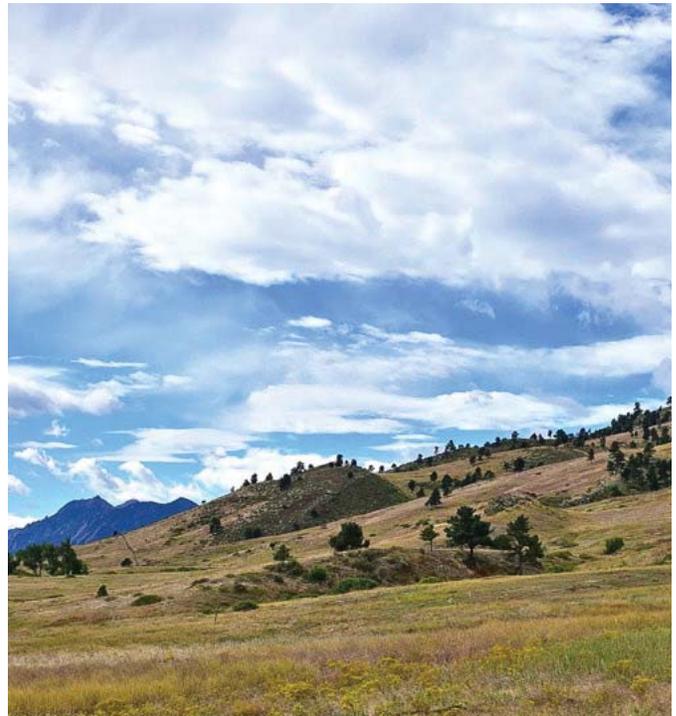
The 10 identified North TSA Plan interests are consistent with the goal of the North TSA Plan, and provided guidance and direction for staff in the development of the plan. The goal of the plan is to balance all of the community interests.

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.

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 property.
- » Designate Dakota Ridge Village (T3) property as a Passive Recreation Area.
- » Designate Berman Brothers (T4) property as an Agricultural Area.

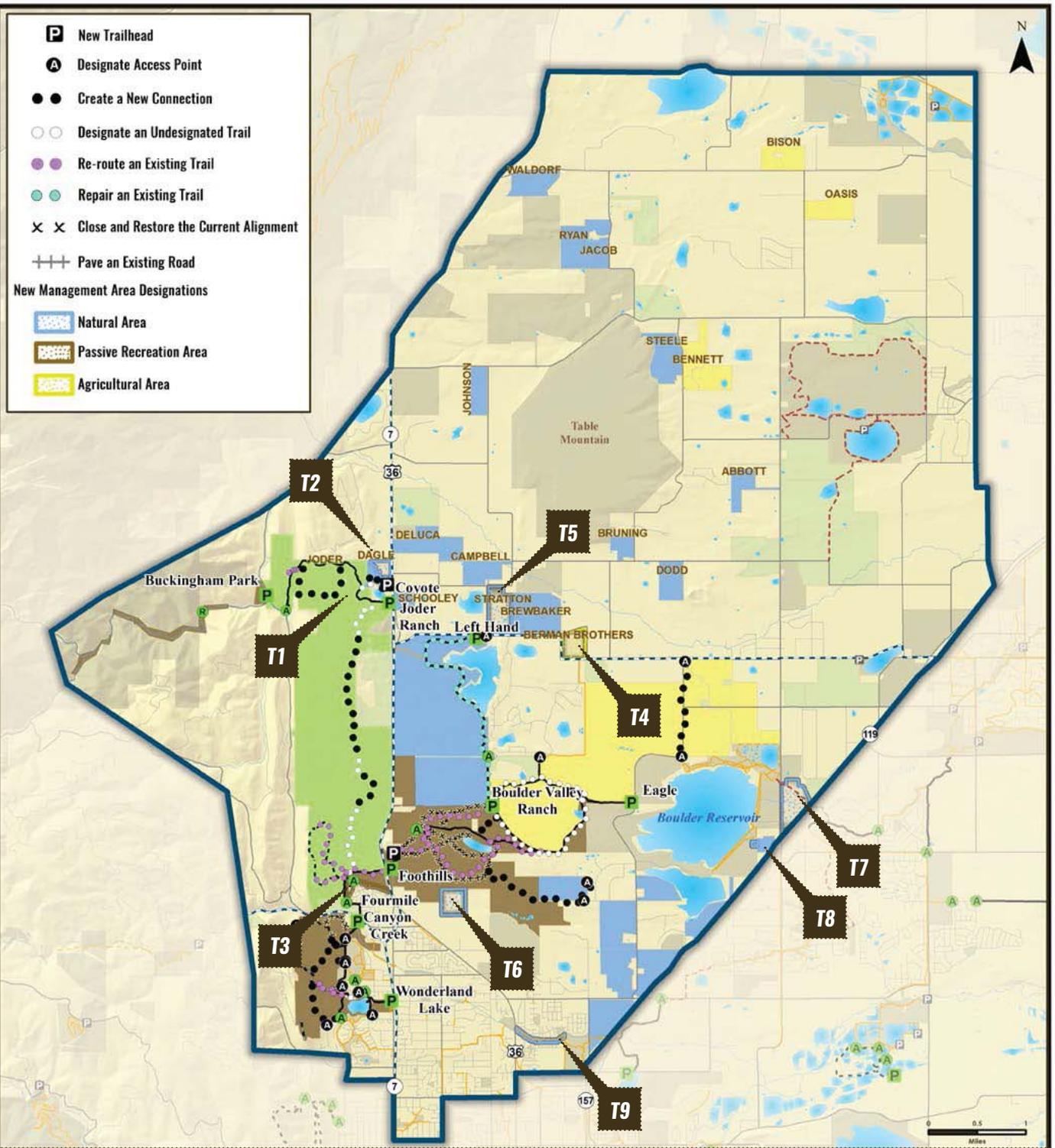
Primary Goal

- » 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 Packet Page 27 each action.



MAP 1: North TSA-Wide - Management Area Designations

- | | | | | | |
|--|----------------------------------|--|----------------------------------|--|---|
| | North Trail Study Planning Area | | OSMP Hiking/Equestrian Trail | | Agricultural Area |
| | North Trail Study Subareas | | OSMP Multi-Use Trail | | Habitat Conservation Area |
| | OSMP Trailhead | | OSMP Gliding Access | | Natural Area |
| | OSMP Access Point | | Non-OSMP Managed Hiking Trail | | Passive Recreation Area |
| | OSMP Recreational Feature Access | | Non-OSMP Managed Multi-Use Trail | | OSMP Easement or Jointly Owned, County-Managed Land |
| | Boulder County Trailhead | | Non-OSMP Planned Trail | | 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.

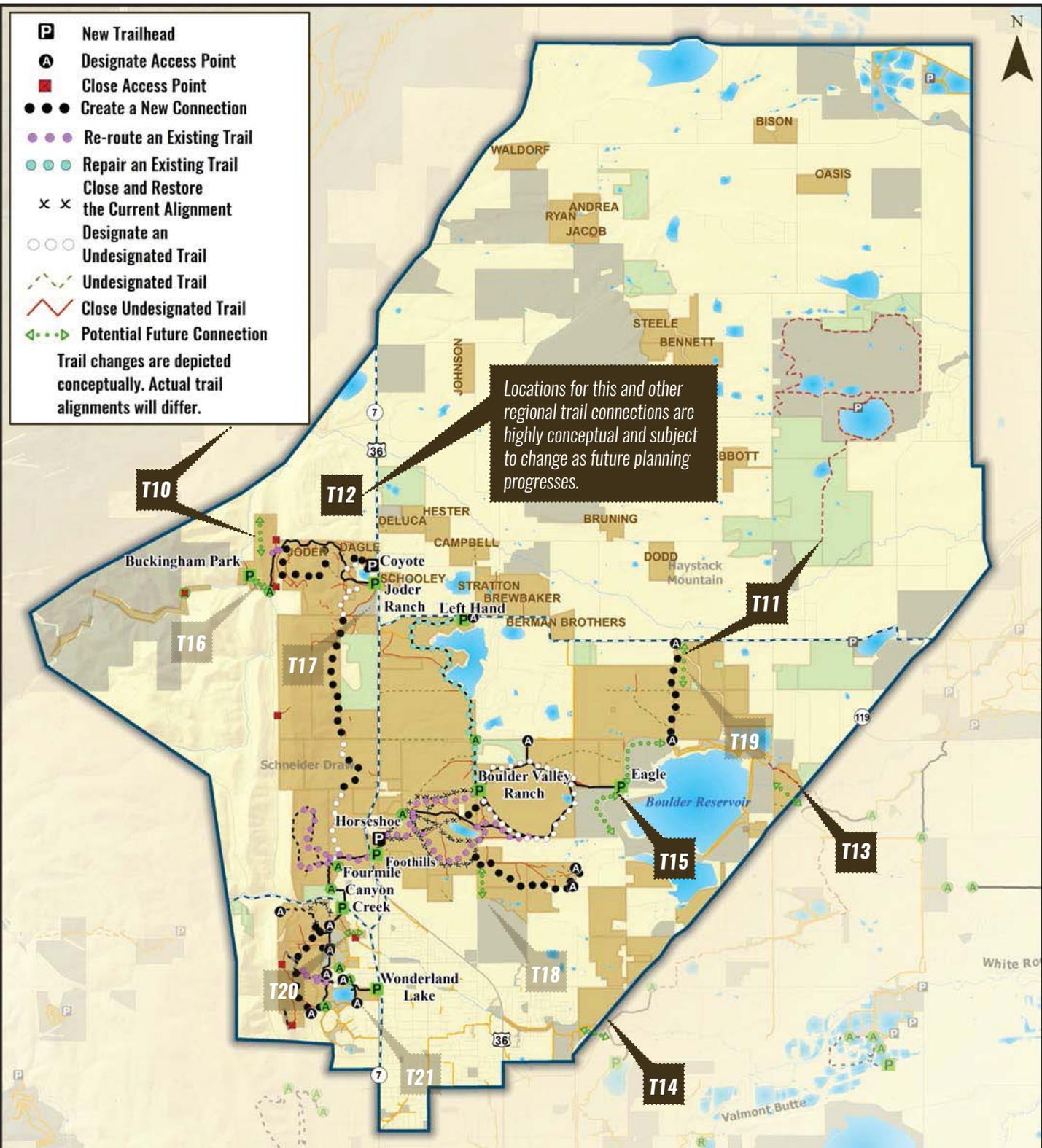
Driving Factors/Benefits

- » 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 Packet Page 29 each action.



MAP 2: North TSA-Wide - Recommendations

North Trail Study Planning Area	OSMP Hiking/Equestrian Trail	North Trail Study Area Lands
North Trail Study Subareas	OSMP Multi-Use Trail	OSMP Fee & Managed Property in the North TSA
OSMP Trailhead	OSMP Gliding Access	Lands Not Included in the North Study Area
OSMP Access Point	Non-OSMP Managed Hiking Trail	OSMP Easement or Jointly Owned, County-Managed Land
OSMP Recreational Feature Access	Non-OSMP Managed Multi-Use Trail	Other Government Land
Boulder County Trailhead	Non-OSMP Planned Trail	

0 0.5 1 Miles



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**

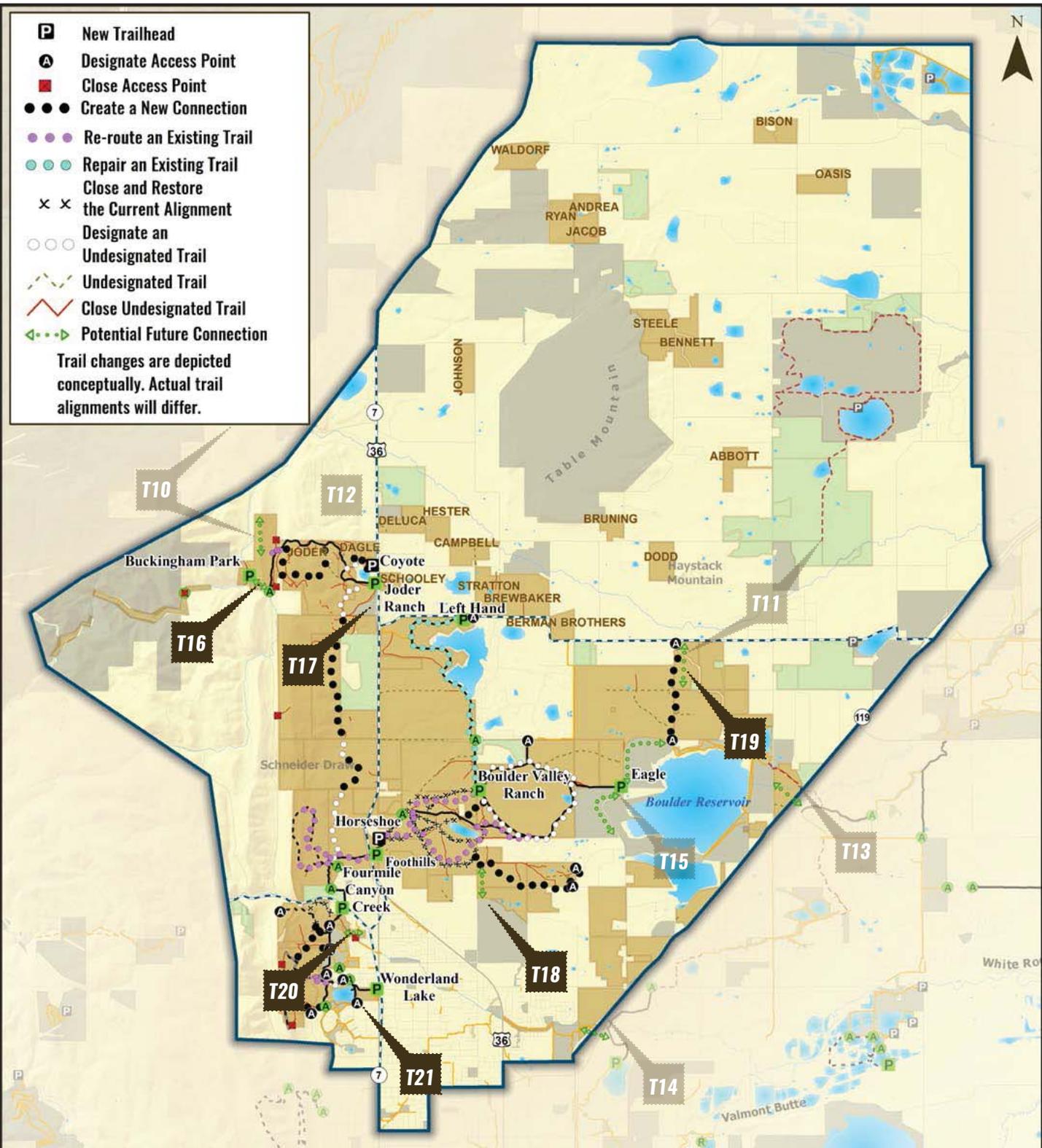
Primary Goal

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

Driving Factors/Benefits

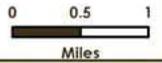
- » Establish clearly identified designated trail access points.
- » Identify infrastructure and maintenance standards for access points.
- » Improve connectivity between North TSA and publicly accessible areas.
- » Minimize impacts to natural resources as connections are improved.

*See Appendix D for a list of interests met by Packet Page 31 each action.



MAP 2: North TSA-Wide - Recommendations, continued

North Trail Study Planning Area	OSMP Hiking/Equestrian Trail	North Trail Study Area Lands
North Trail Study Subareas	OSMP Multi-Use Trail	OSMP Fee & Managed Property in the North TSA
OSMP Trailhead	OSMP Gliding Access	Lands Not Included in the North Study Area
OSMP Access Point	Non-OSMP Managed Hiking Trail	OSMP Easement or Jointly Owned, County-Managed Land
OSMP Recreational Feature Access	Non-OSMP Managed Multi-Use Trail	Other Government Land
Boulder County Trailhead	Non-OSMP Planned Trail	





ACTION T22 Bring all trails up to standards.

*Interests Met: 4**

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

*Interests Met: 4**

ACTION T24 Remove unnecessary fencing and use wildlife friendly fencing.

*Interests Met: 3**

ADDITIONAL ACTIONS: North TSA-Wide - Recommendations

- » *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.*

- » *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.*

- » *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 Packet Page 33 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



MAP 3: North Foothills - Management Area Designations

- » 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.

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.

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.

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

*Interests Met: 4**

ACTION NF2 Designate Dagle II property as a Natural Area.

*Interests Met: 2**

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

*Interests Met: 2**

*See Appendix D for a list of interests met by Packet Page 37 each action.



MAP 3: North Foothills - Management Area Designations

	North Trail Study Planning Area		OSMP Hiking/Equestrian Trail		Agricultural Area
	North Trail Study Subareas		OSMP Multi-Use Trail		Habitat Conservation Area
	OSMP Access Point		Non-OSMP Managed Multi-Use Trail		Natural Area
	OSMP Fee & Managed Property	Trail changes are depicted conceptually. Actual trail alignments will differ.			Passive Recreation Area
	OSMP Easement or Jointly Owned, County-Managed Land				Other Government Land



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**

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

*Interests Met: 3**

MAP 4: North Foothills - Subarea-Wide Recommendations

- » *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.*

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

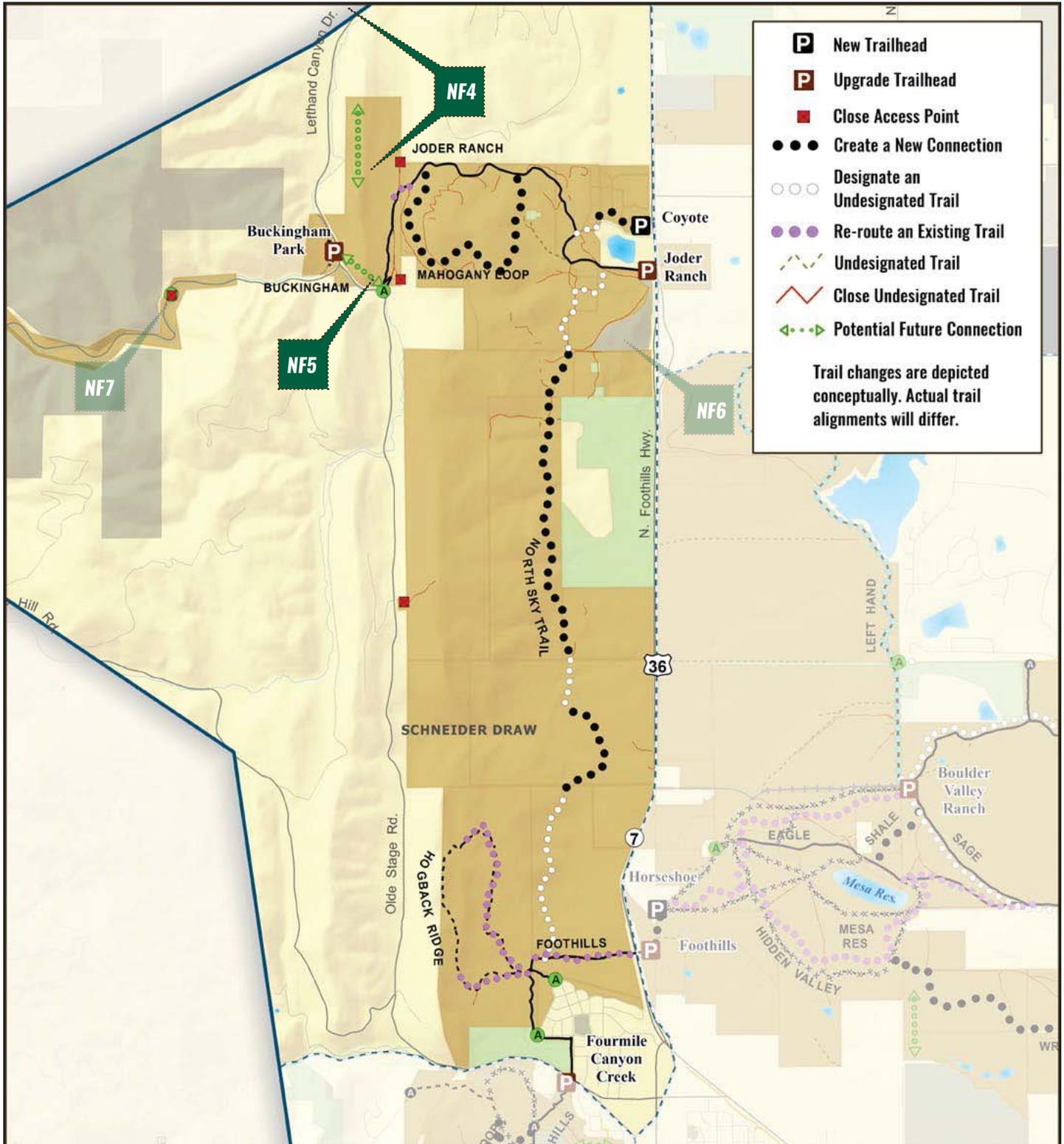
Primary Goal

- » *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 Packet Page 39 each action.*



P New Trailhead
P Upgrade Trailhead
■ Close Access Point
●●● Create a New Connection
○ Designate an Undesignated Trail
●●● Re-route an Existing Trail
--- Undesignated Trail
--- Close Undesignated Trail
◀●●▶ Potential Future Connection

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

MAP 4: North Foothills - Subarea-Wide Recommendations

North Trail Study Planning Area	OSMP Hiking/Equestrian Trail	Lands Not Included in the North Trail Study Area
North Trail Study Subareas	OSMP Multi-Use Trail	
OSMP Access Point	North Trail Study Area Lands	Other Government Land
OSMP Recreational Feature Access	OSMP Fee & Managed Property	

0 0.5 Miles

N



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

*Interests Met: 3**

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

- » *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**

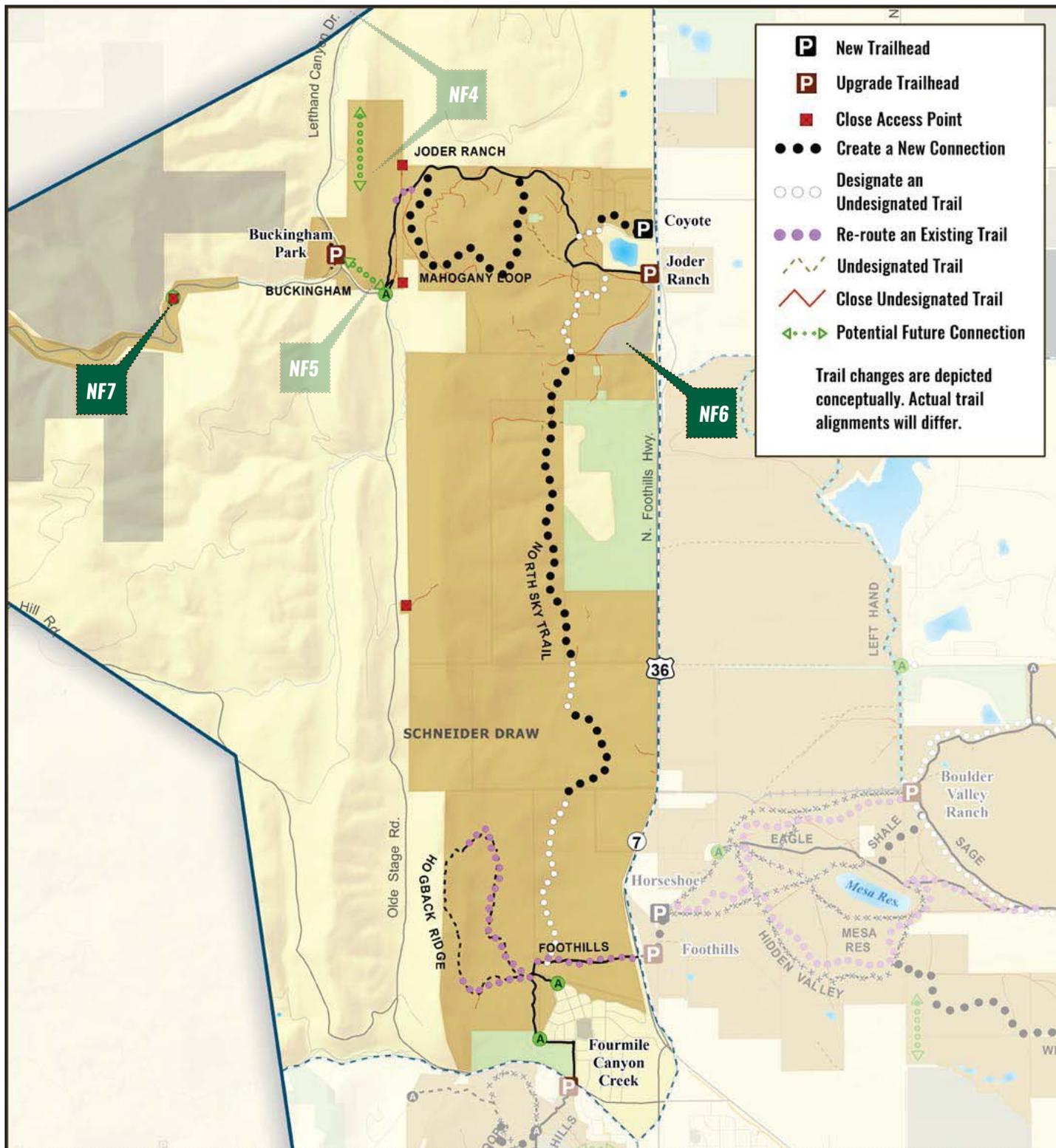
Primary Goal

- » *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 Packet Page 41 each action.*



P New Trailhead
P Upgrade Trailhead
■ Close Access Point
●●● Create a New Connection
○ Designate an Undesignated Trail
●●● Re-route an Existing Trail
--- Undesignated Trail
--- Close Undesignated Trail
↔ Potential Future Connection

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

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

North Trail Study Planning Area	OSMP Hiking/Equestrian Trail	Lands Not Included in the North Trail Study Area OSMP Easement or Jointly Owned, County-Managed Land Other Government Land
North Trail Study Subareas	OSMP Multi-Use Trail	
OSMP Access Point	North Trail Study Area Lands	
OSMP Recreational Feature Access	OSMP Fee & Managed Property	

0 0.5 Miles

N



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

*Interests Met: 4**

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

*Interests Met: 4**

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

*Interests Met: 4**

MAP 5: North Foothills - Joder Focus Area

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.*

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.*

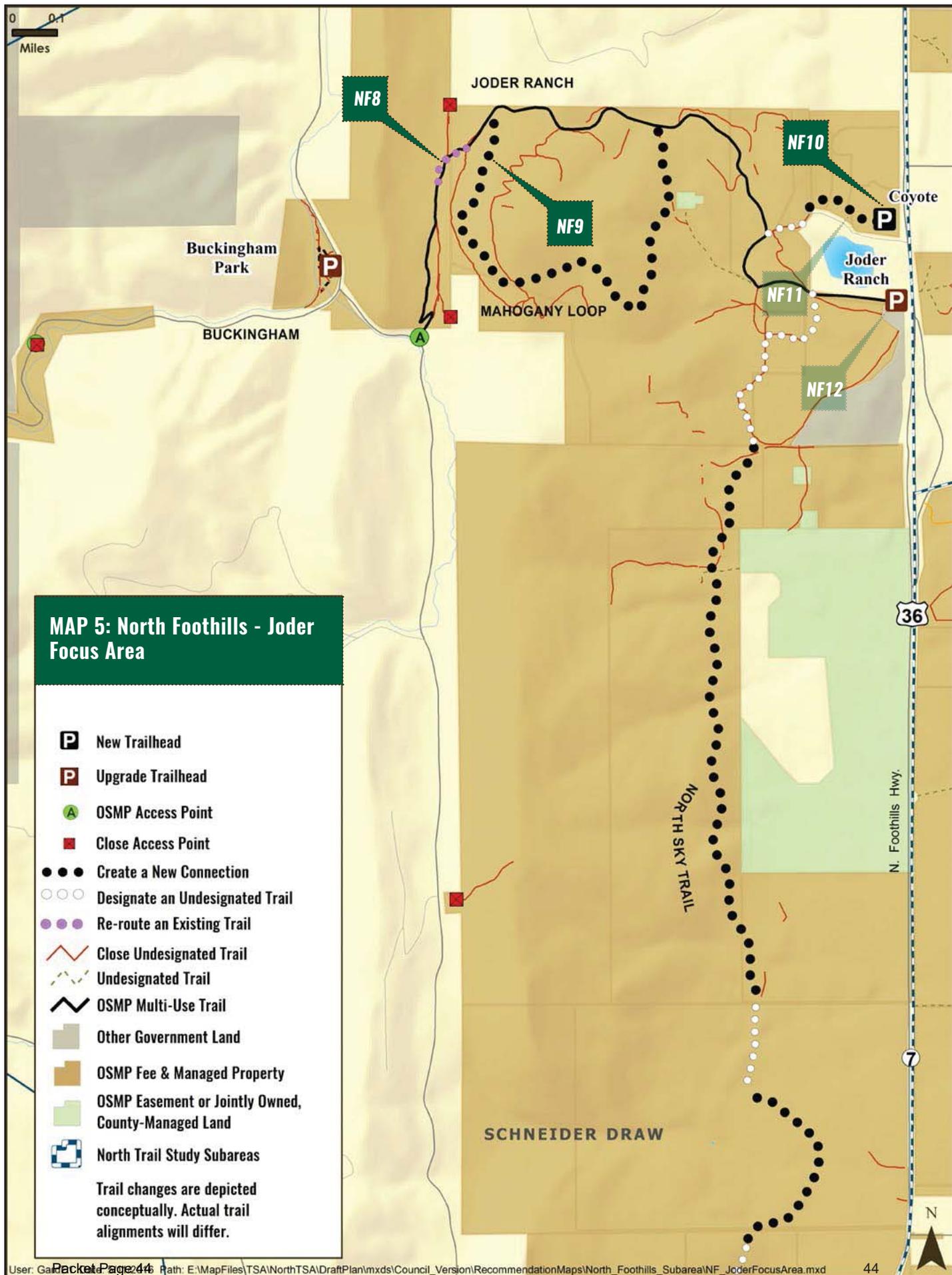
Primary Goal

- » *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 Packet Page 43 each action.*





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**

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

*Interests Met: 4**

Primary Goal

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

Driving Factors/Benefits

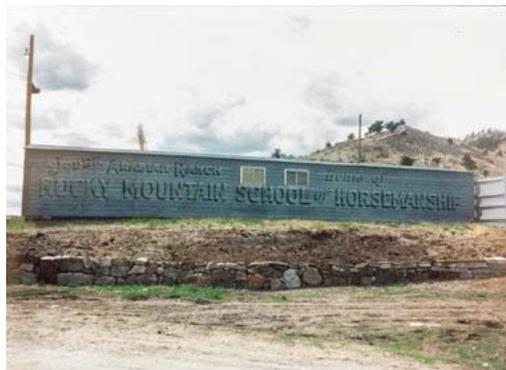
- » Create trail connectivity with trailhead.
- » Minimize visitor conflict along the access road to lessees on the Dagle and Wright properties.

Primary Goal

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

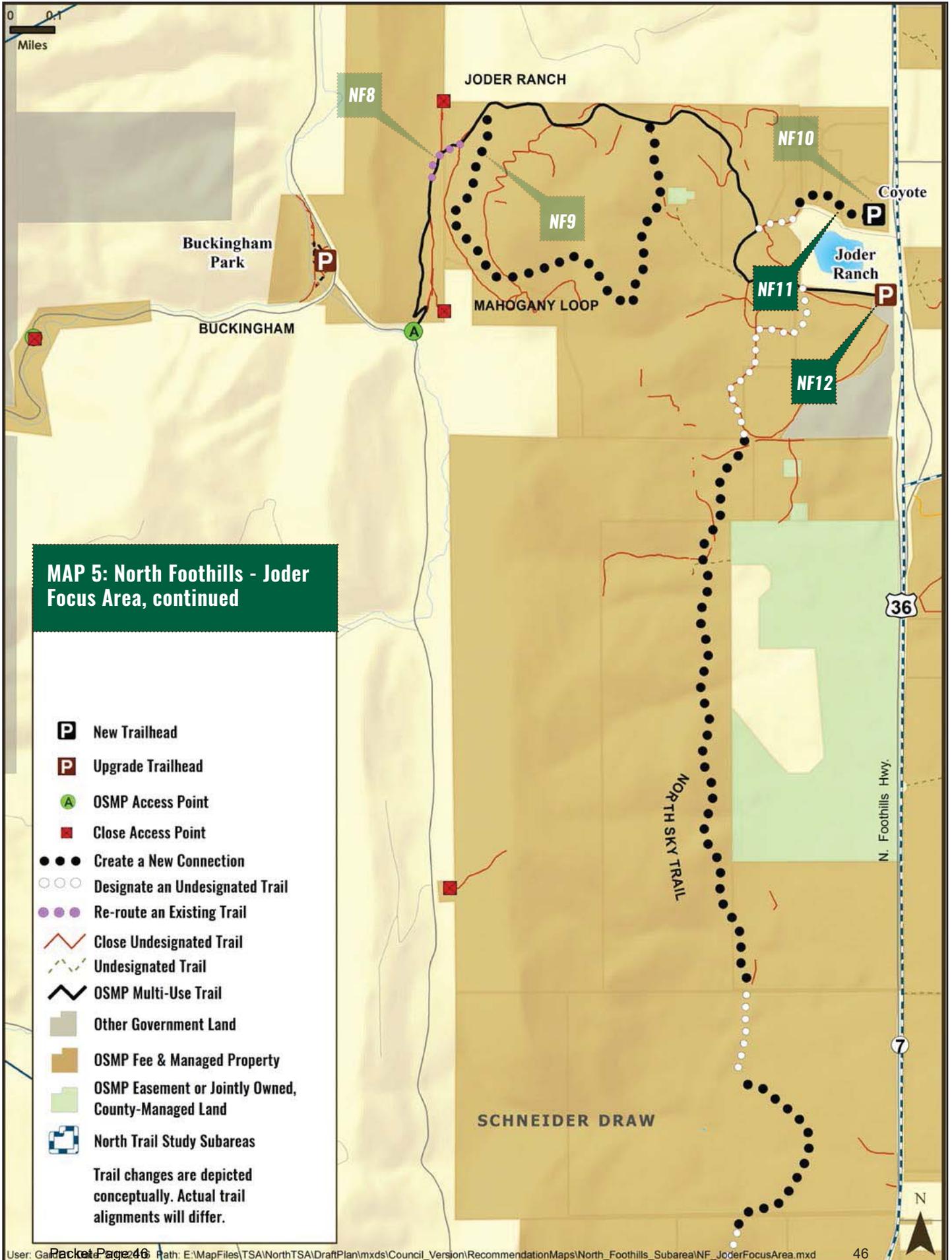
Driving Factors/Benefits

- » 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 Packet Page 45 each action.





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

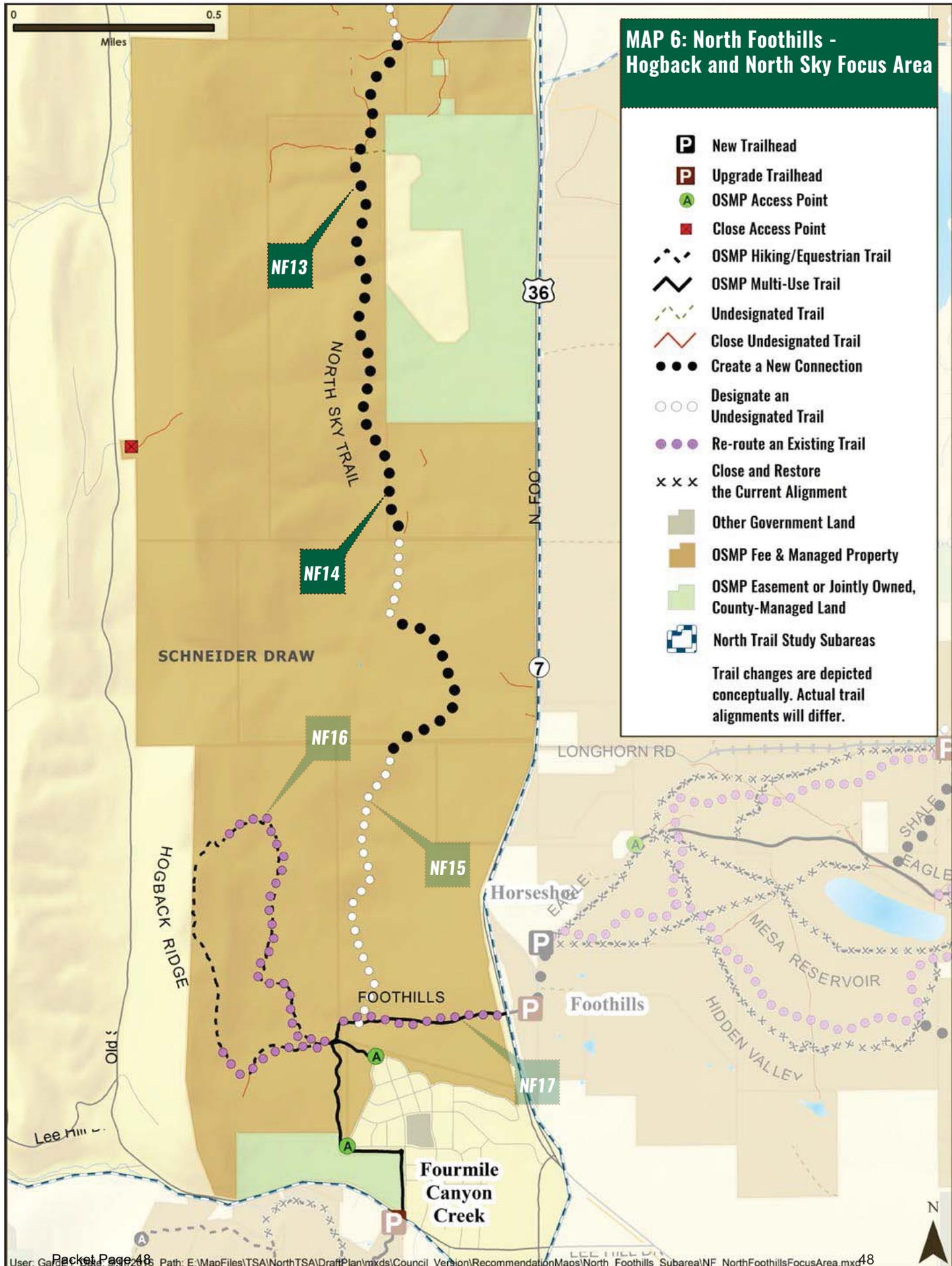


*See Appendix D for a list of interests met by Packet Page 47 each action.



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

-  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.





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**

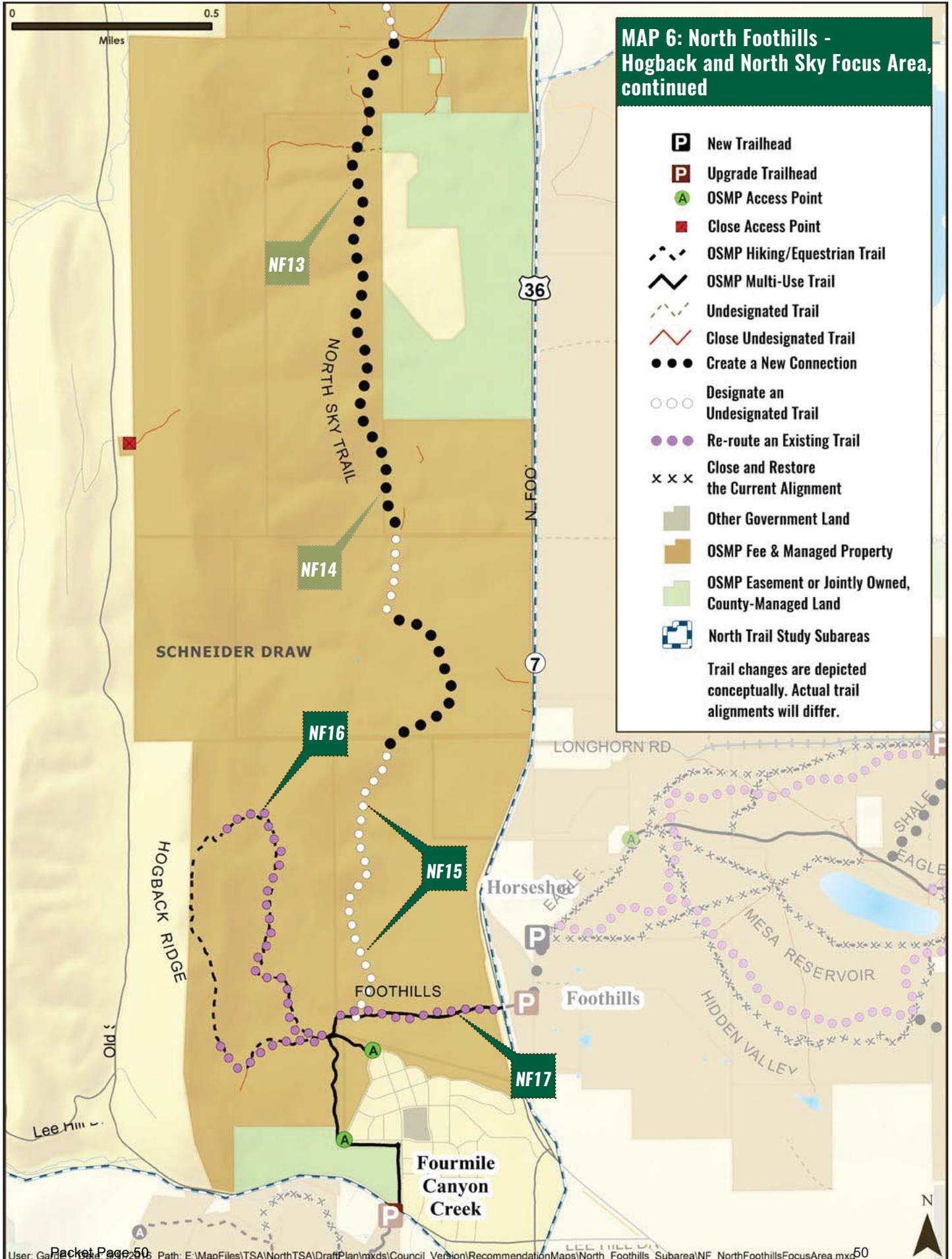
Primary Goal

- » *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 Packet Page 49 each action.*





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**

ACTION NF19 Do not allow off-trail permits within the North Foothills HCA.
*Interests Met: 2**

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.

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

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.

- » 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.

Primary Goal

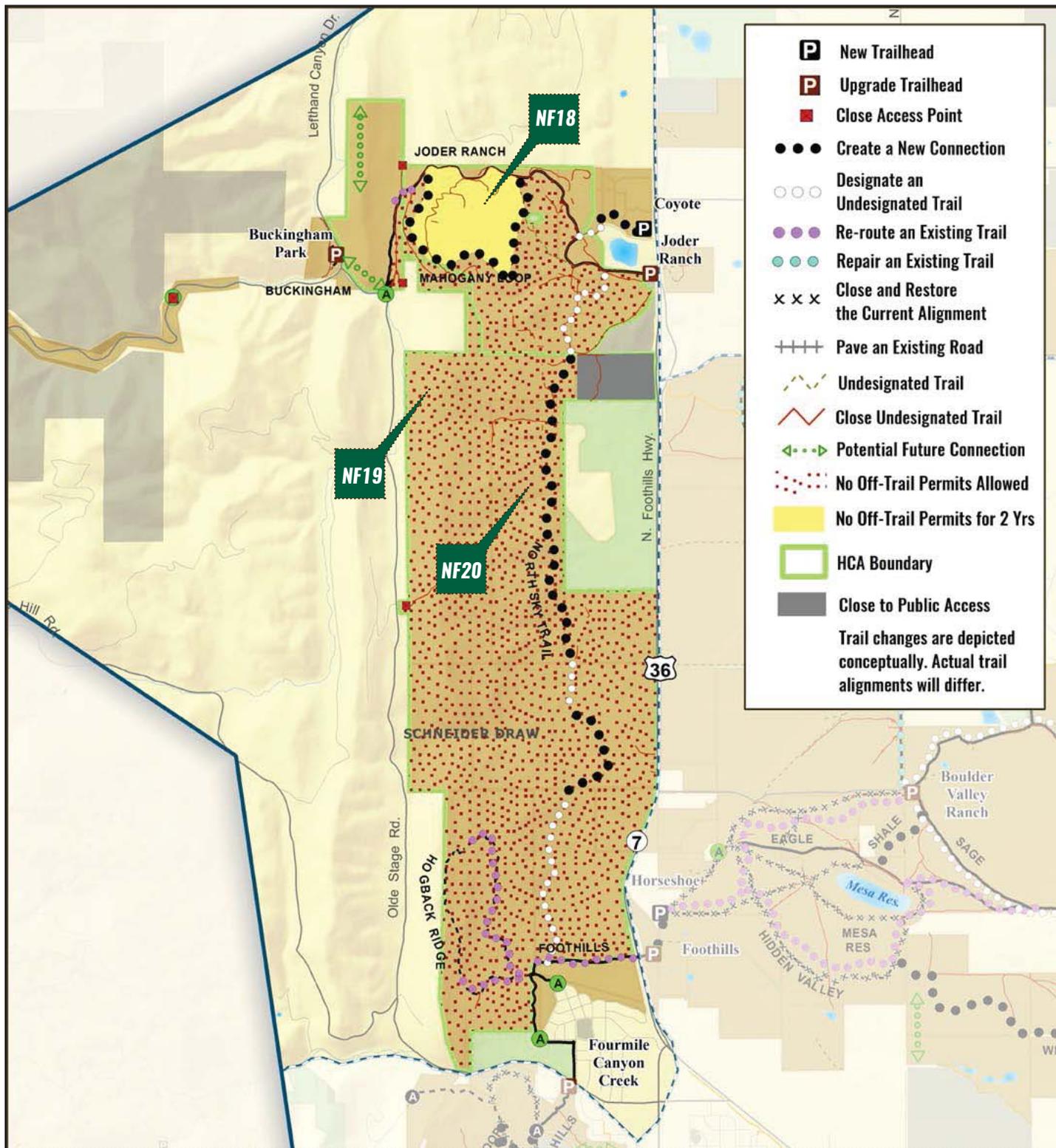
- » Have staff endeavor to develop and bring back to the OSBT an ecological monitoring program for the North Sky Trail and the Joder property in light of the important ecological qualities of these properties.

Driving Factors/Benefits

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



*See Appendix D for a list of interests met by Packet Page 51 each action.



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

North Trail Study Planning Area	OSMP Hiking/Equestrian Trail	Lands Not Included in the North Study Area
North Trail Study Subareas	OSMP Multi-Use Trail	
OSMP Access Point	North Trail Study Area Lands	OSMP Easement or Jointly Owned, County-Managed Land
OSMP Recreational Feature Access	OSMP Fee & Managed Property	Other Government Land

0 0.5
Miles



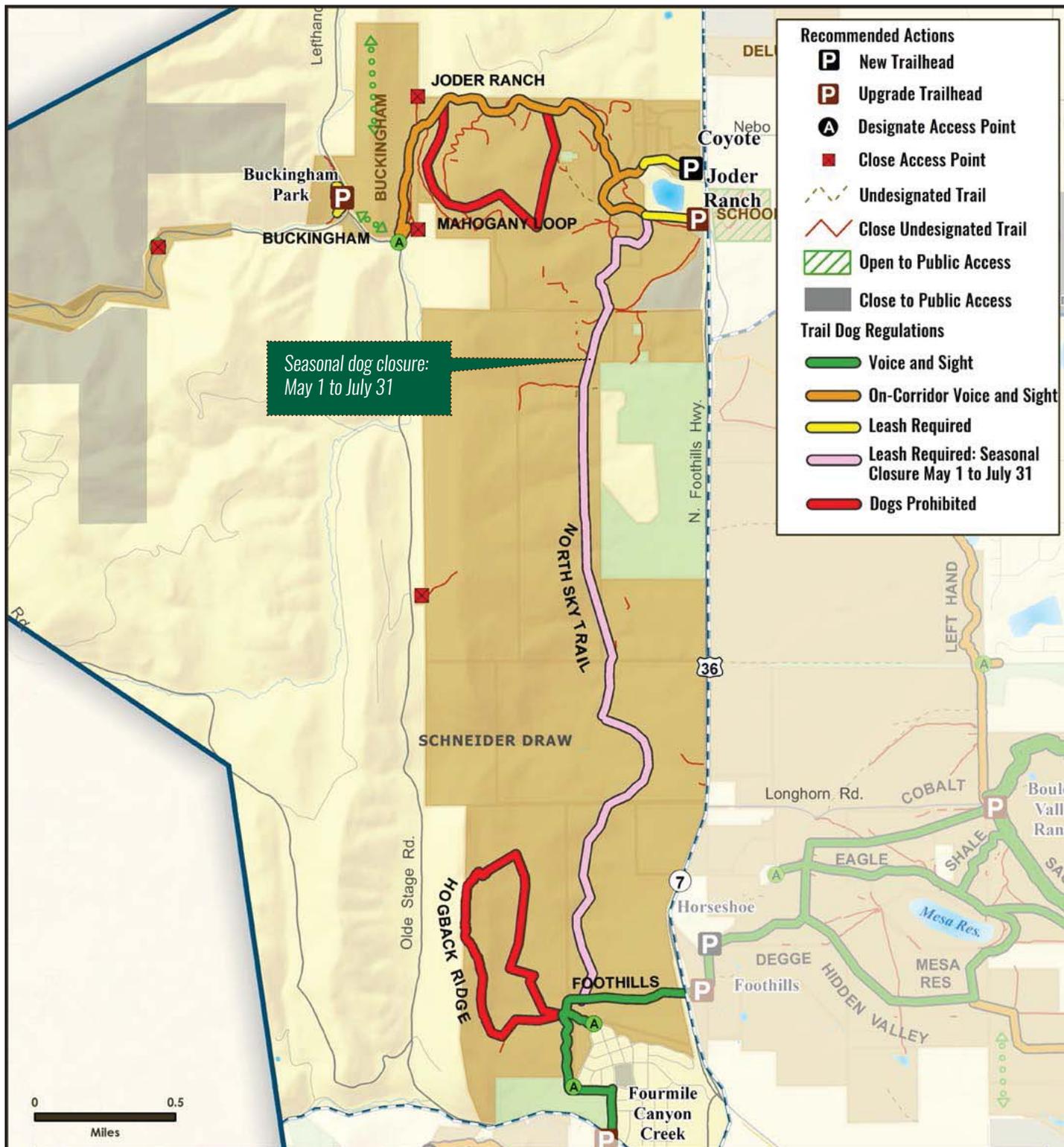
MAP 8: North Foothills - Trail-Based Dog Regulations

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

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



© Michael Morton



MAP 8: North Foothills - Trail-Based Dog Regulations

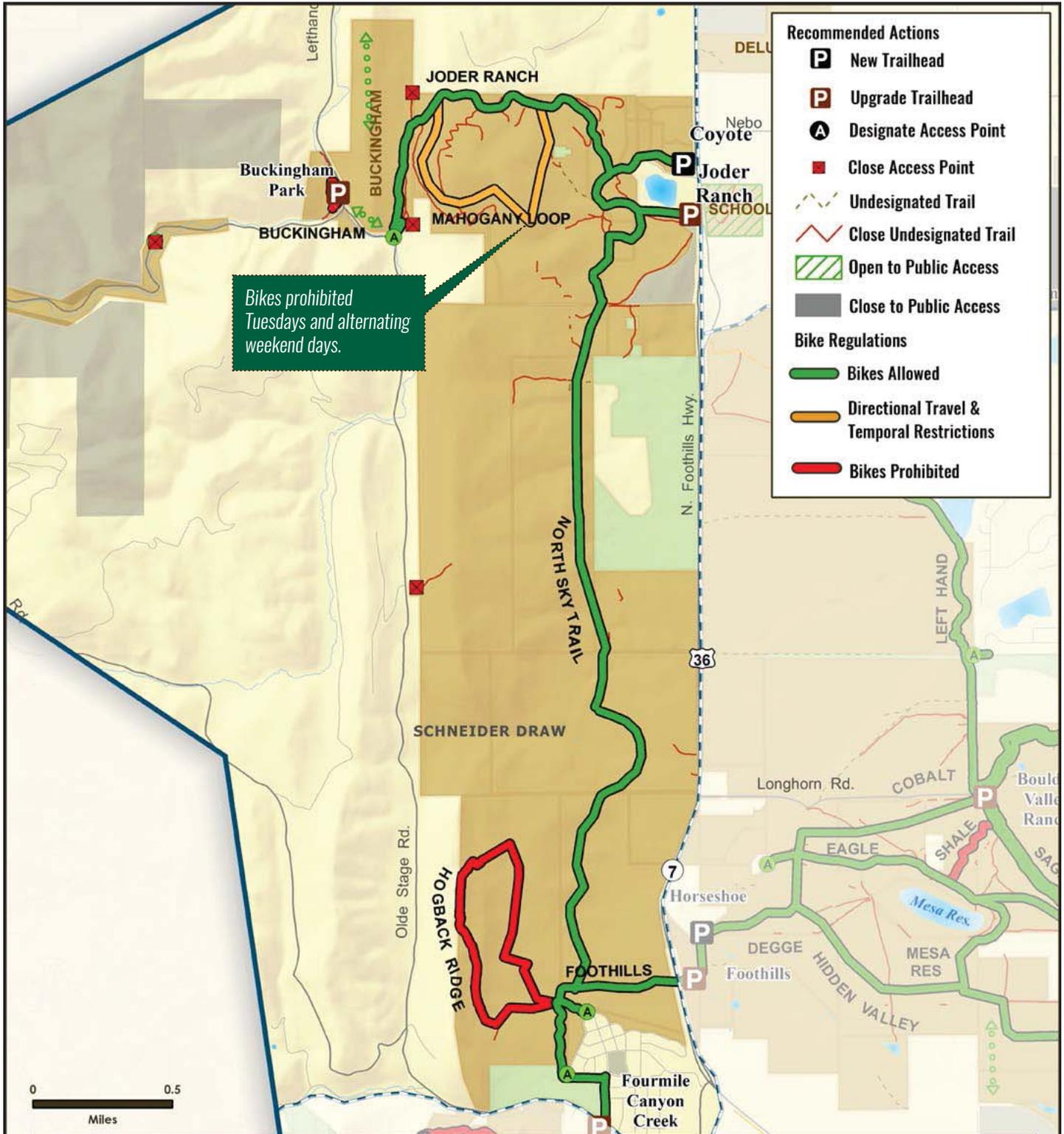
- | | | | | | |
|--|----------------------------------|--|----------------------------------|--|--|
| | North Trail Study Planning Area | | Potential Future Connections | | OSMP Fee & Managed Property |
| | North Trail Study Subareas | | OSMP Hiking/Equestrian Trail | | Lands Not Included in the North Trail Study Area
OSMP Easement or
Jointly Owned, County-Managed Land |
| | OSMP Trailhead | | OSMP Multi-Use Trail | | Other Government Land |
| | OSMP Access Point | | OSMP Gliding Access | | |
| | OSMP Recreational Feature Access | | Non-OSMP Managed Hiking Trail | | |
| | Boulder County Trailhead | | Non-OSMP Managed Multi-Use Trail | | |





MAP 9: North Foothills - Bike Regulations

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



Bikes prohibited
Tuesdays and alternating
weekend days.

- Recommended Actions**
- P** New Trailhead
 - P** Upgrade Trailhead
 - A** Designate Access Point
 - Close Access Point
 - Undesignated Trail
 - Close Undesignated Trail
 - ▨ Open to Public Access
 - Close to Public Access
- Bike Regulations**
- Bikes Allowed
 - Directional Travel & Temporal Restrictions
 - Bikes Prohibited



MAP 9: North Foothills - Bike Regulations

- | | | |
|----------------------------------|----------------------------------|---|
| North Trail Study Planning Area | Potential Future Connections | North Trail Study Area Lands |
| North Trail Study Subareas | OSMP Hiking/Equestrian Trail | OSMP Fee & Managed Property |
| OSMP Trailhead | OSMP Multi-Use Trail | Lands Not Included in the North Trail Study Area |
| OSMP Access Point | OSMP Gliding Access | OSMP Easement or Jointly Owned, County-Managed Land |
| OSMP Recreational Feature Access | Non-OSMP Managed Hiking Trail | Other Government Land |
| Boulder County Trailhead | Non-OSMP Managed Multi-Use Trail | |



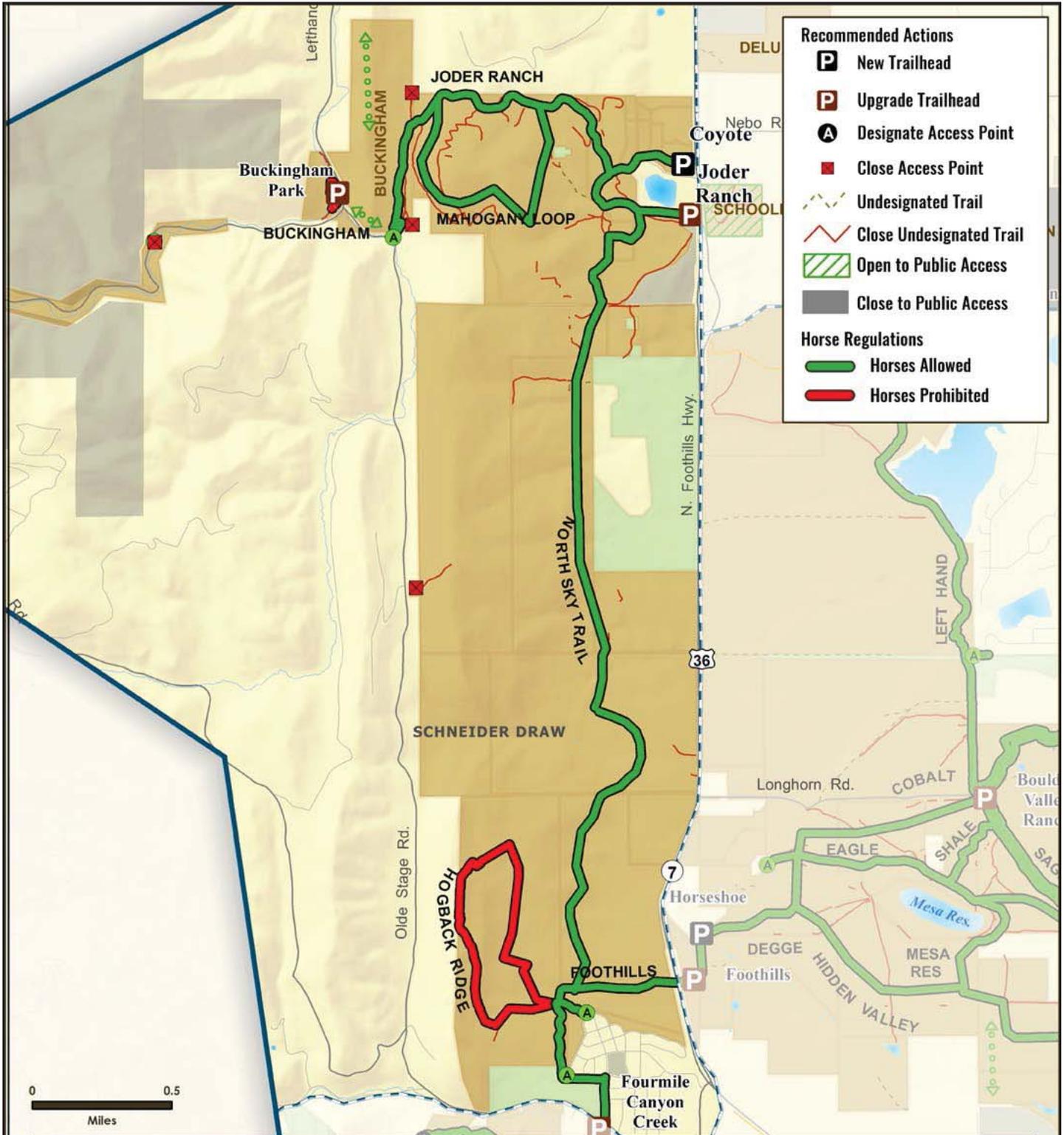
MAP 10: North Foothills - Trail-Based Horse Regulations

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

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.*



MAP 10: North Foothills - Trail-Based Horse Regulations

North Trail Study Planning Area	Potential Future Connections	North Trail Study Area Lands OSMP Fee & Managed Property
North Trail Study Subareas	OSMP Hiking/Equestrian Trail	Lands Not Included in the North Trail Study Area OSMP Easement or Jointly Owned, County-Managed Land
OSMP Trailhead	OSMP Multi-Use Trail	Other Government Land
OSMP Access Point	OSMP Gliding Access	
OSMP Recreational Feature Access	Non-OSMP Managed Hiking Trail	
Boulder County Trailhead	Non-OSMP Managed Multi-Use Trail	



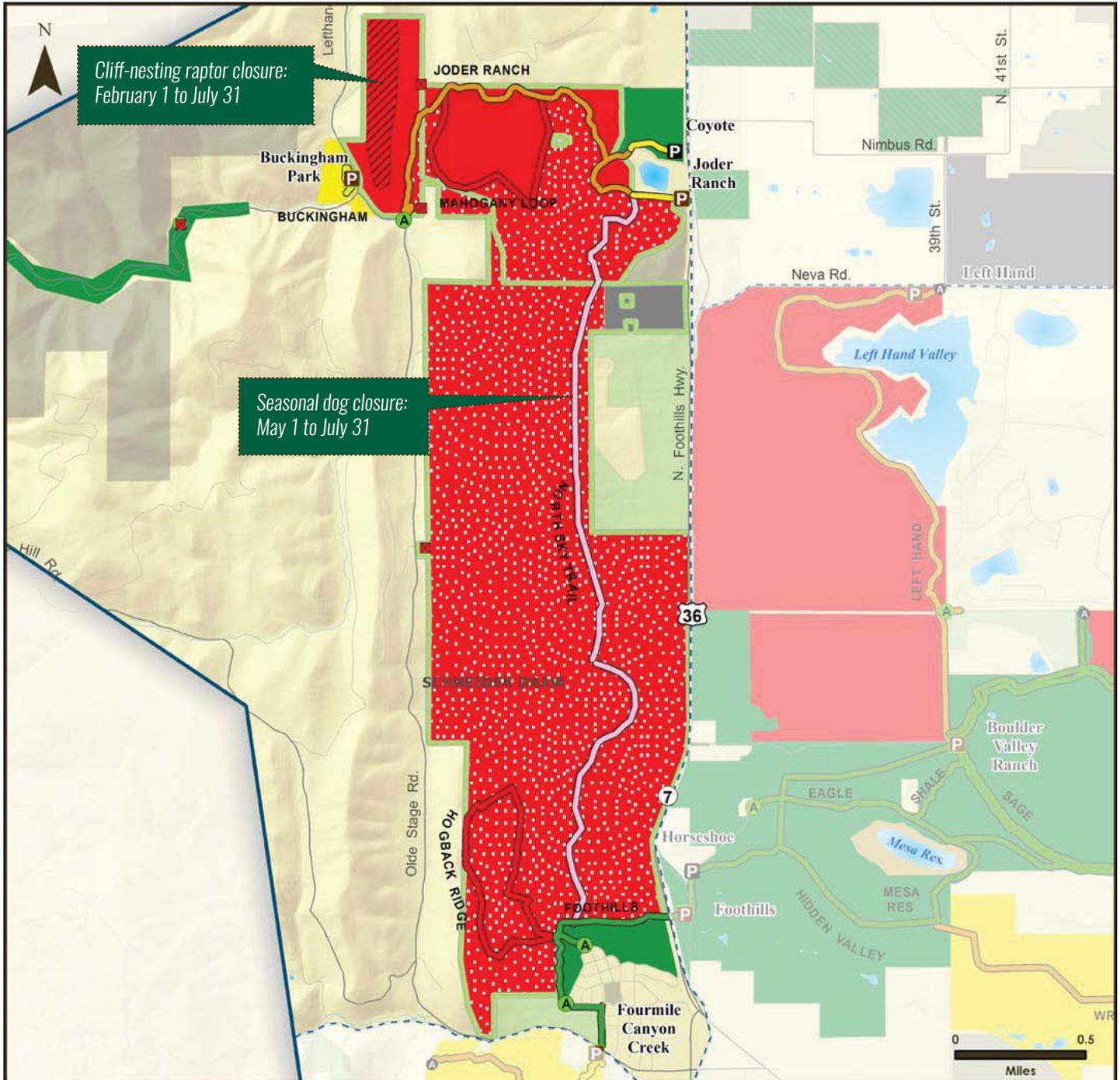


MAP 11: North Foothills - Regulatory Settings

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.

© Gary Stevens





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





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.

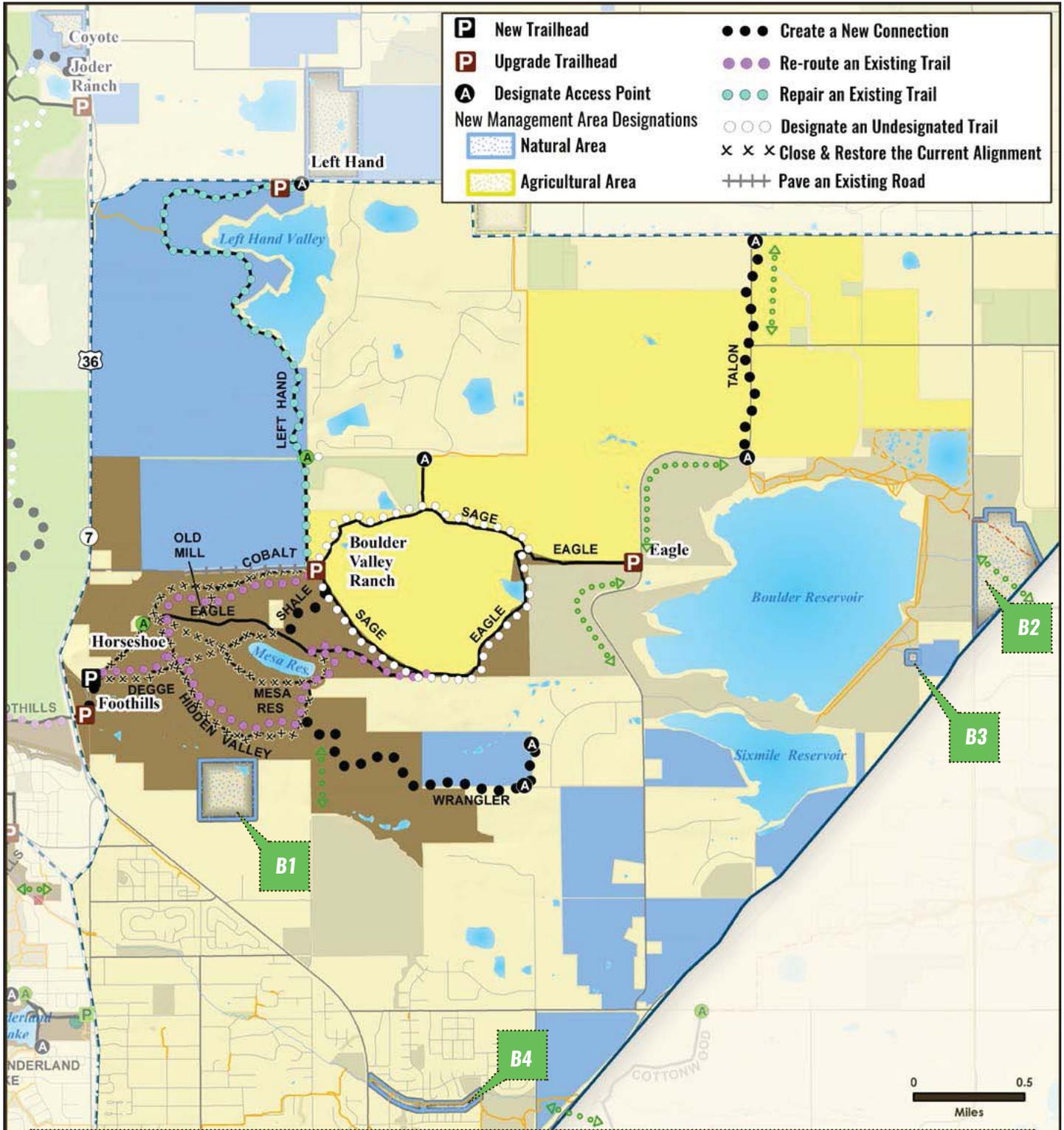
Hart-Jones Exchange property

- » 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 Packet Page 63 each action.



MAP 12: Boulder Valley Ranch - Management Area Designations

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

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

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

*Interests Met: 5**

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**

MAP 13 : Boulder Valley Ranch - Subarea-Wide Recommendations

- » 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.

- » 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 Packet Page 65 each action.



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



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

*Interests Met: 4**

ACTION B12 Bring Lefthand Trailhead up to standards.

*Interests Met: 4**

ACTION B13 Improve Lefthand Trail.

*Interests Met: 5**

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

*Interests Met: 3**

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

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.

- » 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.

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.

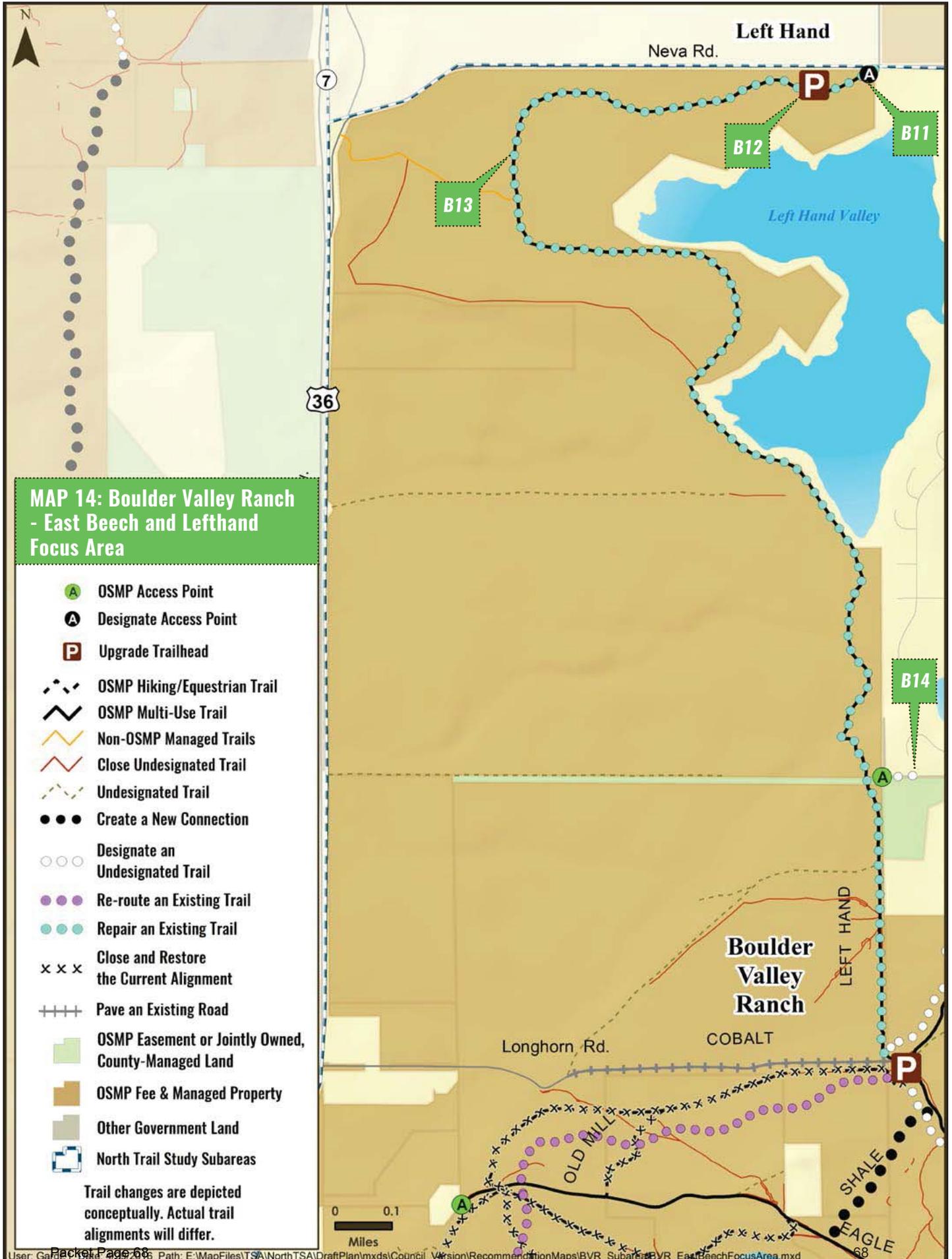
Primary Goal

- » 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 Packet Page 67 each action.





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.

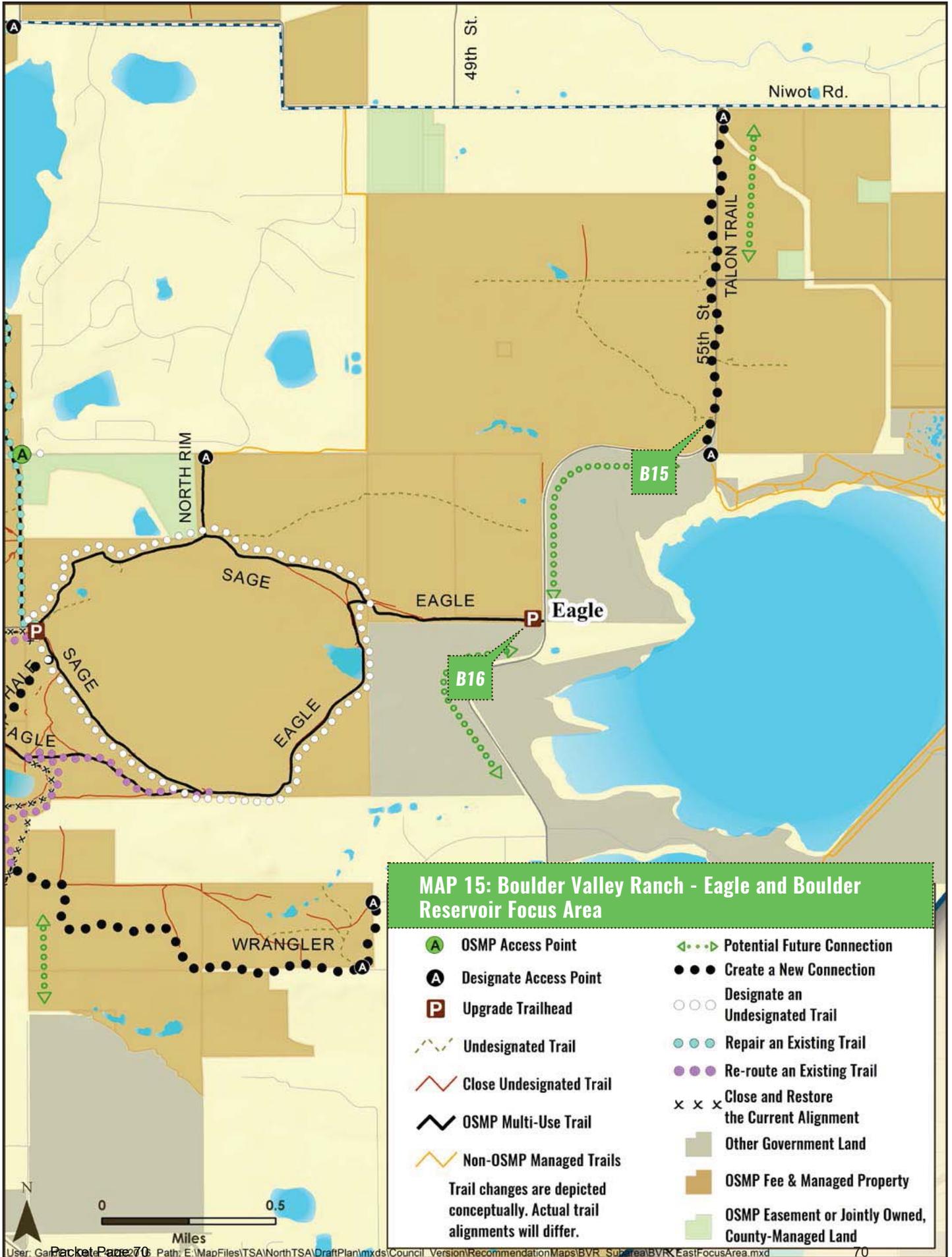
Driving Factors/Benefits

- » 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 Packet Page 69 each action.*



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

- | | |
|---|---|
| OSMP Access Point | Potential Future Connection |
| Designate Access Point | Create a New Connection |
| Upgrade Trailhead | Designate an Undesignated Trail |
| Undesignated Trail | Repair an Existing Trail |
| Close Undesignated Trail | Re-route an Existing Trail |
| OSMP Multi-Use Trail | Close and Restore the Current Alignment |
| Non-OSMP Managed Trails | Other Government Land |
| Trail changes are depicted conceptually. Actual trail alignments will differ. | OSMP Fee & Managed Property |
| | OSMP Easement or Jointly Owned, County-Managed Land |



ACTION B17 Bring Foothills Trailhead up to standards.

*Interests Met: 6**

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

*Interests Met: 2**

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

*Interests Met: 5**



MAP 16: Boulder Valley Ranch - Degge Focus Area

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.

- » 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.

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

Primary Goal

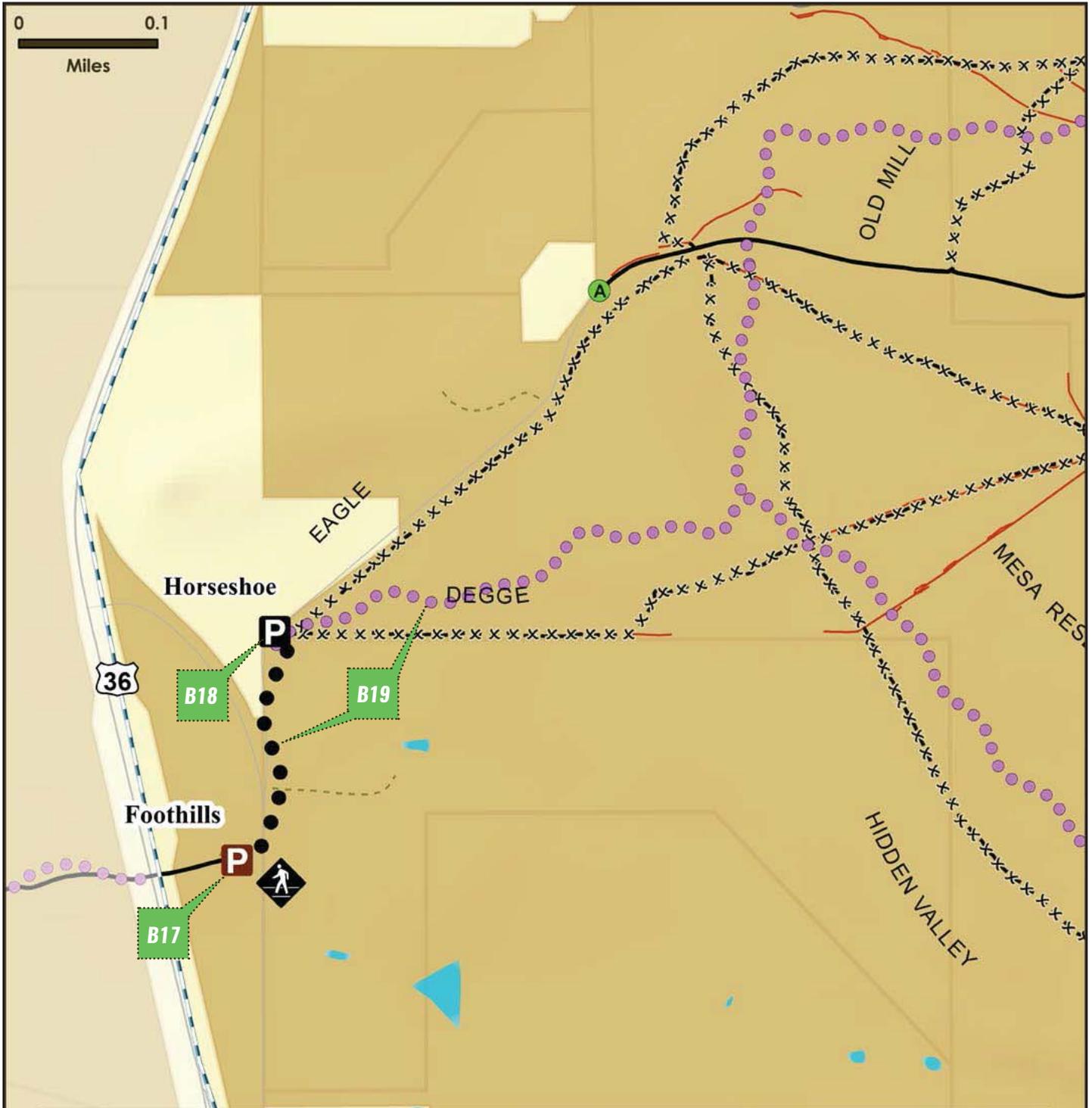
- » Improve visitor experience, trail connectivity and offer a safer way for visitors to connect from the Foothills Trail to the Boulder Valley Ranch/Mesa Reservoir area trails.

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 Packet Page 71 each action.



MAP 16: Boulder Valley Ranch - Degge Focus Area

OSMP Access Point	Create a New Connection	OSMP Fee & Managed Property
New Trailhead	Re-route an Existing Trail	North Trail Study Subareas
Upgrade Trailhead	Close and Restore the Current Alignment	Build Safer Crossing
Build Safer Crossing	Close Undesignated Trail	Undesignated Trail
	OSMP Multi-Use Trail	Trail changes are depicted conceptually. Actual trail alignments will differ.



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

*Interests Met: 5**

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

*Interests Met: 4**

ACTION B22 Provide nature-viewing access at Mesa Reservoir.

*Interests Met: 5**

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

*Interests Met: 5**

MAP 17: Boulder Valley Ranch - Mesa Reservoir Focus Area

- » 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.

- » 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.

Primary Goal

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

Driving Factors/Benefits

- » Provide access to view wetland resources.

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

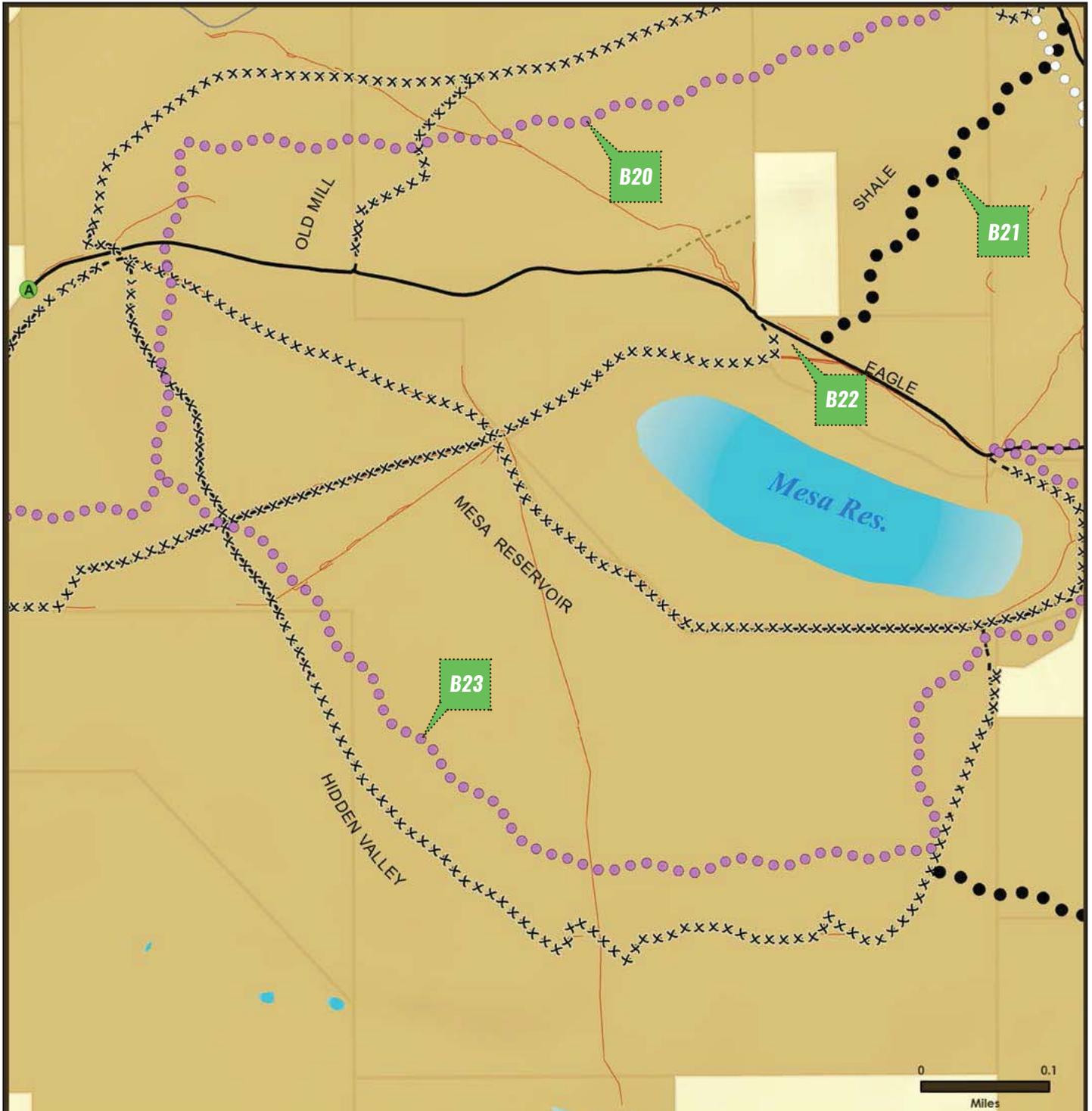
Primary Goal

- » 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.



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.



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**

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

Primary Goal

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.*

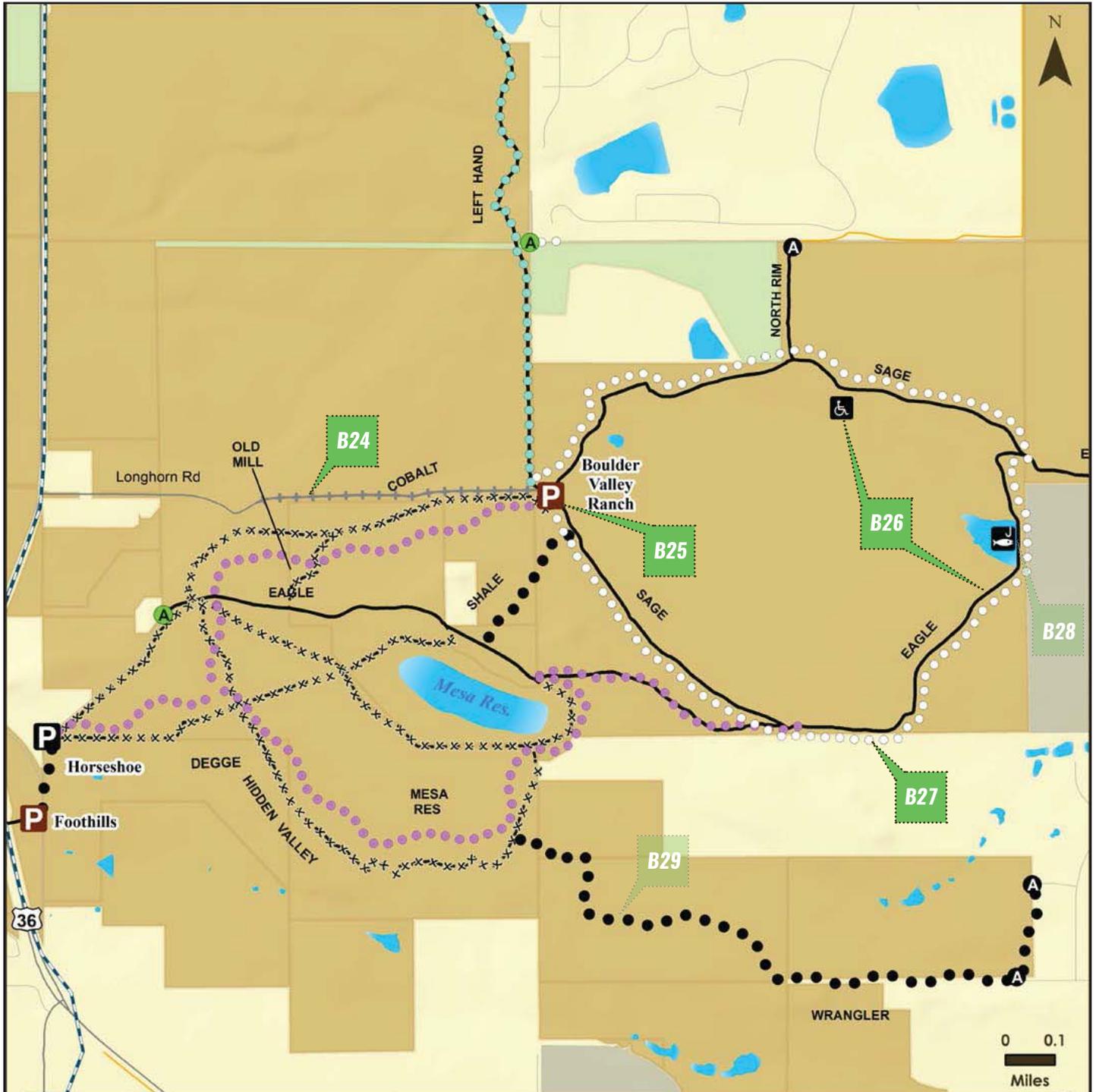
Primary Goal

- » *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 undesignted 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 Packet Page 75 each action.



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

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



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**

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

*Interests Met: 6**

ACTION B30 Public access to BVR arena.

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.

- » 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.

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.

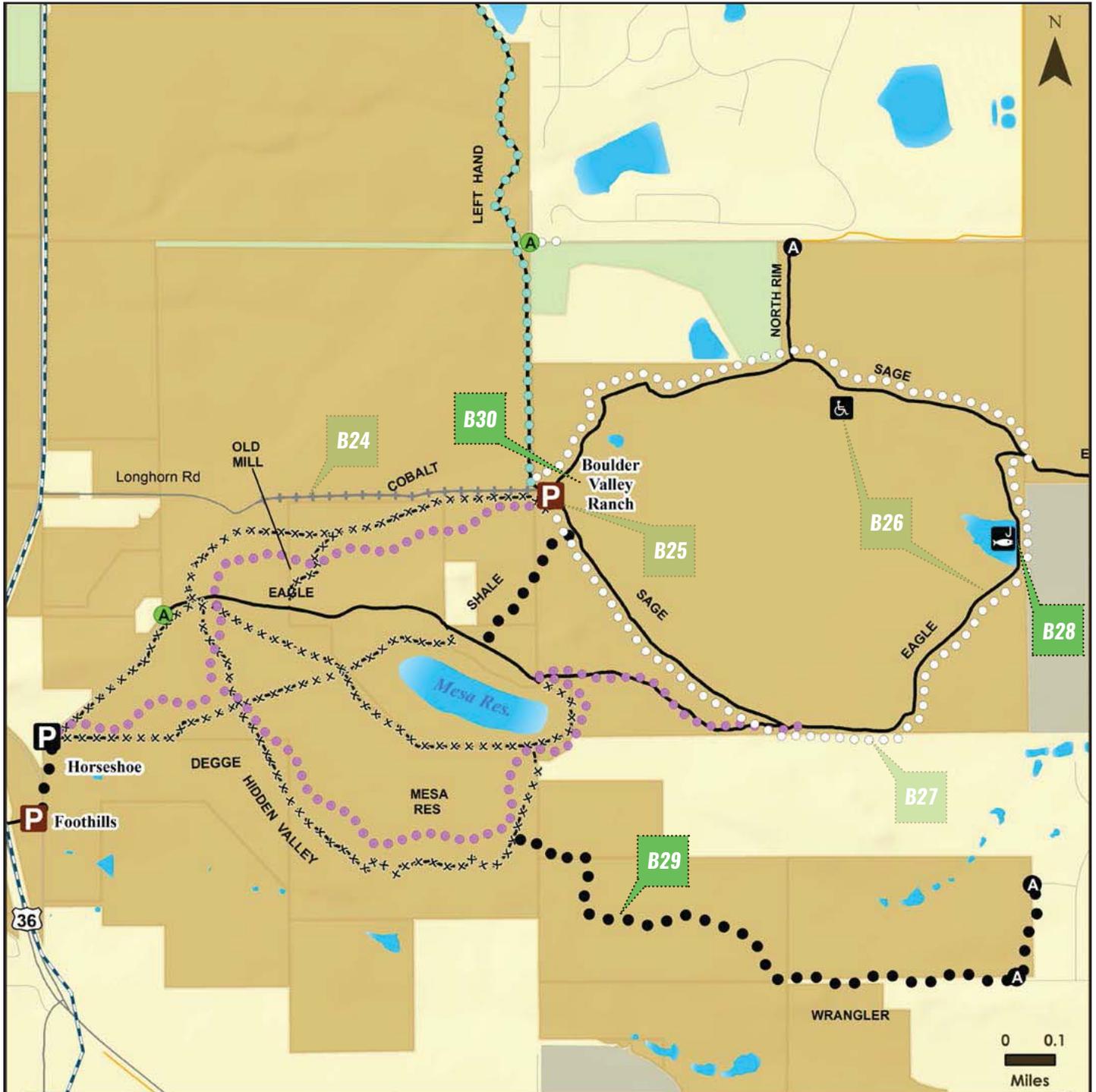
Driving Factors/Benefits

- » 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 Packet Page 77 each action.



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

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

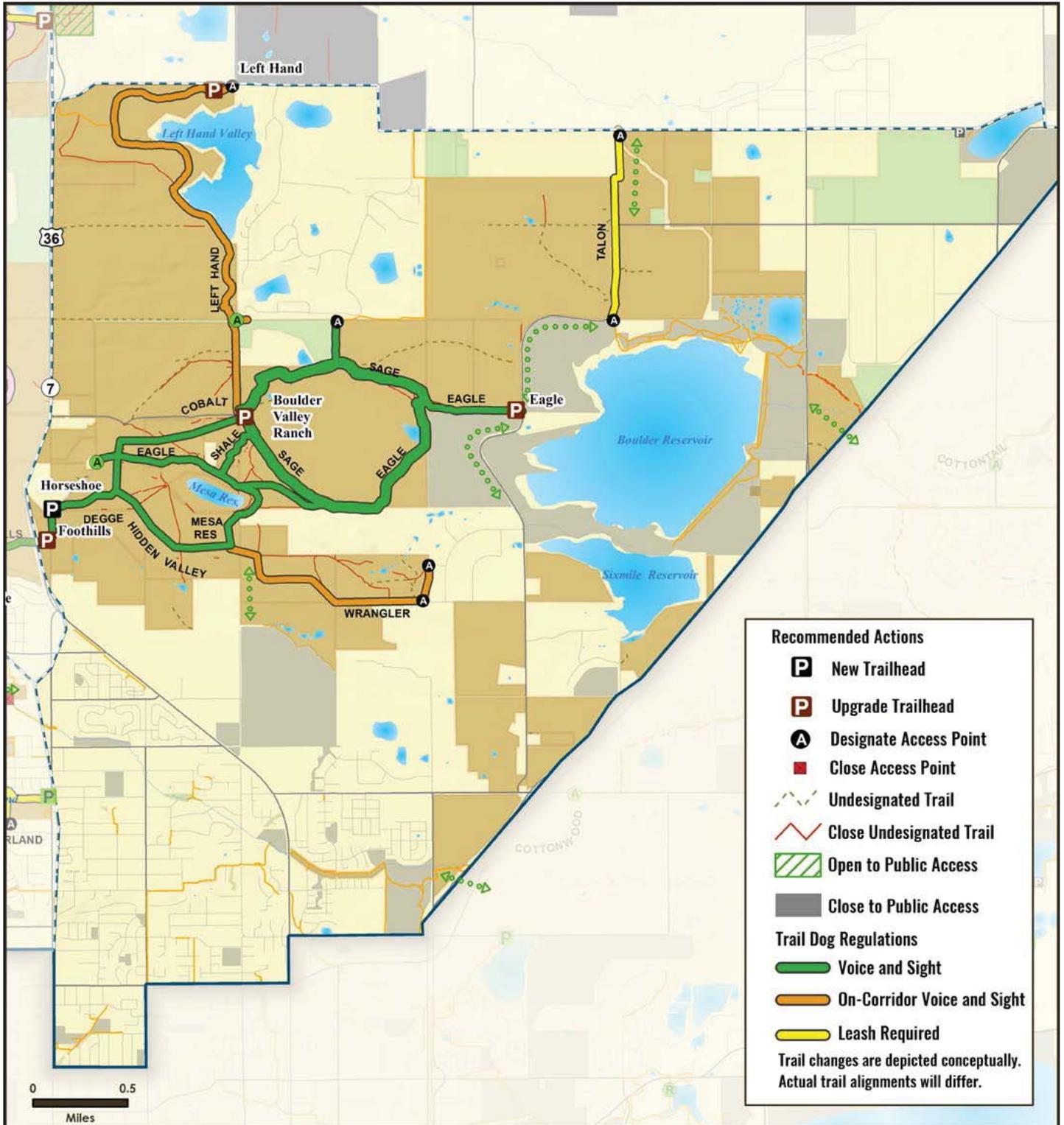


MAP 19: Boulder Valley Ranch - Trail-Based Dog Regulations

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

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.



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

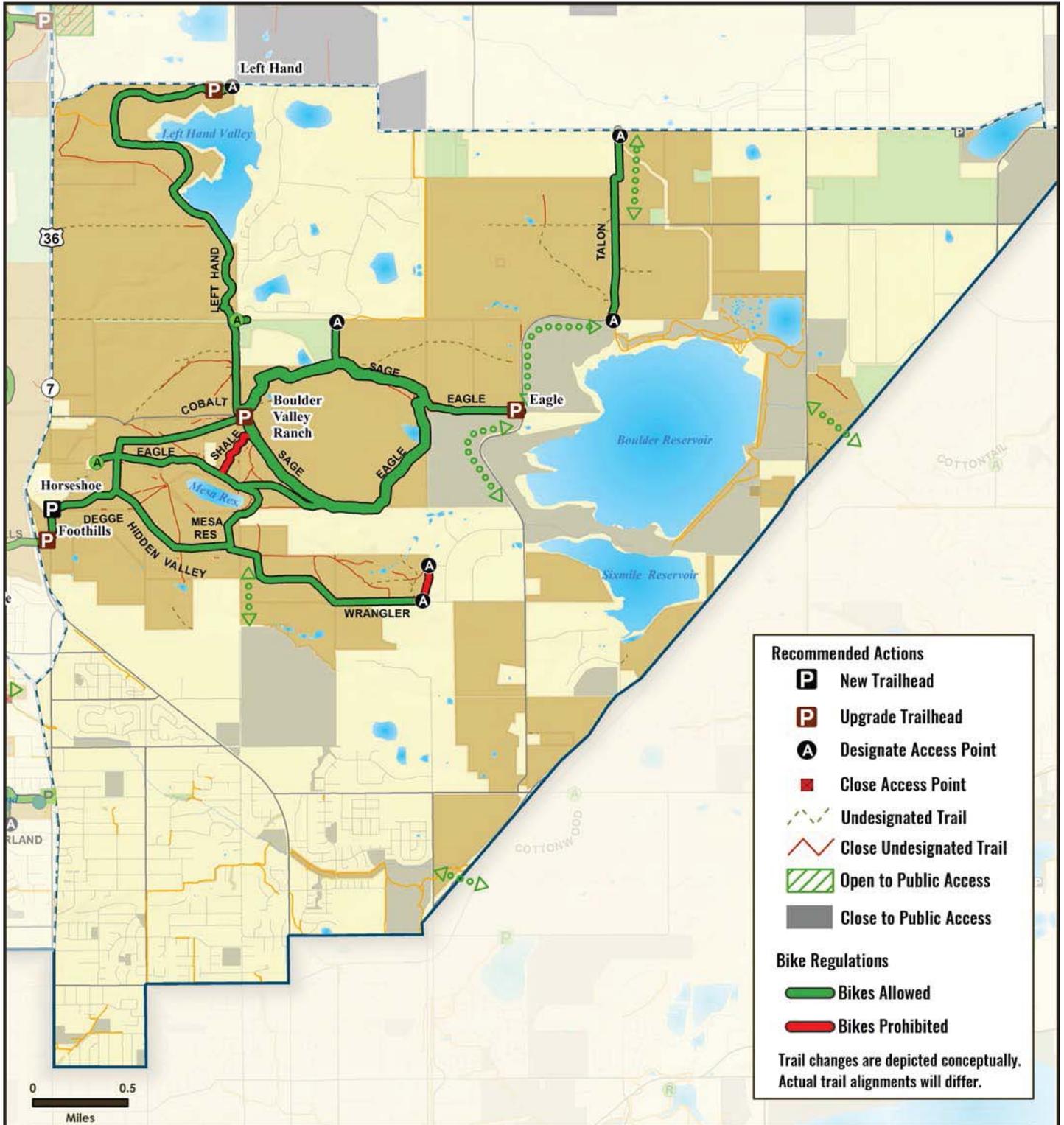
	North Trail Study Planning Area		Potential Future Connection		North Trail Study Area Lands
	North Trail Study Subareas		OSMP Hiking/Equestrian Trail		OSMP Fee & Managed Property
	OSMP Trailhead		OSMP Multi-Use Trail		Lands Not Included in the North Trail Study Area
	OSMP Access Point		Non-OSMP Planned Trails		OSMP Easement or Jointly Owned, County-Managed Land
	OSMP Recreational Feature Access		Non-OSMP Managed Hiking Trail		Other Government Land
	Boulder County Trailhead		Non-OSMP Managed Multi-Use Trail		

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MAP 20: Boulder Valley Ranch - Bike Regulations

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



MAP 20: Boulder Valley Ranch - Bike Regulations

North Trail Study Planning Area	Potential Future Connection	North Trail Study Area Lands
North Trail Study Subareas	OSMP Hiking/Equestrian Trail	OSMP Fee & Managed Property
OSMP Trailhead	OSMP Multi-Use Trail	Lands Not Included in the North Trail Study Area
OSMP Access Point	OSMP Gliding Access	OSMP Easement or Jointly Owned, County-Managed Land
OSMP Recreational Feature Access	Non-OSMP Managed Hiking Trail	Other Government Land
Boulder County Trailhead	Non-OSMP Managed Multi-Use Trail	



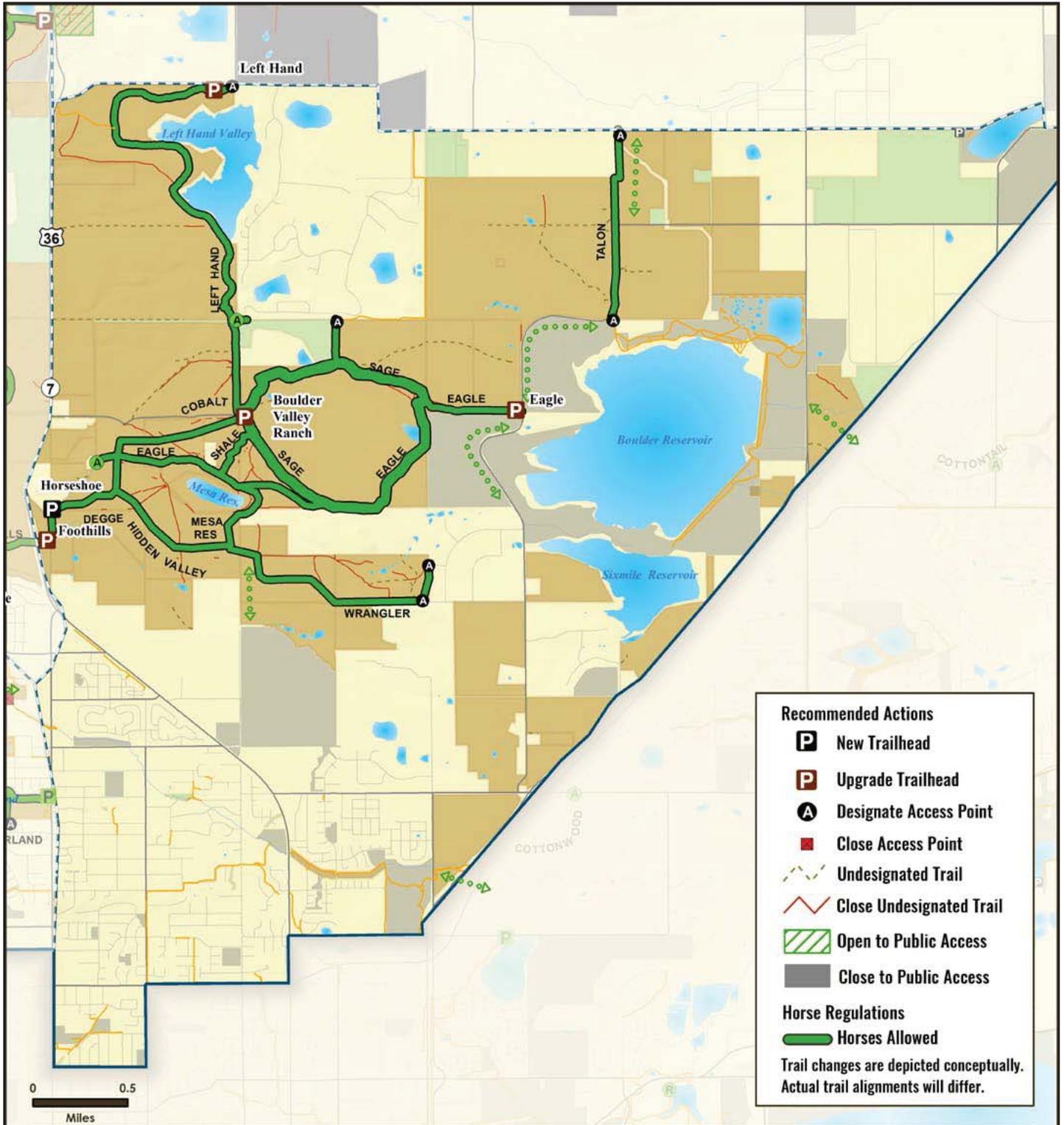
MAP 21: Boulder Valley Ranch - Trail-Based Horse Regulations

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

Horses are allowed off trail in this subarea.



Lefthand Trailhead



Recommended Actions

- New Trailhead
- Upgrade Trailhead
- Designate Access Point
- Close Access Point
- Undesignated Trail
- Close Undesignated Trail
- Open to Public Access
- Close to Public Access

Horse Regulations

- Horses Allowed

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

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

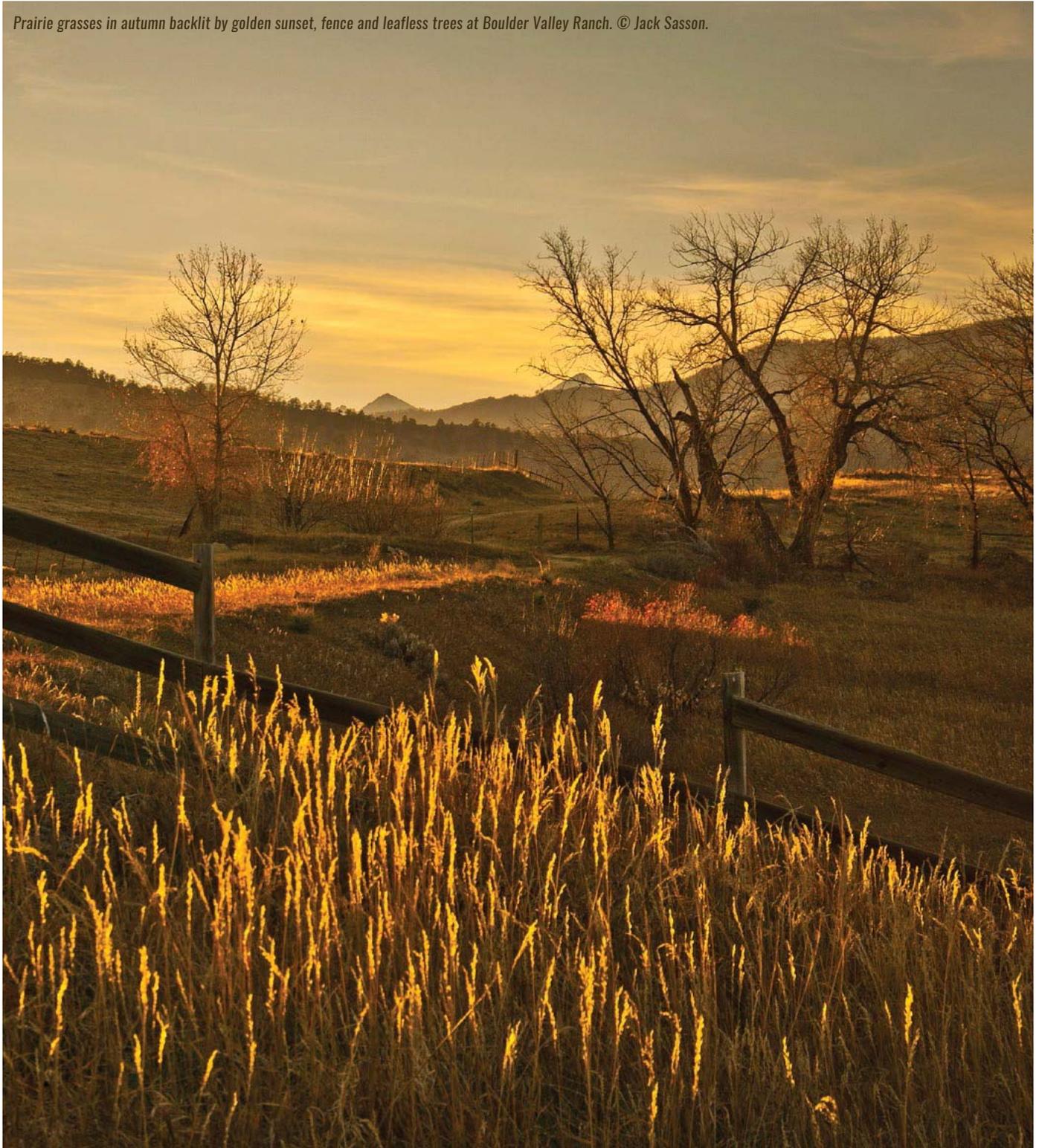
North Trail Study Planning Area	OSMP Hiking/Equestrian Trail	North Trail Study Area Lands
North Trail Study Subareas	OSMP Multi-Use Trail	OSMP Fee & Managed Property
OSMP Trailhead	OSMP Gliding Access	Lands Not Included in the North Trail Study Area
OSMP Access Point	Non-OSMP Managed Hiking Trail	OSMP Easement or Jointly Owned, County-Managed Land
OSMP Recreational Feature Access	Non-OSMP Managed Multi-Use Trail	Other Government Land
Boulder County Trailhead		

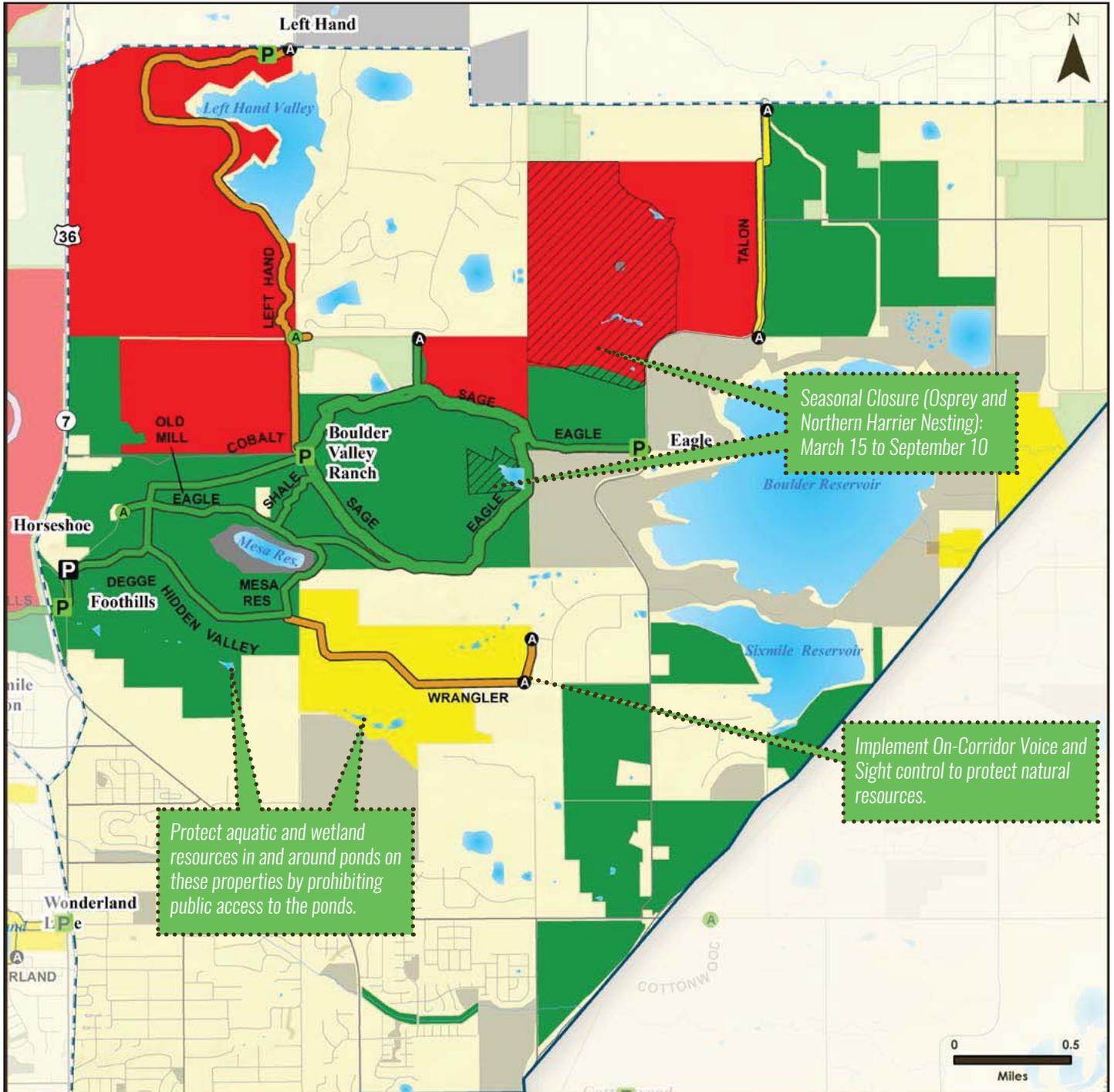


MAP 22: Boulder Valley Ranch - Regulatory Settings

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.





MAP 22: Boulder Valley Ranch - Regulatory Settings

North Trail Study Subareas

- P OSMP Trailhead
- A OSMP Access Point

Visitor Access Regulations

- P New Trailhead
- A 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.



Background photo: Wonderland Lake.



North TSA Plan Recommendations

Wonderland Lake



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

*Interests Met: 1**

ACTION W2 Assess vision for Foothills Nature Center.

*Interests Met: 2**

ACTION W3 Construct a shade structure near Wonderland Lake Trailhead.

*Interests Met: 2**

ACTION W4 Improve safety at Broadway crossing.

*Interests Met: 3**

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

MAP 23: Wonderland Lake - Subarea-Wide Recommendations

- » 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.

- » 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.

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.

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

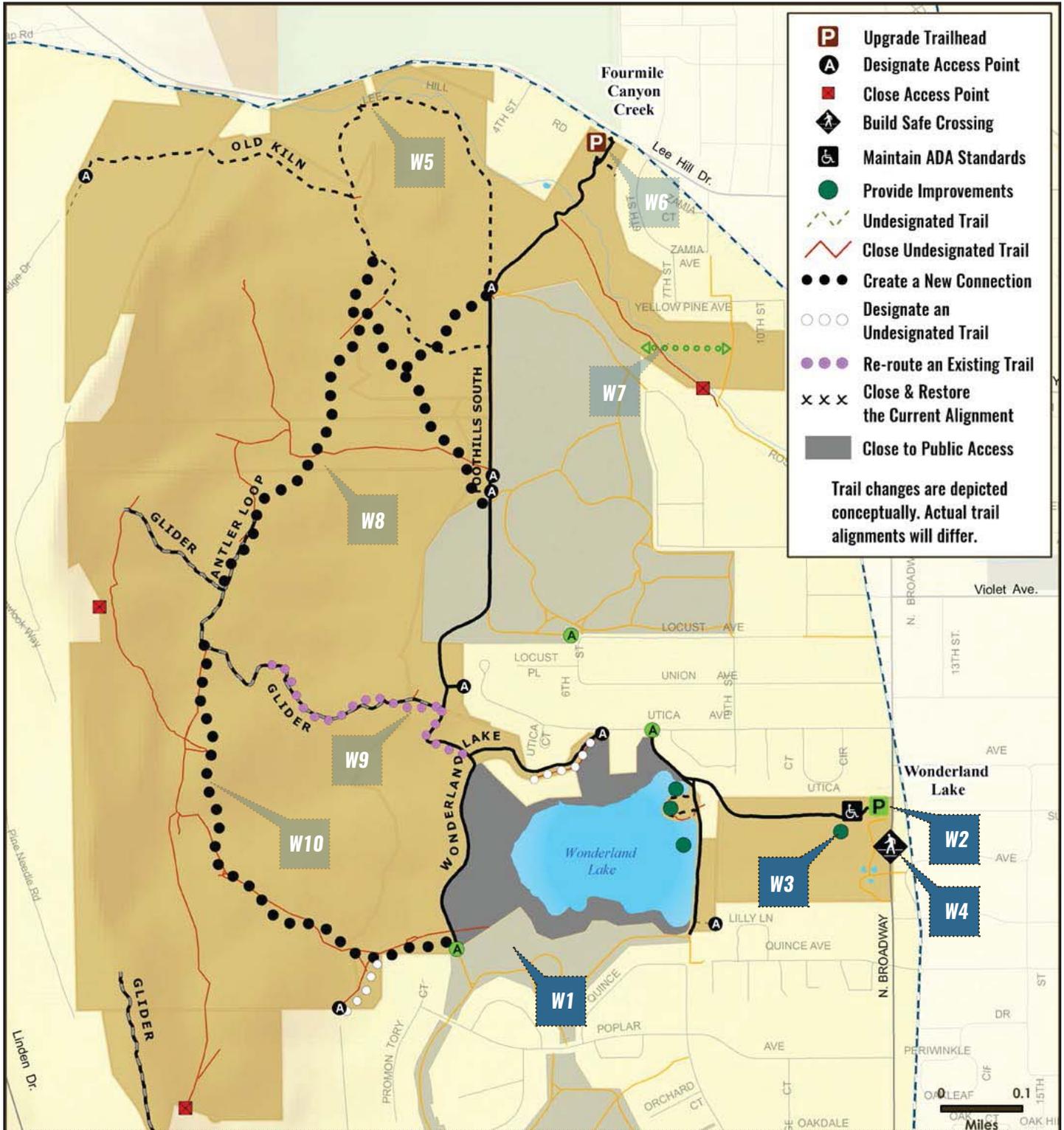
Primary Goal

- » 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.

*See Appendix D for a list of interests met by Packet Page 89 each action.



- P** Upgrade Trailhead
 - A** Designate Access Point
 - Close Access Point
 - ▲** Build Safe Crossing
 - ♿** Maintain ADA Standards
 - Provide Improvements
 - Undesignated Trail
 - Close Undesignated Trail
 - Create a New Connection
 - Designate an Undesignated Trail
 - Re-route an Existing Trail
 - xxx** Close & Restore the Current Alignment
 - Close to Public Access
- Trail changes are depicted conceptually. Actual trail alignments will differ.

MAP 23: Wonderland Lake - Subarea-Wide Recommendations

- North Trail Study Planning Area
- ▣** North Trail Study Subareas
- P** OSMP Trailhead
- A** 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





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

*Interests Met: 2**

ACTION W6 *Rename Four Mile Creek Trailhead as Fourmile Canyon Creek Trailhead.*

*Interests Met: 2**

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

*Interests Met: 3**

MAP 24: Wonderland Lake - Fourmile Canyon Creek Focus Area

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.*

Primary Goal

- » *Align trailhead name with Fourmile Canyon Creek.*

- » *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.*

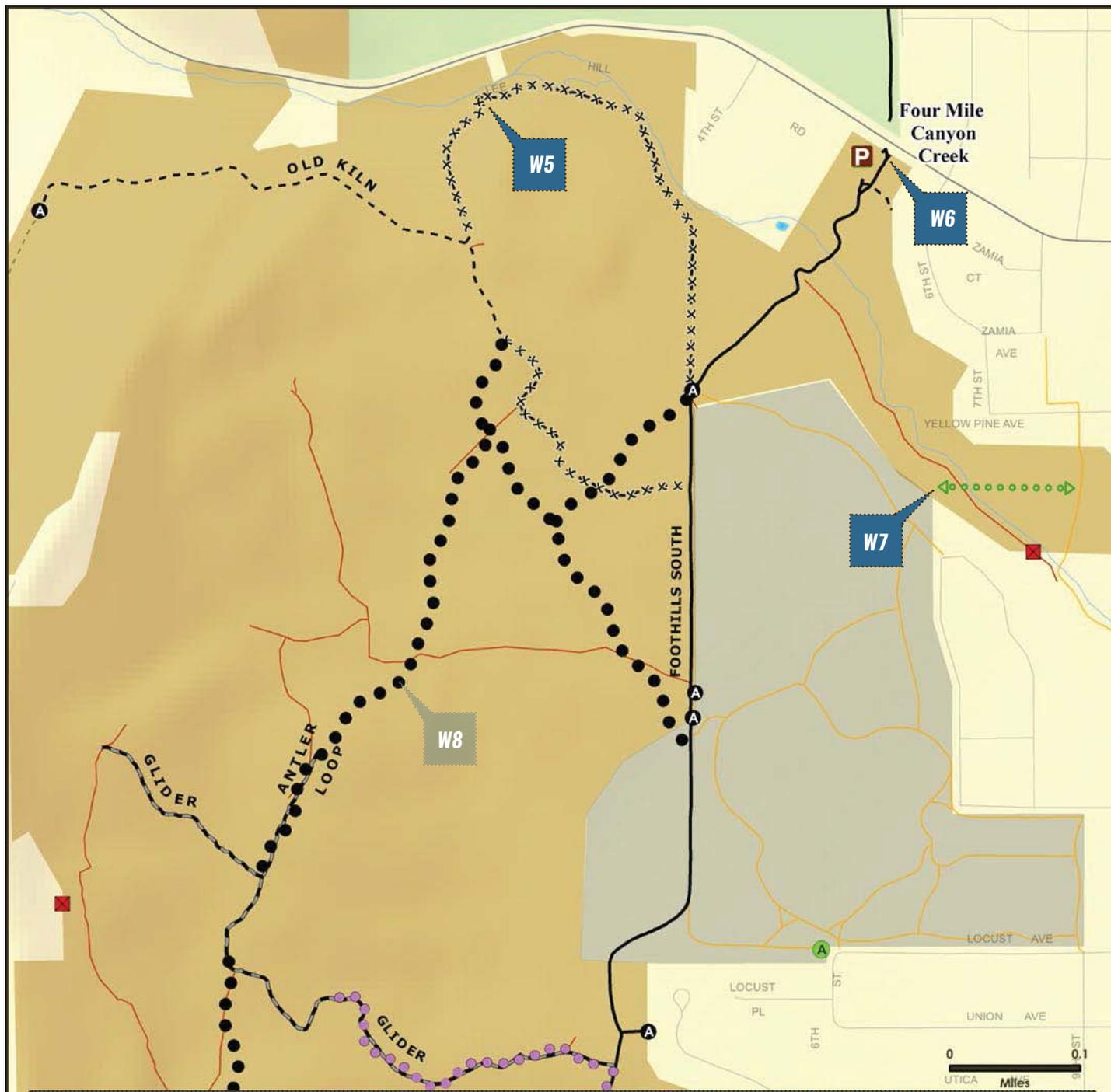
Driving Factors/Benefits

- » *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 Packet Page 91 each action.*



- | | | |
|---|------------------------------|---|
| P Upgrade Trailhead | Potential Future Connection | OSMP Fee & Managed Property |
| A Designate Access Point | OSMP Hiking/Equestrian Trail | OSMP Easement or Jointly Owned, County-Managed Land |
| OSMP Access Point | OSMP Multi-Use Trail | Other Government Land |
| Close Access Point | OSMP Gliding Access | |
| Create a New Connection | Non-OSMP Managed Trails | |
| Close and Restore the Current Alignment | Undesignated Trail | |
| Re-route an Existing Trail | Close Undesignated Trail | |
- Trail changes are depicted conceptually. Actual trail alignments will differ.



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.*

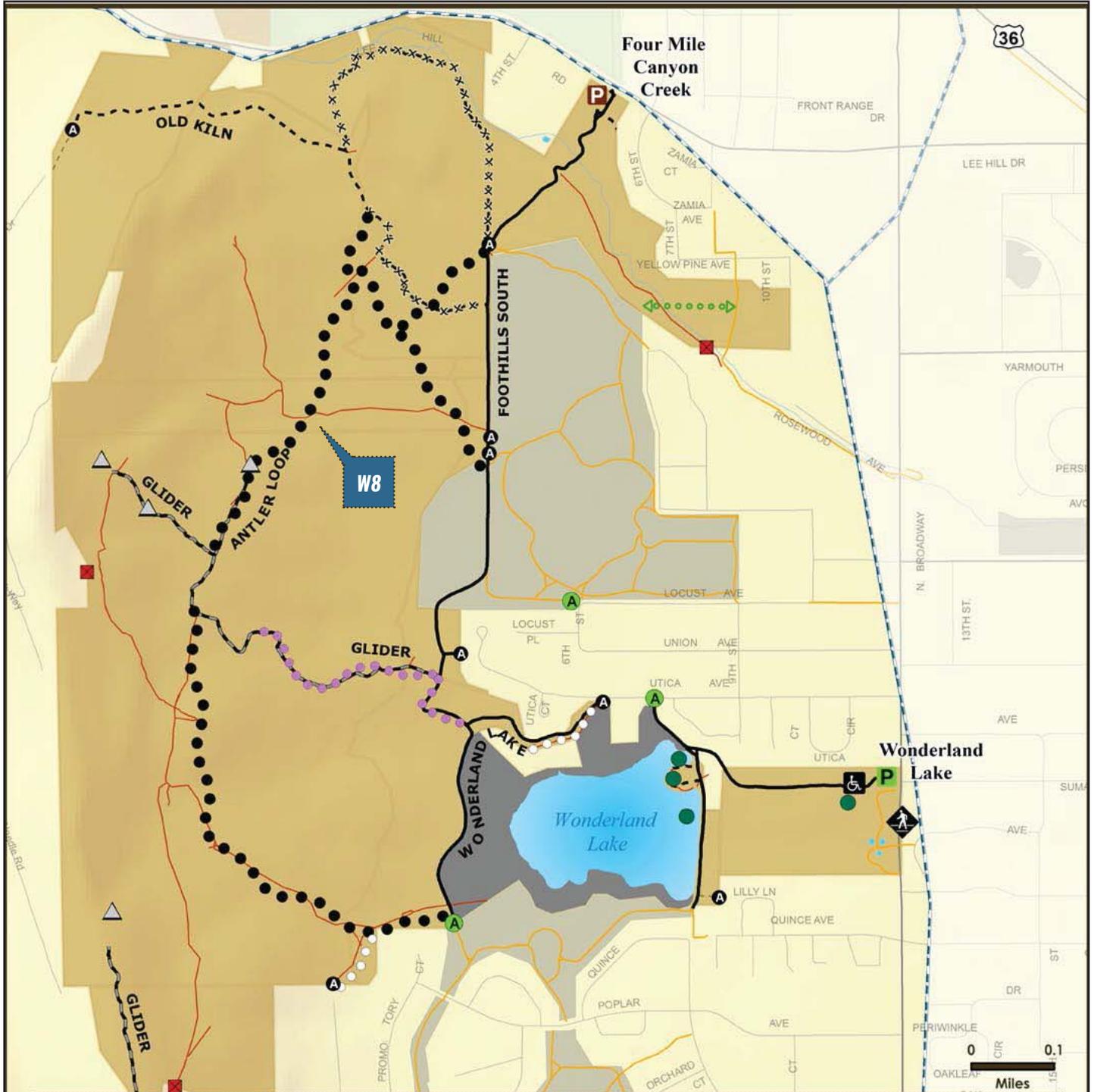
Primary Goal

- » *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 Packet Page 93 each action.*



MAP 25: Wonderland Lake - South Foothills Focus Area

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



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

*Interests Met: 2**

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

*Interests Met: 3**

MAP 26: Wonderland Lake - Wonderland Lake Backdrop Focus Area

- » 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.

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

Primary Goal

- » Increase recreation and loop trail opportunities for visitors.

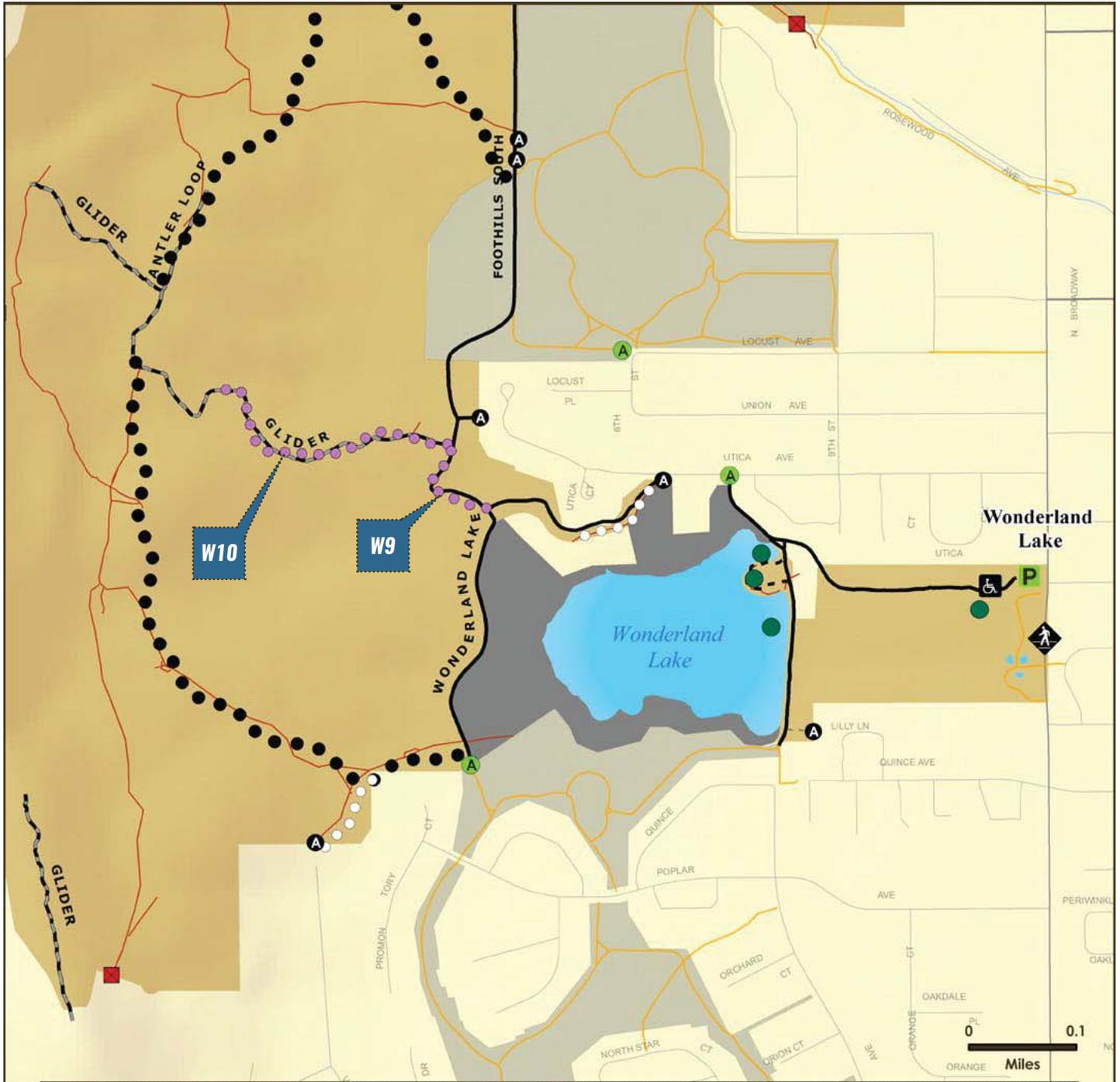
Driving Factors/Benefits

- » Increase connectivity among trails.
- » Increase trail sustainability.



Blooming New Mexico feathergrass. © Bill May.

*See Appendix D for a list of interests met by Packet Page 95 each action.



MAP 26: Wonderland Lake - Wonderland Lake Backdrop Focus Area

OSMP Trailhead	OSMP Hiking/Equestrian Trail	Create a New Connection
OSMP Access Point	OSMP Multi-Use Trail	Designate an Undesignated Trail
Close Access Point	OSMP Gliding Access	Re-route an Existing Trail
Designate Access Point	Close Undesignated Trail	Close to Public Access
Build Safe Crossing	Undesignated Trail	OSMP Fee & Managed Property
Maintain ADA Standards	Non-OSMP Managed Trails	Other Government Land
Provide Improvements		

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



MAP 27: Wonderland Lake - Wonderland Lake Focus Area

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

*Interests Met: 5**

ACTION W12 Prohibit boats and belly boats on Wonderland Lake.

*Interests Met: 2**

ACTION W13 Prohibit ice skating on Wonderland Lake.

*Interests Met: 2**

ACTION W14 Allow sledding on Wonderland Lake dam.

*Interests Met: 2**

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

*Interests Met: 1**

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.

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.

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.

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.

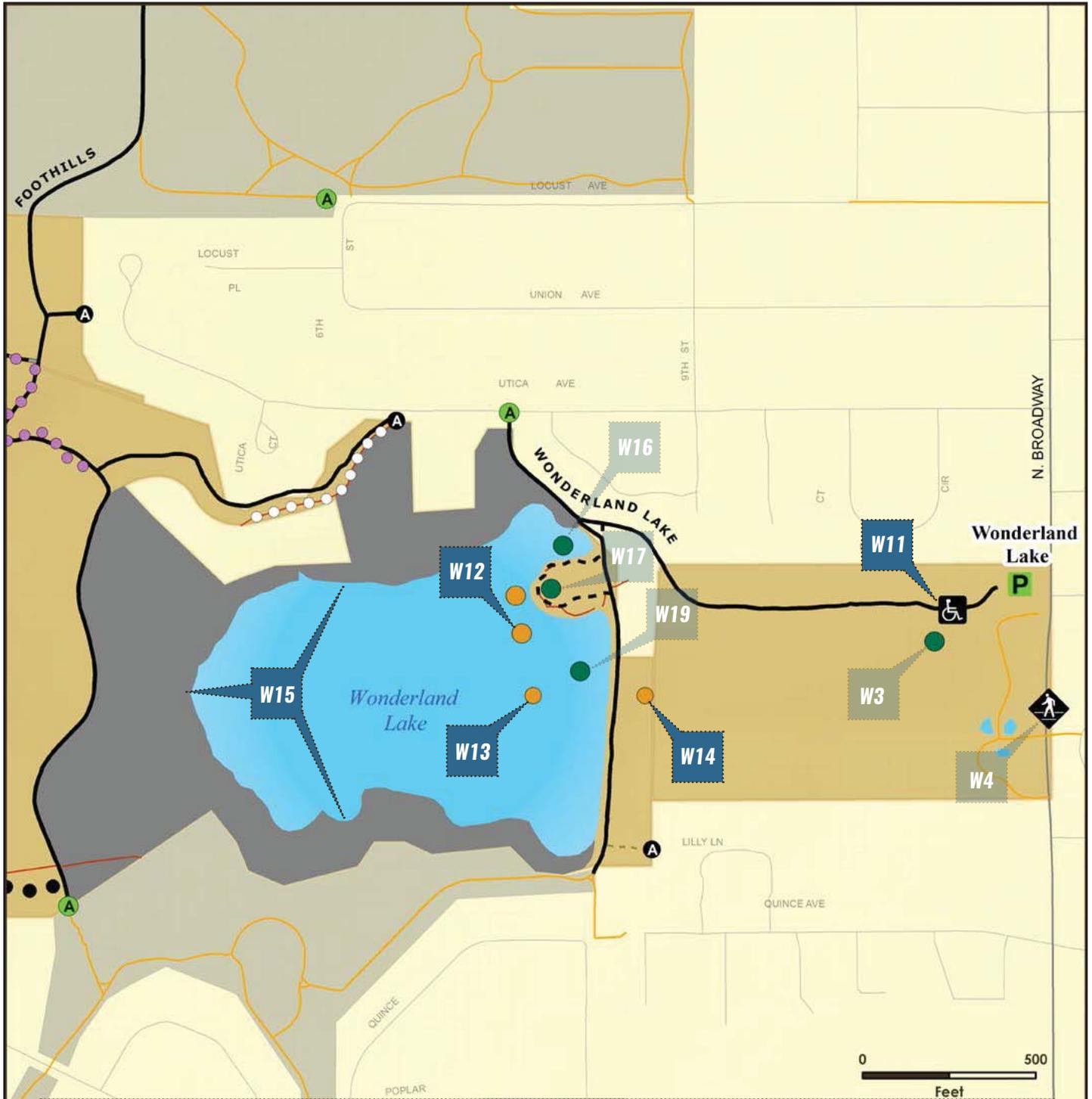
Primary Goal

- » 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 Packet Page 97 each action.



OSMP Trailhead	OSMP Hiking/Equestrian Trail	OSMP Fee & Managed Property
OSMP Access Point	OSMP Multi-Use Trail	Other Government Land
Designate Access Point	Close Undesignated Trail	Close to Public Access
Build Safe Crossing	Undesignated Trail	Trail changes are depicted conceptually. Actual trail alignments will differ.
Maintain ADA Standards	Non-OSMP Managed Trails	
Provide Improvements	Create a New Connection	
Regulatory Change	Designate an Undesignated Trail	
	Re-route an Existing Trail	



MAP 28: Wonderland Lake - Peninsula Focus Area

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

*Interests Met: 4**

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

*Interests Met: 4**

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

*Interests Met: 3**

ACTION W19 Create Wonderland Lake fishing pier.

*Interests Met: 6**

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.

- » 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.

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.

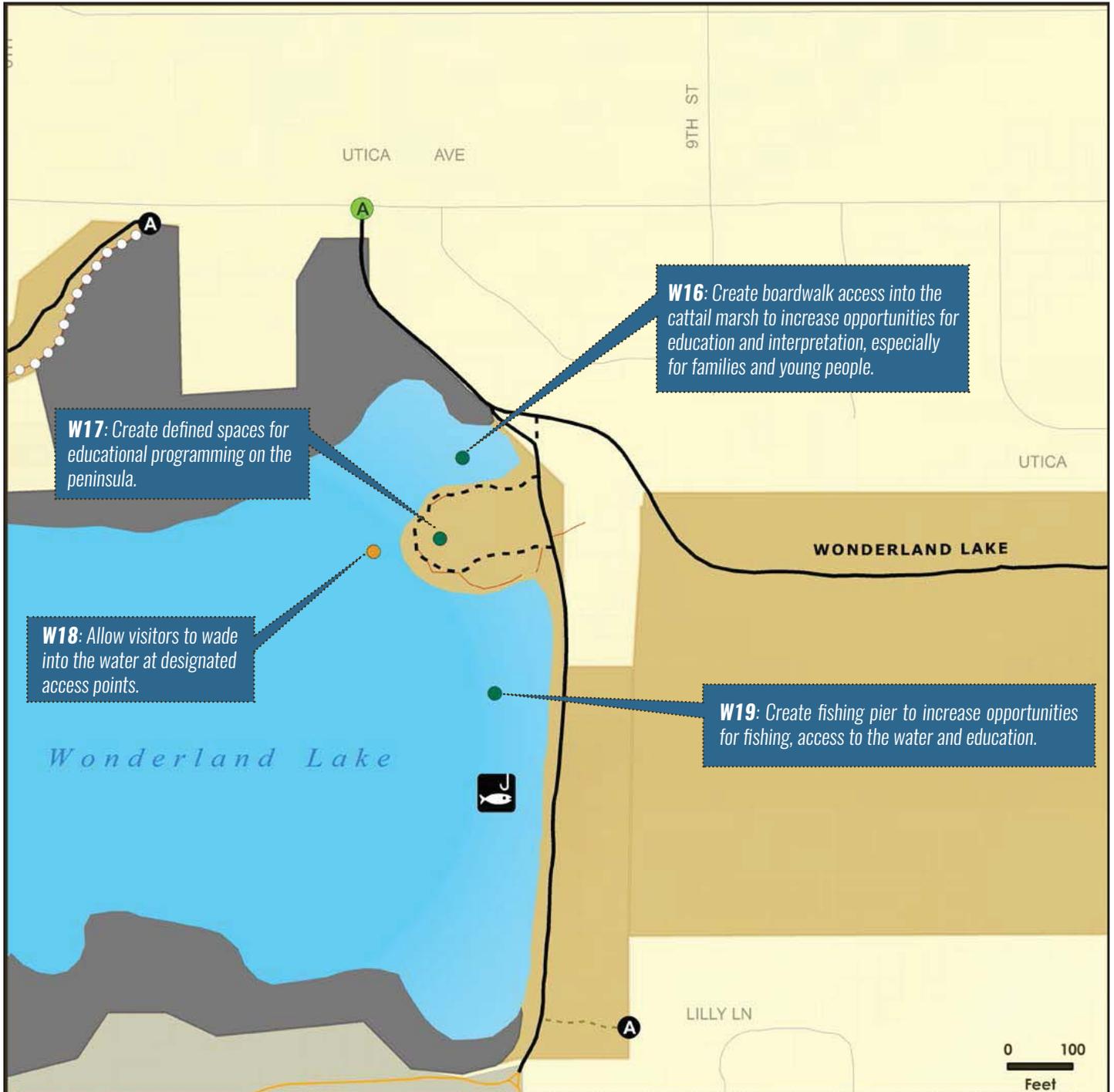
Primary Goal

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

Driving Factors/Benefits

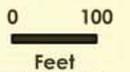
- » Provide fishing access alternative to enhance the safety for visitors traveling along the dam around those who are fishing.
- » Concentrate fishing and lake access to protect wetland vegetation in other areas around the lake.

*See Appendix D for a list of interests met by Packet Page 99 each action.



MAP 28: Wonderland Lake - Peninsula Focus Area

- | | | |
|---------------------------------|------------------------------|---|
| OSMP Access Point | OSMP Hiking/Equestrian Trail | OSMP Fee & Managed Property |
| Designate Access Point | OSMP Multi-Use Trail | Other Government Land |
| Fishing Access | Close Undesignated Trail | Close to Public Access |
| Regulatory Change | Undesignated Trail | Trail changes are depicted conceptually. Actual trail alignments will differ. |
| Provide Improvements | Non-OSMP Managed Trails | |
| Designate an Undesignated Trail | | |

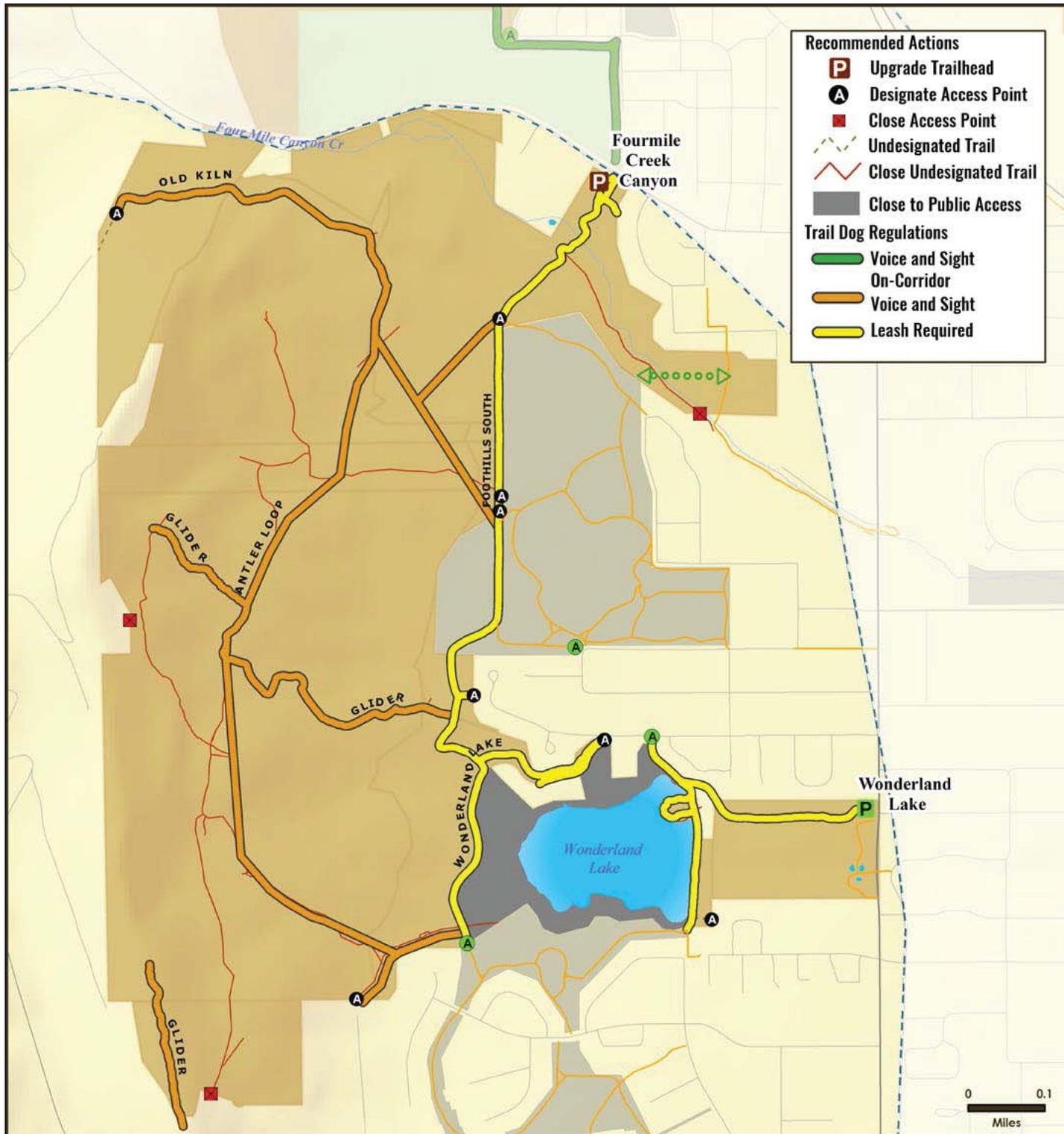




MAP 29: Wonderland Lake - Trail-Based Dog Regulations

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

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



Recommended Actions

- P** Upgrade Trailhead
- A** Designate Access Point
- Close Access Point
- Undesignated Trail
- Close Undesignated Trail
- Close to Public Access

Trail Dog Regulations

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

MAP 29: Wonderland Lake - Trail-Based Dog Regulations

North Trail Study Planning Area	Potential Future Connection	North Trail Study Area Lands
North Trail Study Subareas	OSMP Hiking/Equestrian Trail	OSMP Fee & Managed Property
OSMP Trailhead	OSMP Multi-Use Trail	Lands Not Included in the North Trail Study Area
OSMP Access Point	OSMP Gliding Access	OSMP Easement or Jointly Owned, County-Managed Land
Trail changes are depicted conceptually. Actual trail alignments will differ.	Non-OSMP Managed Hiking Trail	Other Government Land
	Non-OSMP Managed Multi-Use Trail	



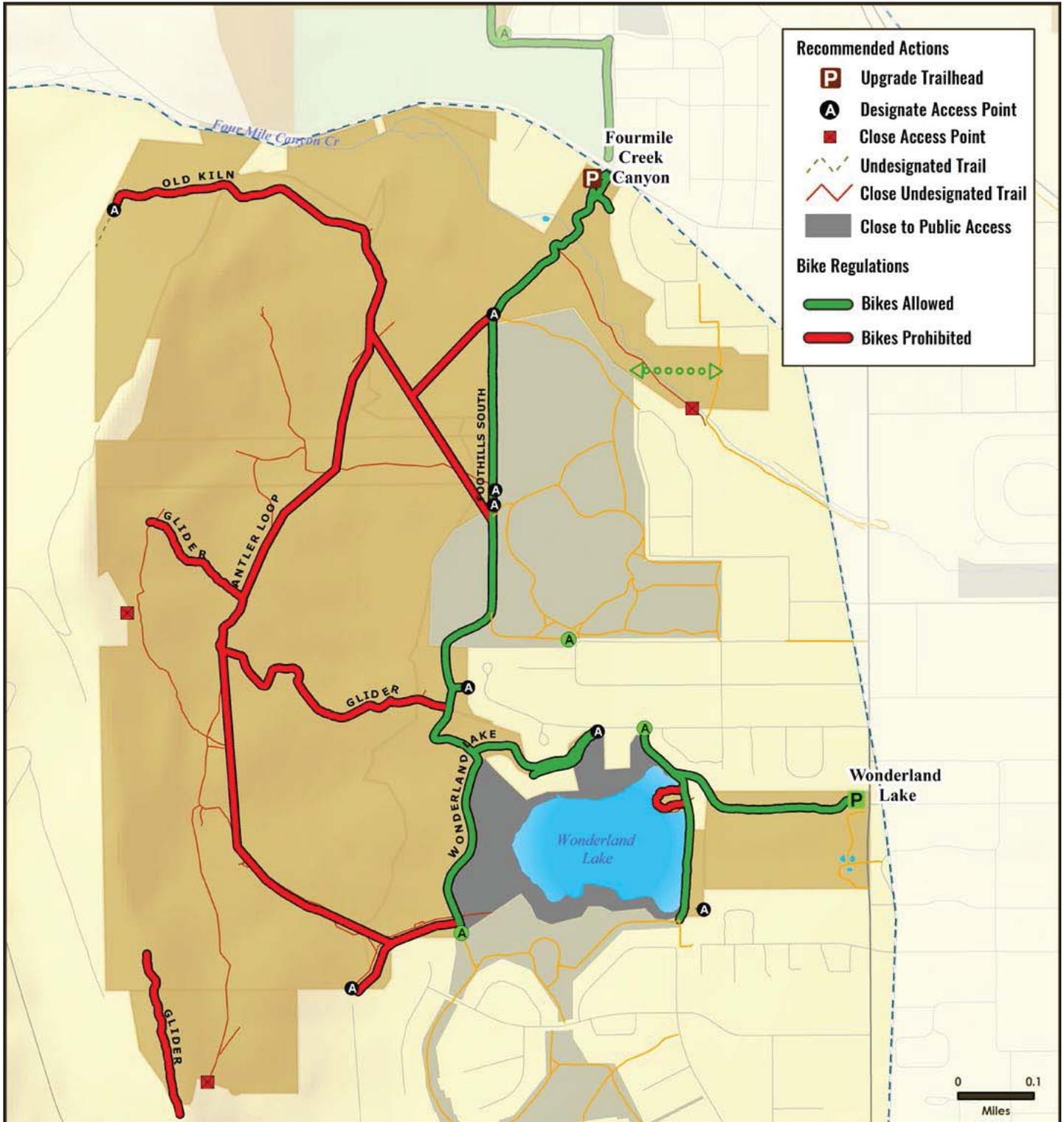
MAP 30: Wonderland Lake - Bike Regulations

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.





MAP 30: Wonderland Lake - Bike Regulations

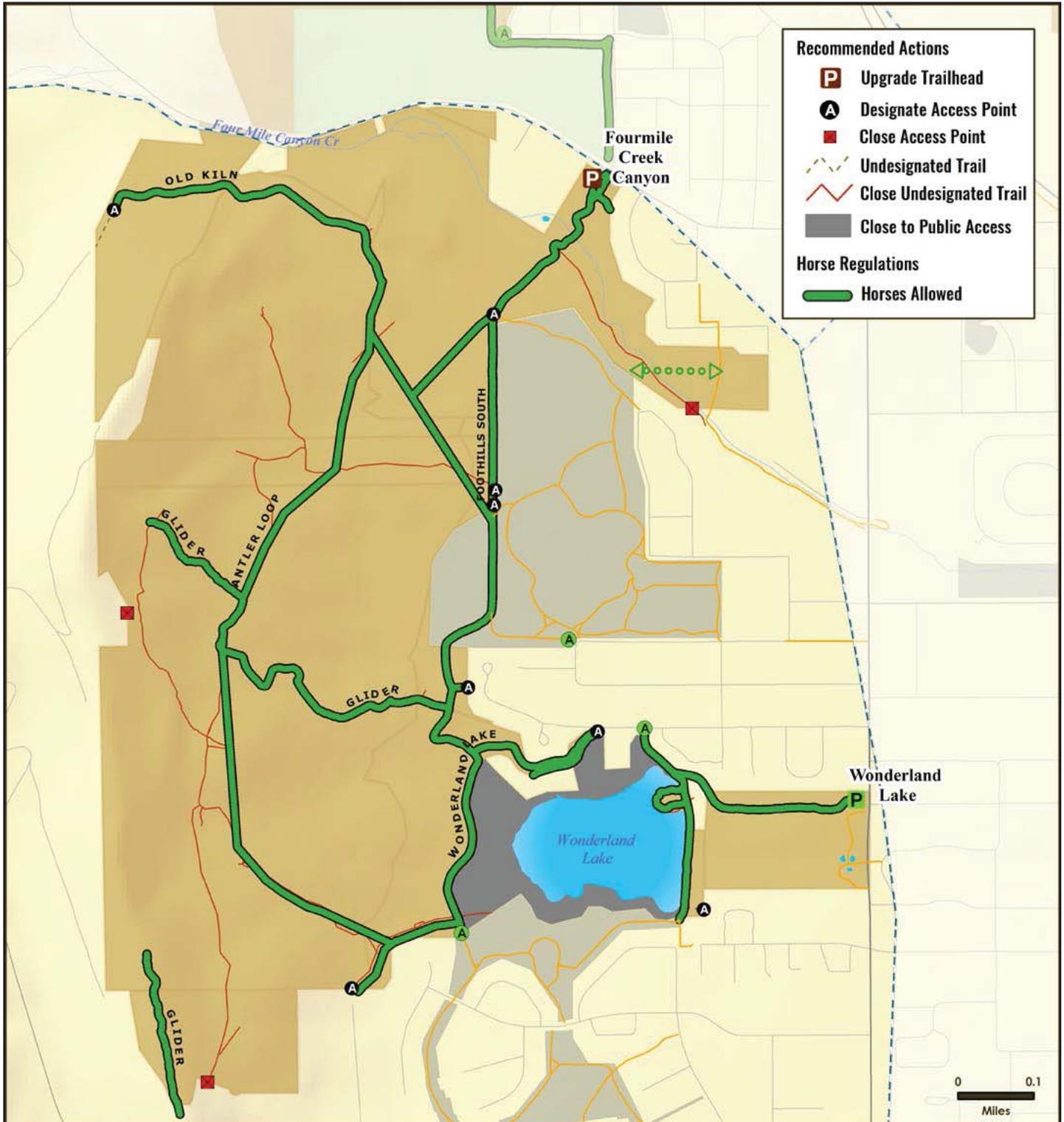
North Trail Study Planning Area	Potential Future Connection	North Trail Study Area Lands
North Trail Study Subareas	OSMP Hiking/Equestrian Trail	OSMP Fee & Managed Property
OSMP Trailhead	OSMP Multi-Use Trail	Lands Not Included in the North Trail Study Area
OSMP Access Point	OSMP Gliding Access	OSMP Easement or Jointly Owned, County-Managed Land
Trail changes are depicted conceptually. Actual trail alignments will differ.	Non-OSMP Managed Hiking Trail	Other Government Land
	Non-OSMP Managed Multi-Use Trail	



MAP 31: Wonderland Lake - Trail-Based Horse Regulations

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

Horses are allowed off-trail in this subarea.



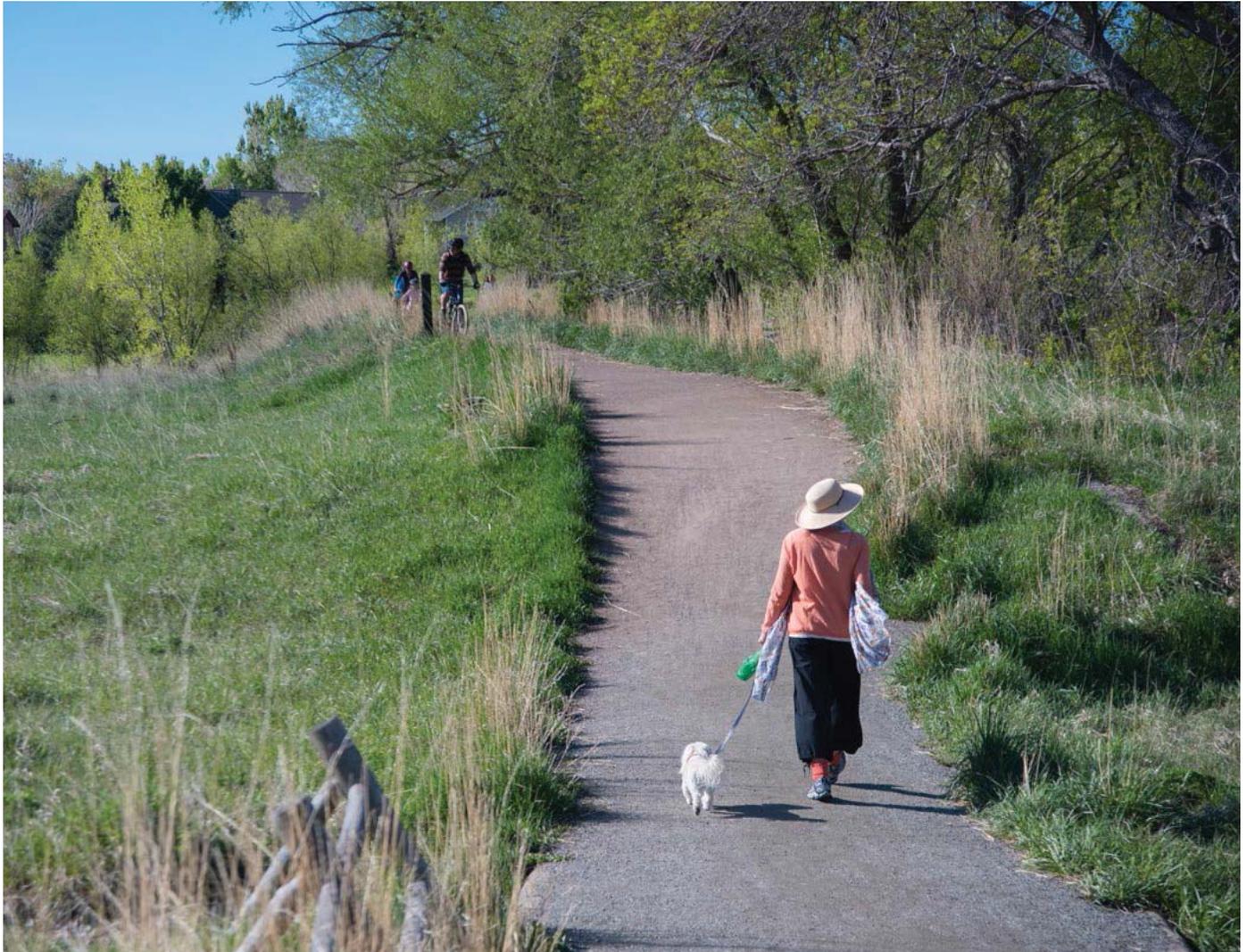
MAP 31: Wonderland Lake - Trail-Based Horse Regulations

 North Trail Study Planning Area	 Potential Future Connection	 North Trail Study Area Lands
 North Trail Study Subareas	 OSMP Hiking/Equestrian Trail	 OSMP Fee & Managed Property
 OSMP Trailhead	 OSMP Multi-Use Trail	 Lands Not Included in the North Trail Study Area
 OSMP Access Point	 OSMP Gliding Access	 OSMP Easement or
Trail changes are depicted conceptually. Actual trail alignments will differ.	 Non-OSMP Managed Hiking Trail	 Jointly Owned, County-Managed Land
	 Non-OSMP Managed Multi-Use Trail	 Other Government Land

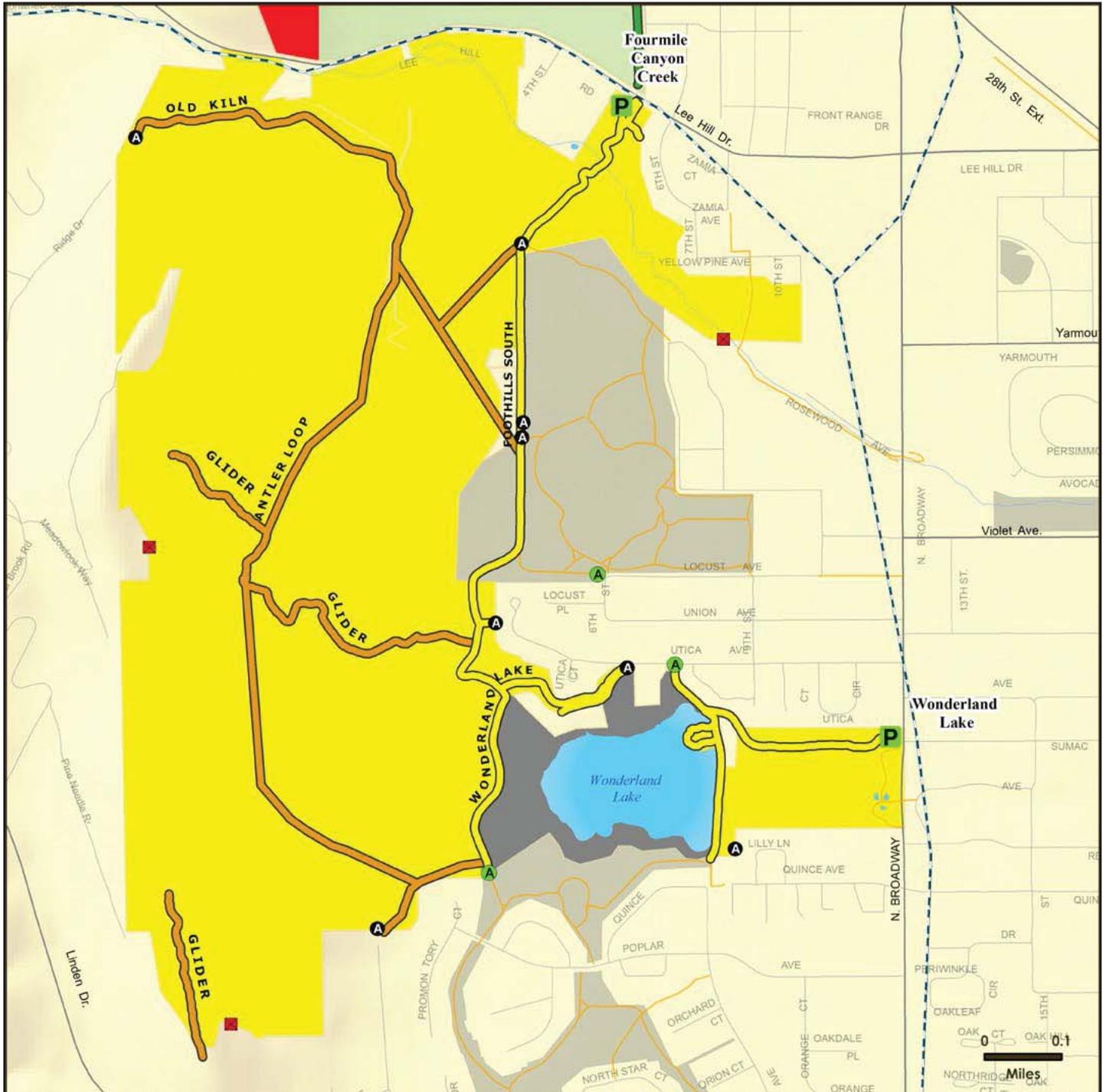


MAP 32: Wonderland Lake - Regulatory Settings

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.



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





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**

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

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

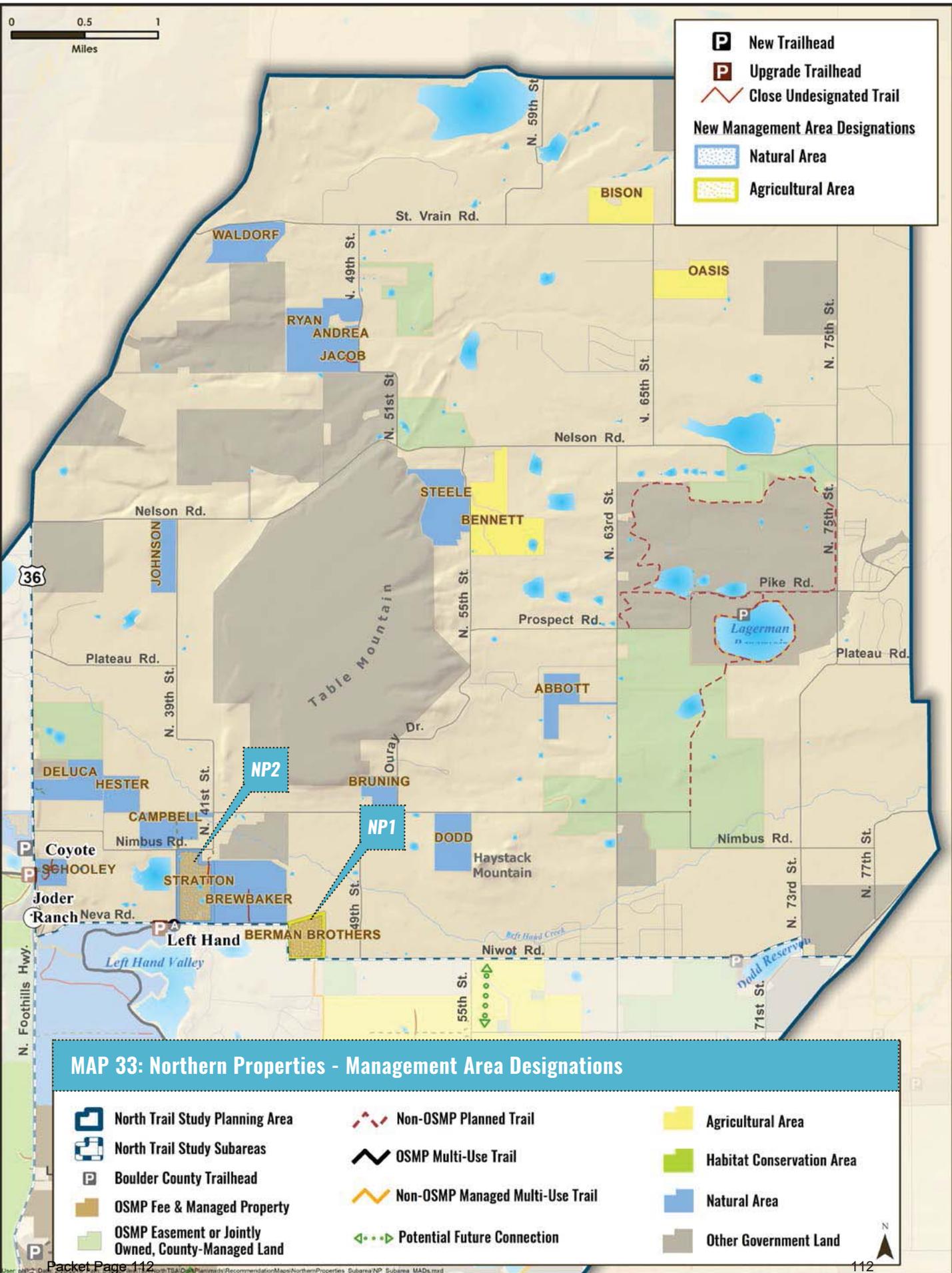
Primary Goal

- » 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 Packet Page 111 each action.



MAP 33: Northern Properties - Management Area Designations

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



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.

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

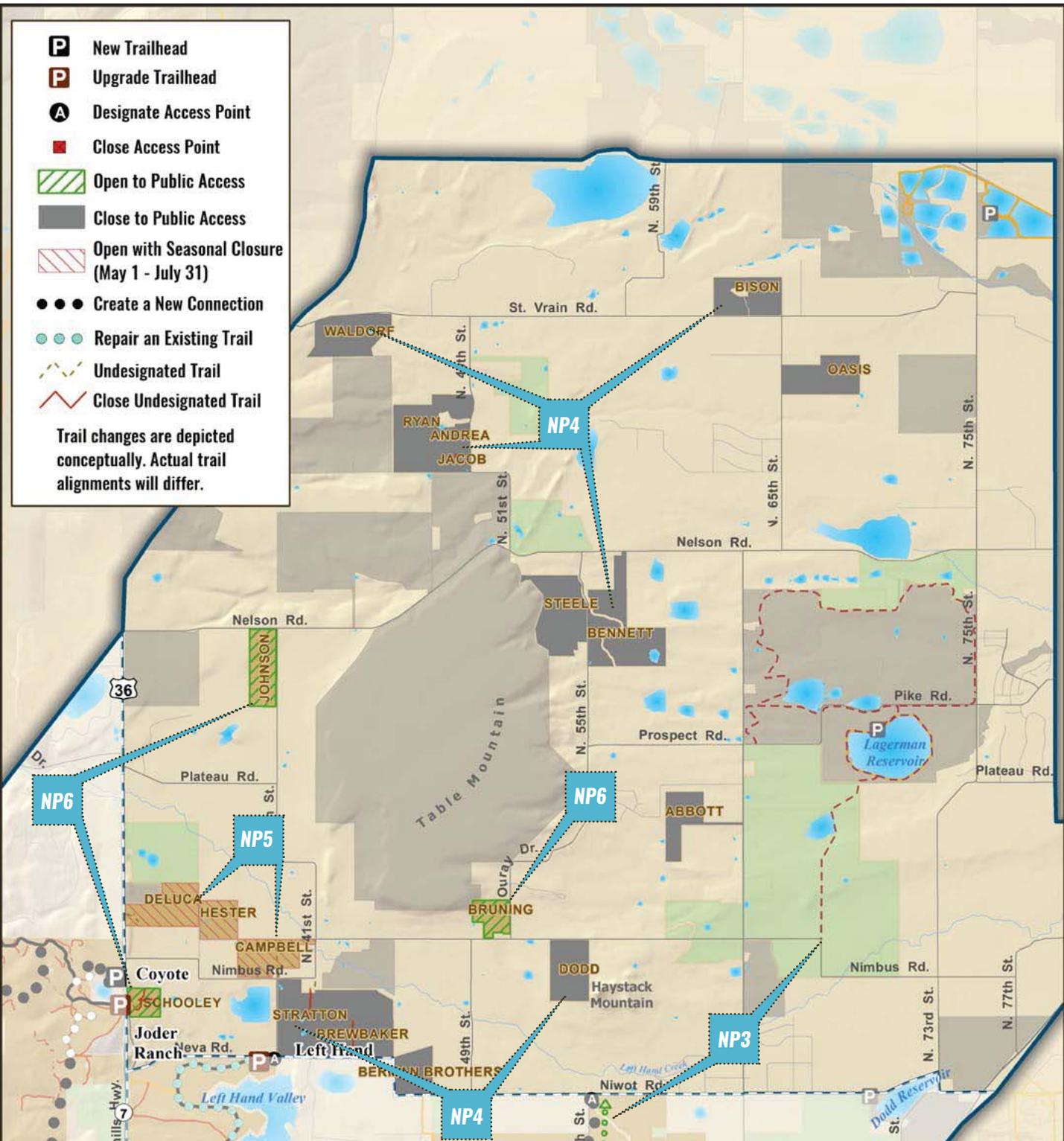
- » *Allow access to properties where impacts to natural and agricultural resources are less of a concern.*

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.

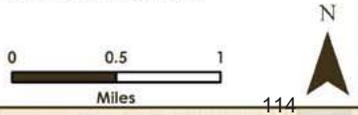
*See Appendix D for a list of interests met by Packet Page 113 each action.



- P** New Trailhead
 - P** Upgrade Trailhead
 - A** Designate Access Point
 - Close Access Point
 - Open to Public Access
 - Close to Public Access
 - Open with Seasonal Closure (May 1 - July 31)
 - Create a New Connection
 - Repair an Existing Trail
 - Undesignated Trail
 - Close Undesignated Trail
- Trail changes are depicted conceptually. Actual trail alignments will differ.

MAP 34: Northern Properties - Subarea-Wide Recommendations

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



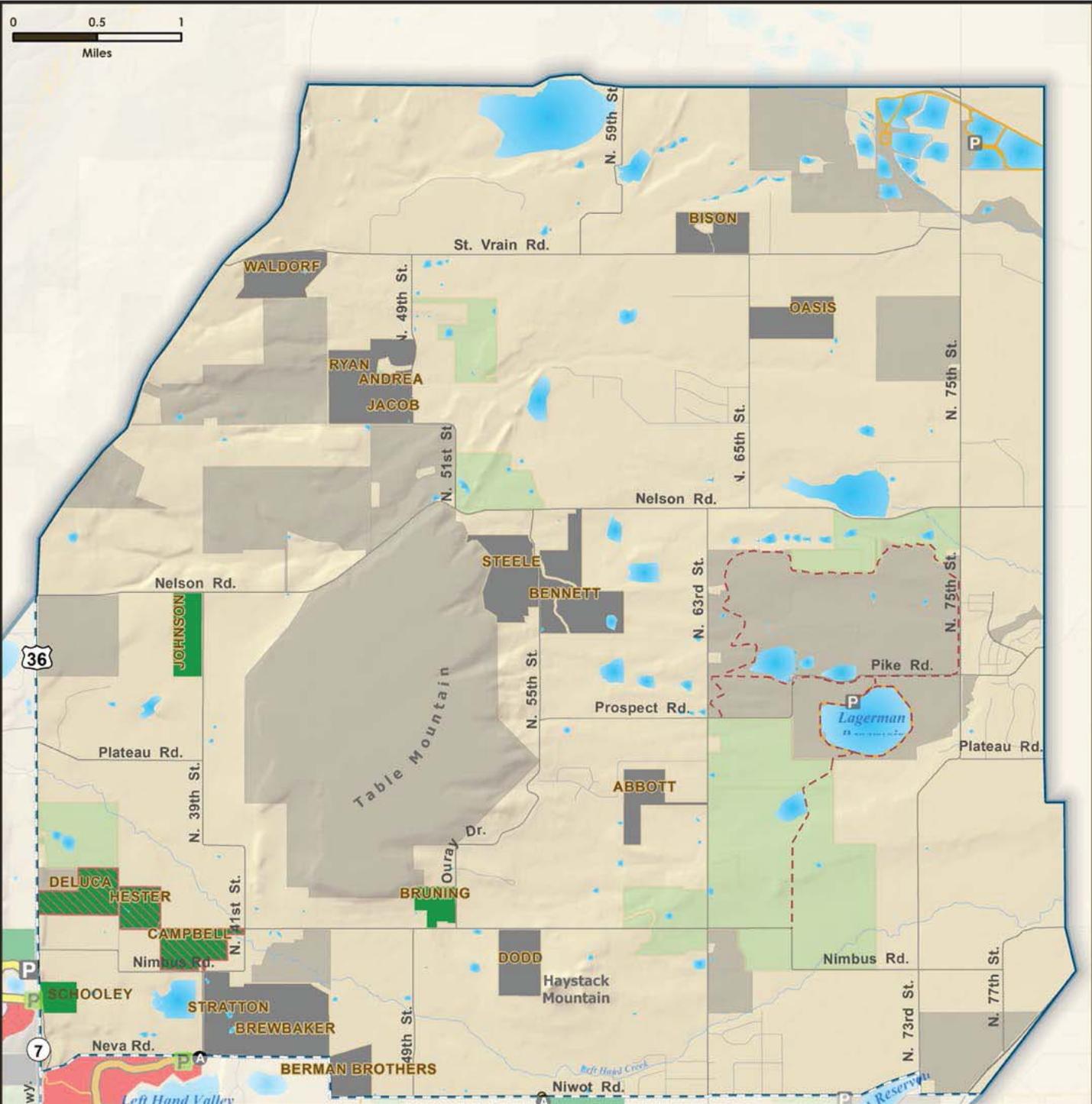


MAP 35: Northern Properties - Regulatory Settings

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 Trail Study Planning Area
- North Trail Study Subareas
- Boulder County Trailhead
- OSMP Trailhead
- Visitor Access Regulations**
- New Trailhead
- New Access Point

- Non-OSMP Planned Trail
- Non-OSMP Managed Multi-Use Trail
- Trail Dog Regulations**
- On-Corridor Voice and Sight
- Leash Required

- Dog Regulation Areas**
- Voice and Sight Control
- Dogs Prohibited
- Closed to Public Access
- Open with Seasonal Closure (May 1 - July 31)
- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land



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



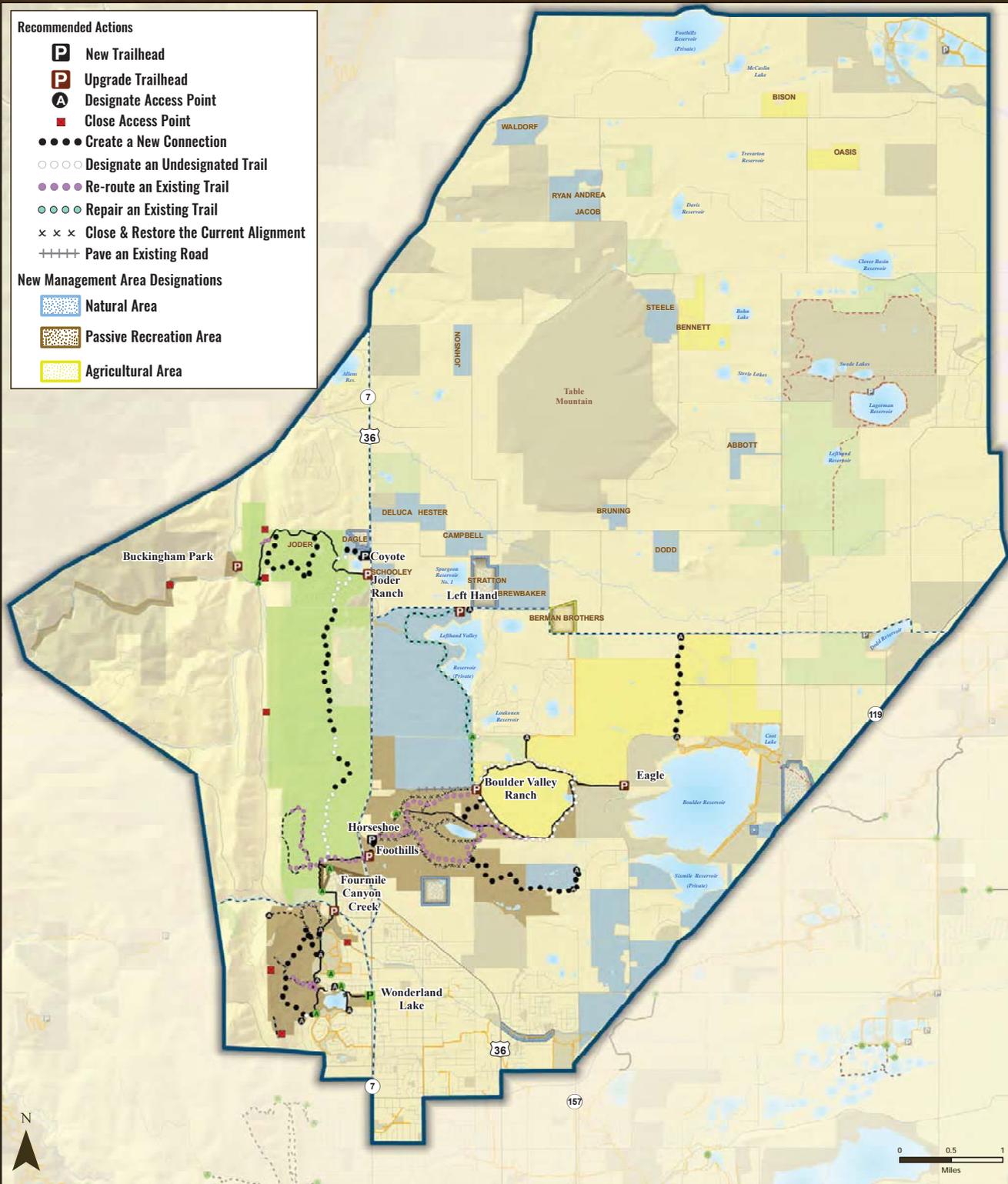
North Trail Study Area Plan

Recommended Actions

- P** New Trailhead
- P** Upgrade Trailhead
- A** Designate Access Point
- Close Access Point
- Create a New Connection
- ○ ○ Designate an Undesignated Trail
- Re-route an Existing Trail
- ○ ○ Repair an Existing Trail
- × × × Close & Restore the Current Alignment
- ++++ Pave an Existing Road

New Management Area Designations

- Natural Area
- Passive Recreation Area
- Agricultural Area



Management Area Designations

- | | | |
|----------------------------------|----------------------------------|---|
| North Trail Study Planning Area | OSMP Hiking/Equestrian Trail | Agricultural Area |
| North Trail Study Subareas | OSMP Multi-Use Trail | Habitat Conservation Area |
| OSMP Trailhead | OSMP Gliding Access | Natural Area |
| OSMP Access Point | Non-OSMP Managed Hiking Trail | Passive Recreation Area |
| OSMP Recreational Feature Access | Non-OSMP Managed Multi-Use Trail | OSMP Easement or Jointly Owned, County-Managed Land |
| Boulder County Trailhead | Non-OSMP Planned Trail | Other Government Land |

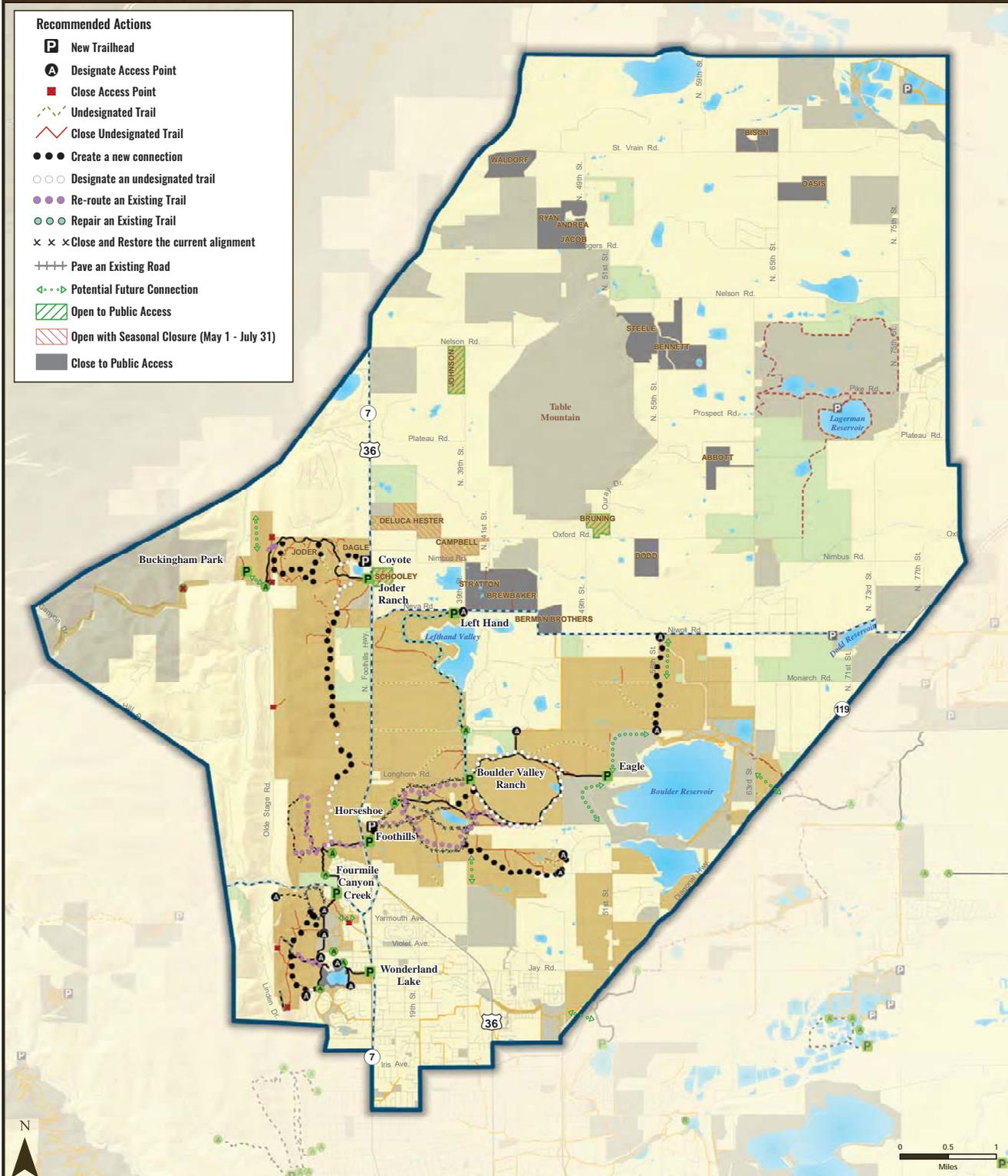
Trail changes are depicted conceptually. Actual trail alignments will differ. #23



North Trail Study Area Plan

Recommended Actions

- New Trailhead
- Designate Access Point
- Close Access Point
- Undesignated Trail
- Close Undesignated Trail
- Create a new connection
- Designate an undesignated trail
- Re-route an Existing Trail
- Repair an Existing Trail
- Close and Restore the current alignment
- Pave an Existing Road
- Potential Future Connection
- Open to Public Access
- Open with Seasonal Closure (May 1 - July 31)
- Close to Public Access



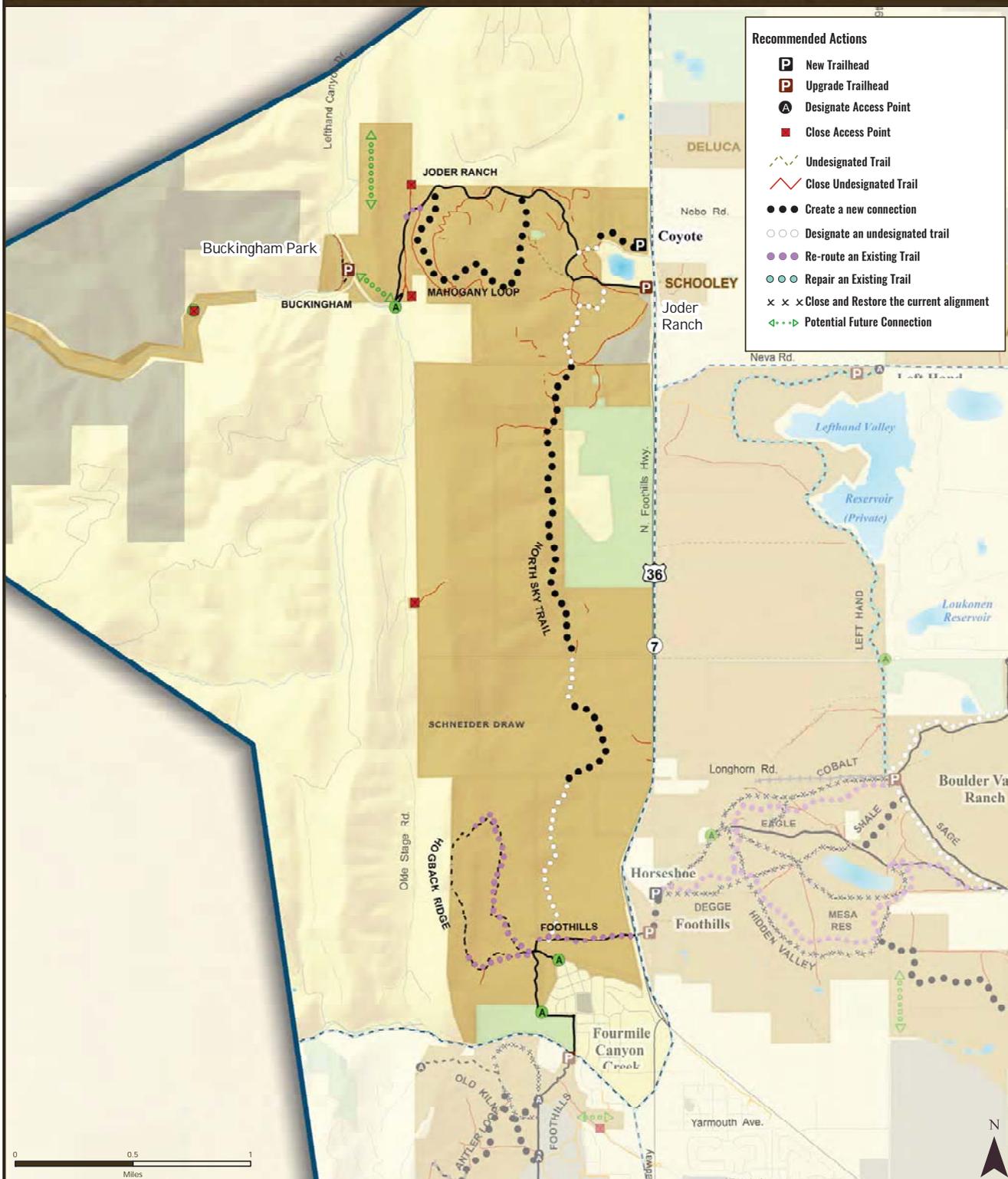
North Trail Study Area Draft Plan Recommendations

- | | | | | | |
|--|----------------------------------|--|----------------------------------|--|---|
| | North Trail Study Planning Area | | OSMP Hiking/Equestrian Trail | | OSMP Fee & Managed Property in the North TSA |
| | North Trail Study Subareas | | OSMP Multi-Use Trail | | OSMP Easement or Jointly Owned, County-Managed Land |
| | OSMP Trailhead | | OSMP Gliding Access | | Other Government Land |
| | OSMP Access Point | | Non-OSMP Managed Hiking Trail | | |
| | OSMP Recreational Feature Access | | Non-OSMP Managed Multi-Use Trail | | |
| | Boulder County Trailhead | | Non-OSMP Planned Trail | | |

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



North Trail Study Area Plan



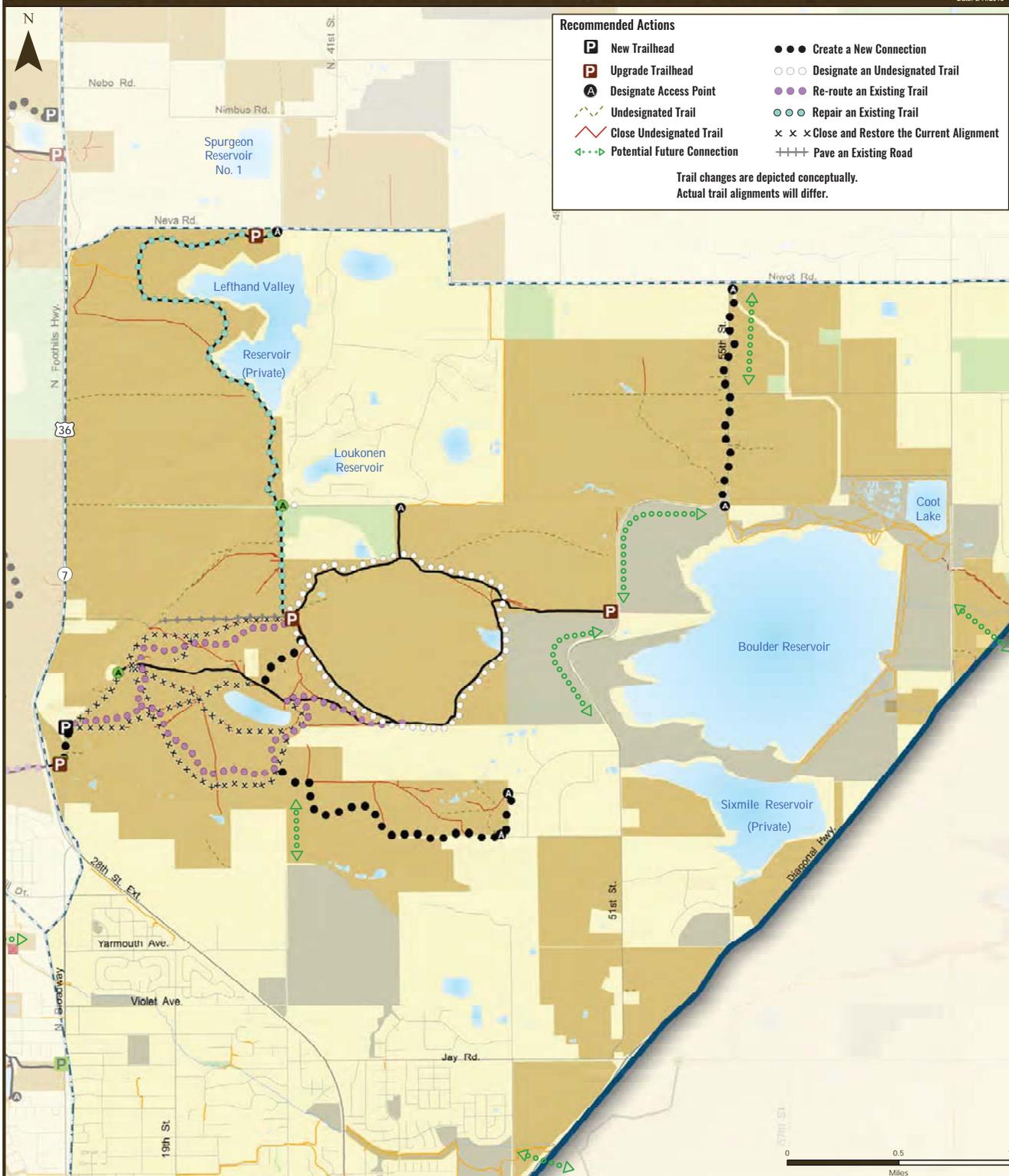
Recommended Actions

- New Trailhead
- Upgrade Trailhead
- Designate Access Point
- Close Access Point
- Undesignated Trail
- Close Undesignated Trail
- Create a new connection
- Designate an undesignated trail
- Re-route an Existing Trail
- Repair an Existing Trail
- Close and Restore the current alignment
- Potential Future Connection

North Foothills Subarea Recommendations

North Trail Study Planning Area	OSMP Hiking/Equestrian Trail	OSMP Fee & Managed Property in the North TSA
North Trail Study Subareas	OSMP Multi-Use Trail	OSMP Easement or Jointly Owned, County-Managed Land
OSMP Trailhead	OSMP Gliding Access	Other Government Land
OSMP Access Point	Non-OSMP Managed Hiking Trail	
OSMP Recreational Feature Access	Non-OSMP Managed Multi-Use Trail	
Boulder County Trailhead	Non-OSMP Planned Trail	

Trail changes are depicted conceptually. Actual trail alignments will differ. #25



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

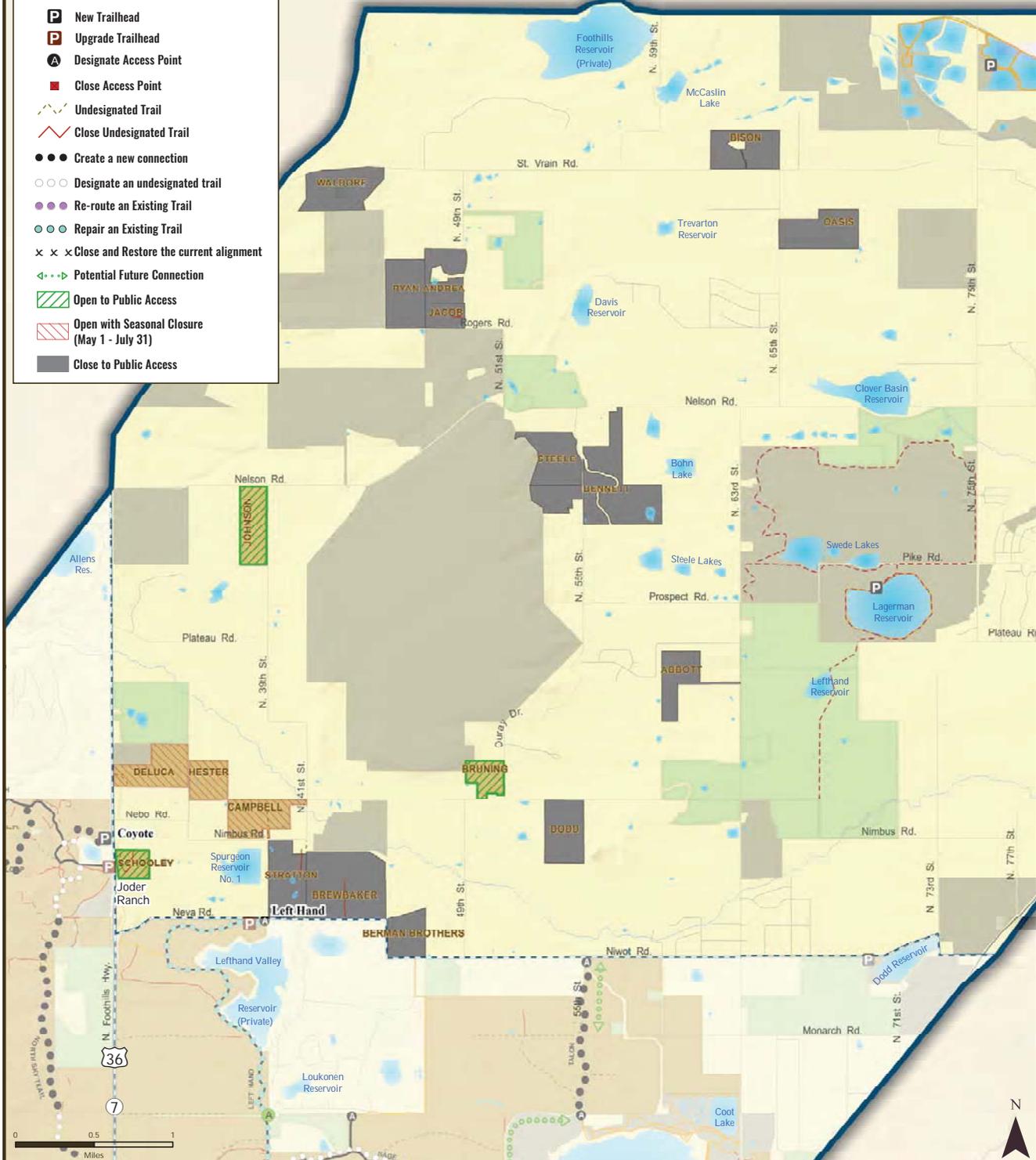
Other Government Land



North Trail Study Area Plan

Recommended Actions

- New Trailhead
- Upgrade Trailhead
- Designate Access Point
- Close Access Point
- Undesignated Trail
- Close Undesignated Trail
- Create a new connection
- Designate an undesignated trail
- Re-route an Existing Trail
- Repair an Existing Trail
- Close and Restore the current alignment
- Potential Future Connection
- Open to Public Access
- Open with Seasonal Closure (May 1 - July 31)
- Close to Public Access



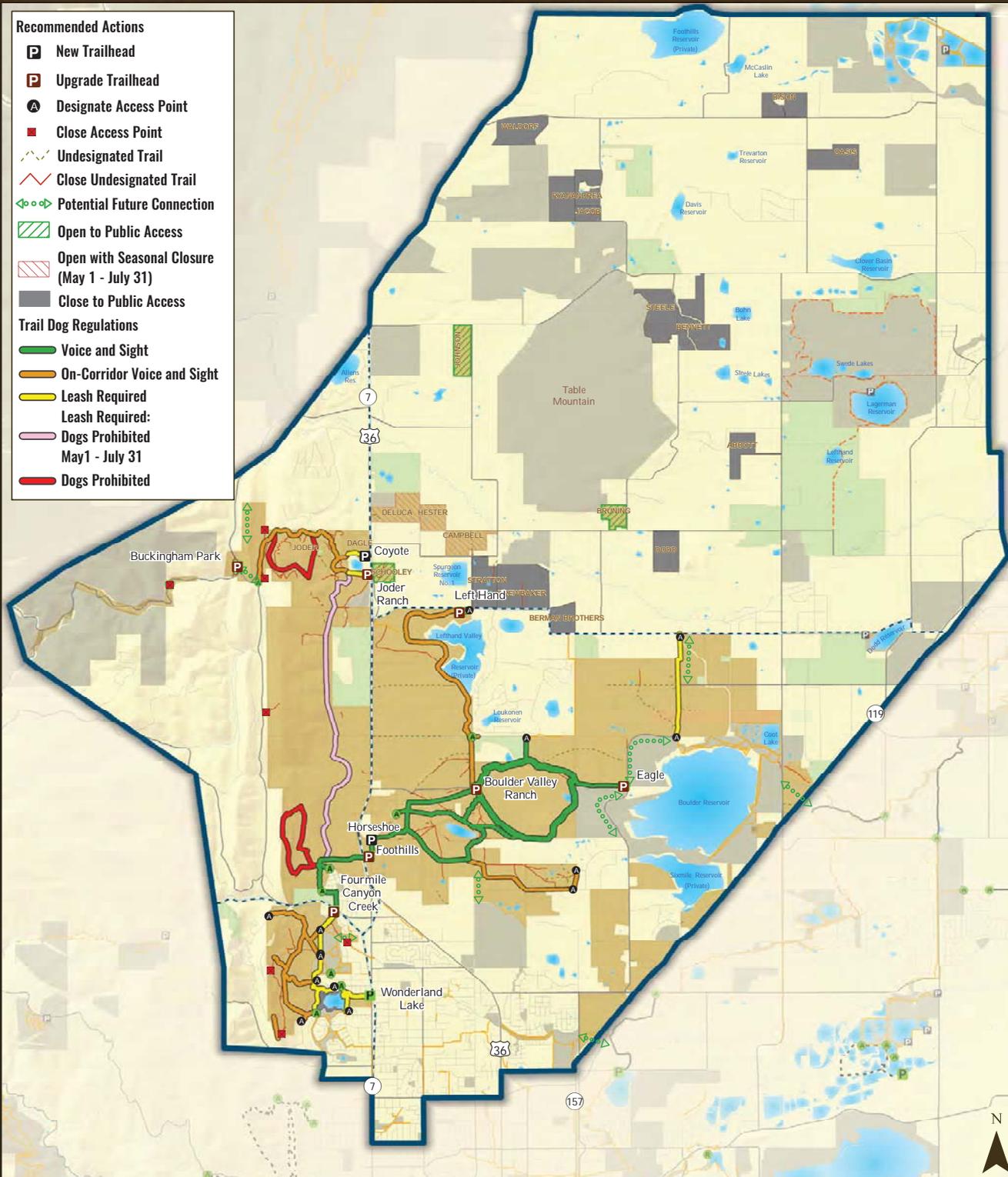
Northern Properties Subarea Recommendations

- North Trail Study Planning Area
 - OSMP Hiking/Equestrian Trail
 - OSMP Fee & Managed Property in the North TSA
 - North Trail Study Subareas
 - OSMP Multi-Use Trail
 - OSMP Easement or Jointly Owned, County-Managed Land
 - OSMP Trailhead
 - OSMP Gliding Access
 - Other Government Land
 - OSMP Access Point
 - Non-OSMP Managed Hiking Trail
 - OSMP Recreational Feature Access
 - Non-OSMP Managed Multi-Use Trail
 - Non-OSMP Planned Trail
 - Boulder County Trailhead
- Trail changes are depicted conceptually. Actual trail alignments will differ. #26



North Trail Study Area Plan

- Recommended Actions**
- New Trailhead
 - Upgrade Trailhead
 - Designate Access Point
 - Close Access Point
 - Undesignated Trail
 - Close Undesignated Trail
 - Potential Future Connection
 - Open to Public Access
 - Open with Seasonal Closure (May 1 - July 31)
 - Close to Public Access
- Trail Dog Regulations**
- Voice and Sight
 - On-Corridor Voice and Sight
 - Leash Required
 - Leash Required: May 1 - July 31
 - Dogs Prohibited
 - Dogs Prohibited May 1 - July 31



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

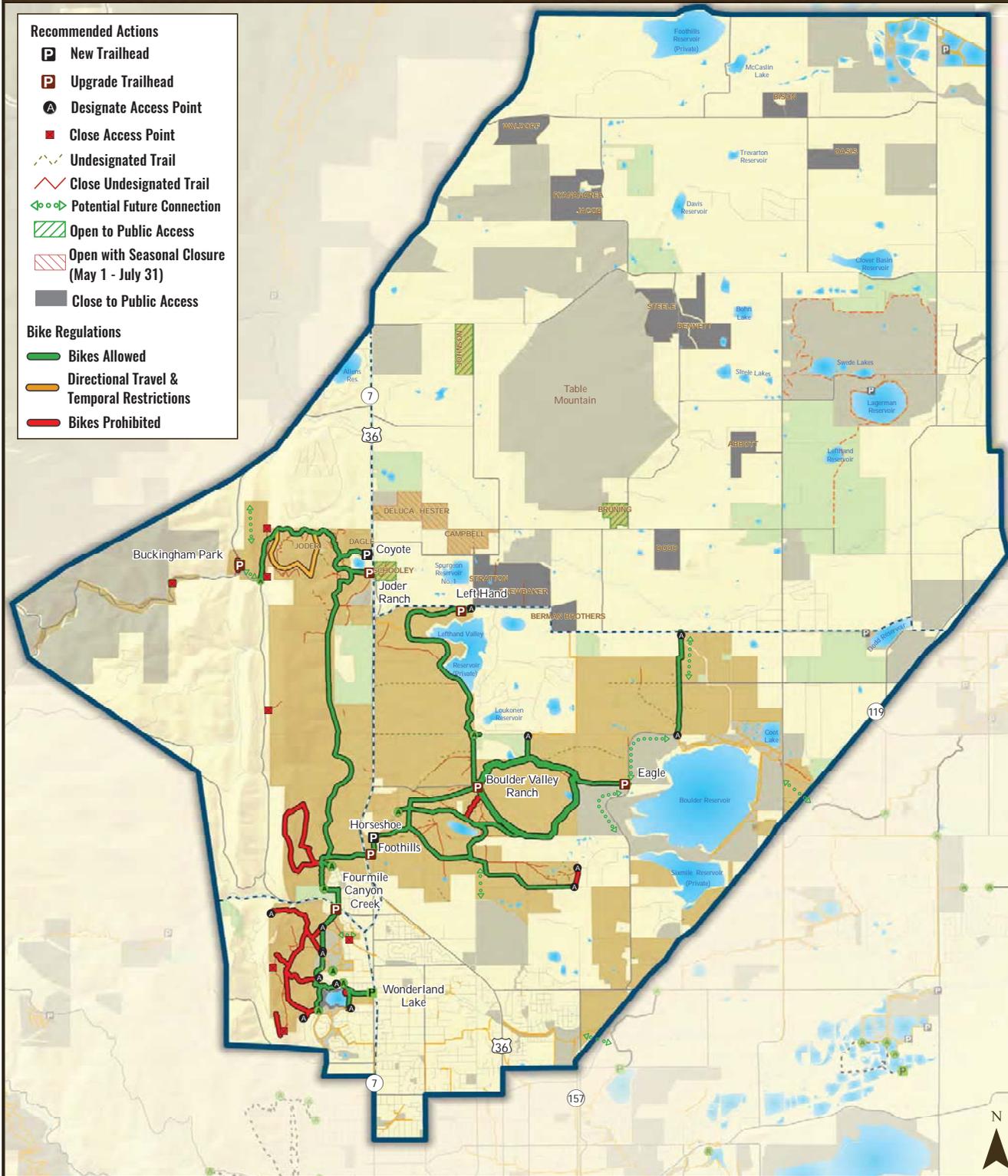
- OSMP Fee & Managed Property in the North TSA
- Lands Not Included in the North Trail Study Area
- OSMP Easement or Jointly Owned, County-Managed Land
- Other Government Land





North Trail Study Area Plan

- Recommended Actions**
- New Trailhead
 - Upgrade Trailhead
 - Designate Access Point
 - Close Access Point
 - Undesignated Trail
 - Close Undesignated Trail
 - Potential Future Connection
 - Open to Public Access
 - Open with Seasonal Closure (May 1 - July 31)
 - Close to Public Access
- Bike Regulations**
- Bikes Allowed
 - Directional Travel & Temporal Restrictions
 - Bikes Prohibited



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

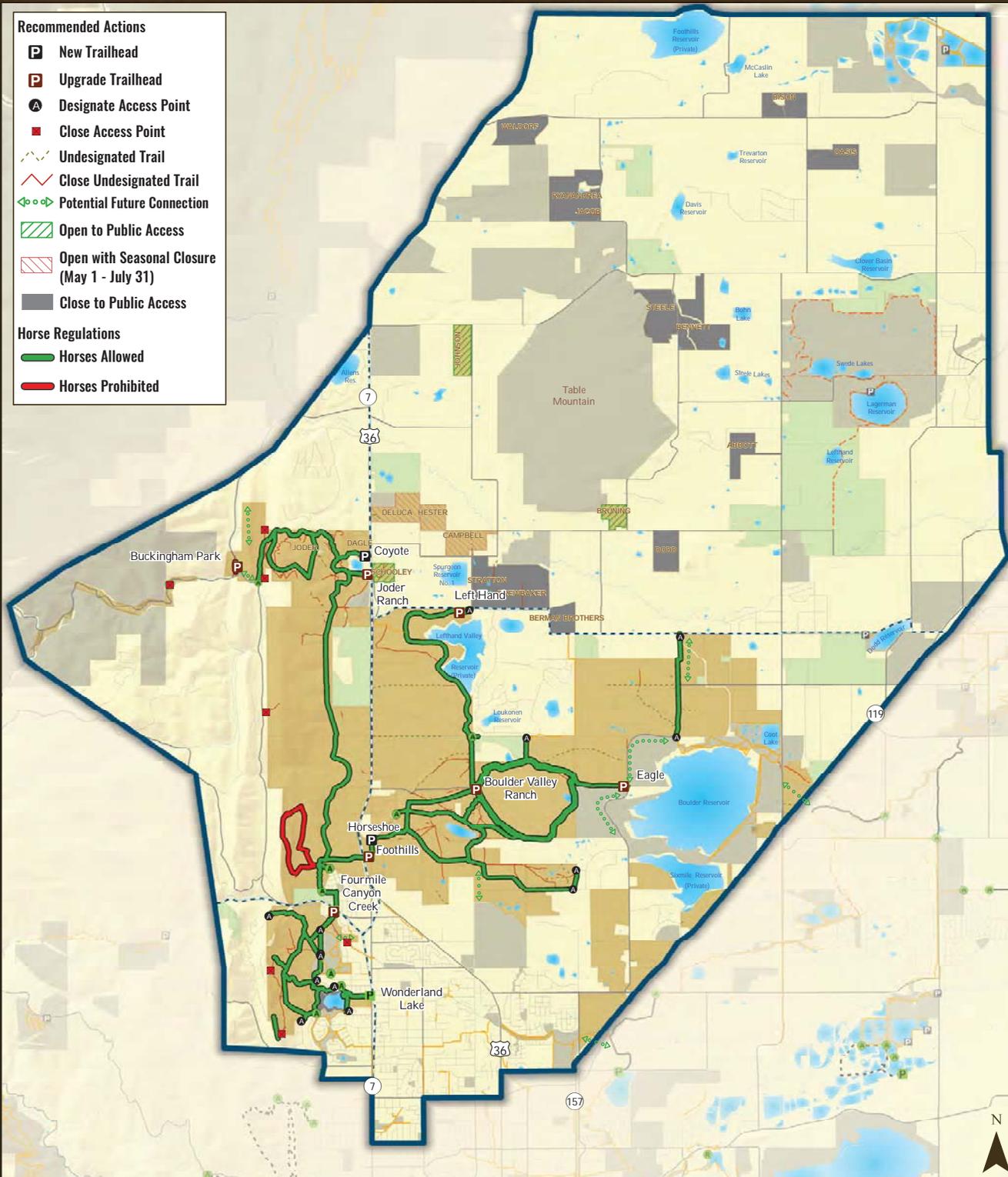




North Trail Study Area Plan

Recommended Actions

- New Trailhead
 - Upgrade Trailhead
 - Designate Access Point
 - Close Access Point
 - Undesignated Trail
 - Close Undesignated Trail
 - Potential Future Connection
 - Open to Public Access
 - Open with Seasonal Closure (May 1 - July 31)
 - Close to Public Access
- ### Horse Regulations
- Horses Allowed
 - Horses Prohibited



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

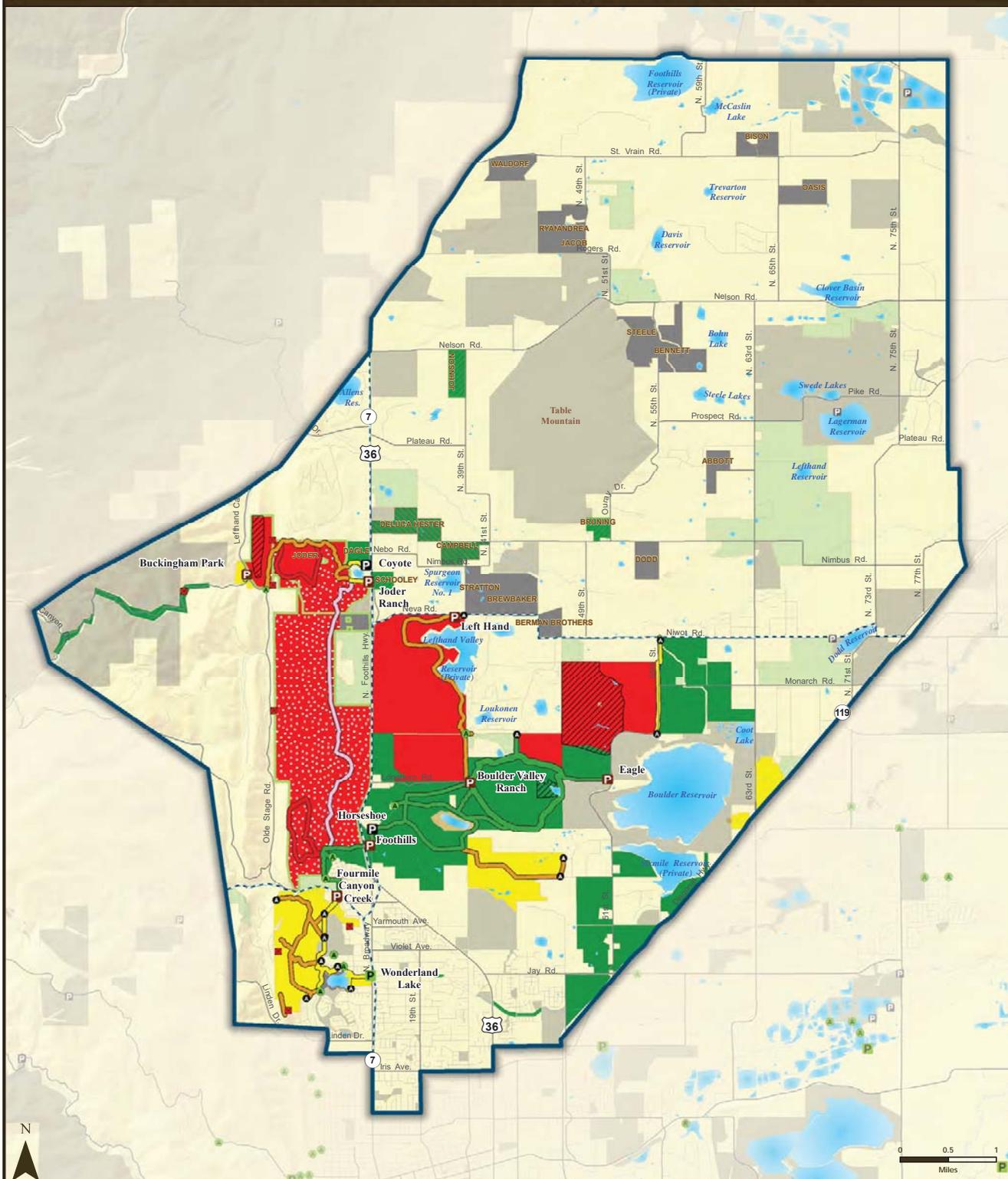
OSMP Easement or Jointly Owned, County-Managed Land

Other Government Land





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 ^{A130}

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 $\geq 75,000$ 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

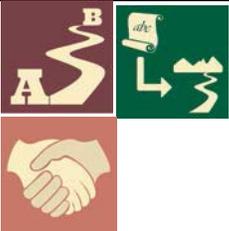
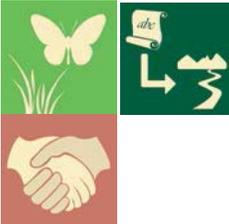
Appendix D

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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.	<ul style="list-style-type: none"> 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.	<p>As opportunities arise, collaborate with partner agencies to create the following regional trail connections in a way that minimizes natural resource impacts.</p> <ul style="list-style-type: none"> (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 (<i>construction pending</i>). (T14) Fourmile Canyon Creek Trail underpass to Cottonwood Trail (<i>construction pending</i>). 	

Reference Number(s) and Action Title	Action	Interests
T16 to T20 Collaborate with partner agencies to create local trail connections.	<ul style="list-style-type: none"> • (T15) Eagle Trail to the planned Boulder Reservoir Trail. <p>As opportunities arise, collaborate with partner agencies to create the following local trail connections in a way that minimizes natural resource impacts.</p> <ul style="list-style-type: none"> • (T16) Joder Trail to Buckingham Park via Olde Stage Road (<i>in progress</i>). • (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.	<p>As opportunities arise, collaborate with partner agencies to create regional trail connections in a way that minimizes natural resource impacts.</p> <p>The North TSA Plan does not preclude future public planning processes to assess a regional trail connection to Heil Ranch on the Buckingham property.</p>	  
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.	<p>As opportunities arise, collaborate with partner agencies to create local trail connections in a way that minimizes natural resource impacts.</p> <p>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</p>	  

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

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. <ul style="list-style-type: none"> • (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 (<i>construction pending</i>). • (B8) Fourmile Canyon Creek Trail underpass to Cottonwood Trail (<i>construction pending</i>). • (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.		   

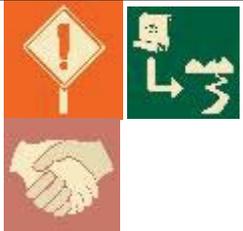
Reference Number(s) and Action Title	Action	Interests
B12 Bring Lefthand Trailhead up to standards.	Include horse trailer parking at Lefthand Trailhead.	
B13 Improve Lefthand Trail.		
B14 Designate a connector trail from Lefthand Trail to the Lake Valley Estates neighborhood.		
B15 Create a connection 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 55 th Street.	
B16 Bring Eagle Trailhead up to standards.	Include horse trailer parking at Eagle Trailhead.	

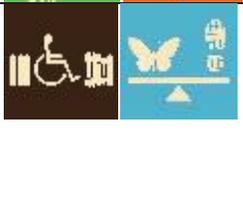
Reference Number(s) and Action Title	Action	Interests
		
B17 Bring Foothills Trailhead up to standards.		     
B18 Add a new trailhead at the Degge Trail access point. (Horseshoe Trailhead)	Provide additional parking capacity and horse trailer parking.	 
B19 Create a trail connection between Foothills 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
		
<p>No Reference Number: Regulation Change: Dogs allowed On-Corridor Voice and Sight access on Wonderland Hill loop. (Antler Loop)</p>		
<p>Northern Properties Subarea</p>		
<p>NP1 Designate Berman Brothers property as an Agricultural Area.</p>		
<p>NP2 Designate Stratton property as a Natural Area.</p>		
<p>NP3 Collaborate to create a connection between the North TSA to Boulder County Parks and Open Space's Lagerman/Imel/AHI Open Space Complex.</p>	<p>As opportunities arise, collaborate with partner agencies to create regional trail connections in a way that minimizes natural resource impacts.</p>	
<p>NP4 Prohibit public access on Waldorf, Ryan, Andrea, Jacob, Bison, Oasis, Steele, Bennett, Stratton, Brewbaker, Berman Brothers, Dodd and Abbott properties.</p>		
<p>NP5 Allow public access on Deluca, Hester and Campbell properties with seasonal closure (May 1 - July 31) for ground nesting bobolinks.</p>		

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 Klin Trail.	\$3,640 Underway								Medium
56	B21	Provide a sustainable connection with Sage Trailhead by replacing undesignated trails through shale barrrens 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	\$100,000							Low
21	T22	Bring all trails up to standards. (South Foothills Trail)		\$25,000							Medium
28	W3	Construct a shade structure near Wonderland Lake Trailhead.		\$9,000							Low
35	W11	Improve Americans with Disabilities (ADA) access on Wonderland Lake Trail.									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.									Low
40	W16	Provide access to the cattail marsh on north side of peninsula.		\$3,500							Low
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		High
57	B22	Provide nature-viewing access at Mesa Reservoir.			\$2,500 Initial Design	Final Design and Permits			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		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		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 Low Low High High Medium Medium Low Low Low Medium High Medium 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					
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 seeking a trail experience on the Wonderland hogback.						Initial Design	Final Design and Permits	\$131,000 Build	
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	I/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	

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 55 th 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 55 th 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, asphalt, 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.

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; and
- 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. Five tour dates have been scheduled and tours are underway.

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 is scheduled with City Council for May 24. The plan is anticipated to be presented to City Council for consideration and acceptance on June 7.

OSBT Supported Changes to the North TSA Draft Plan (March 9, 2016)

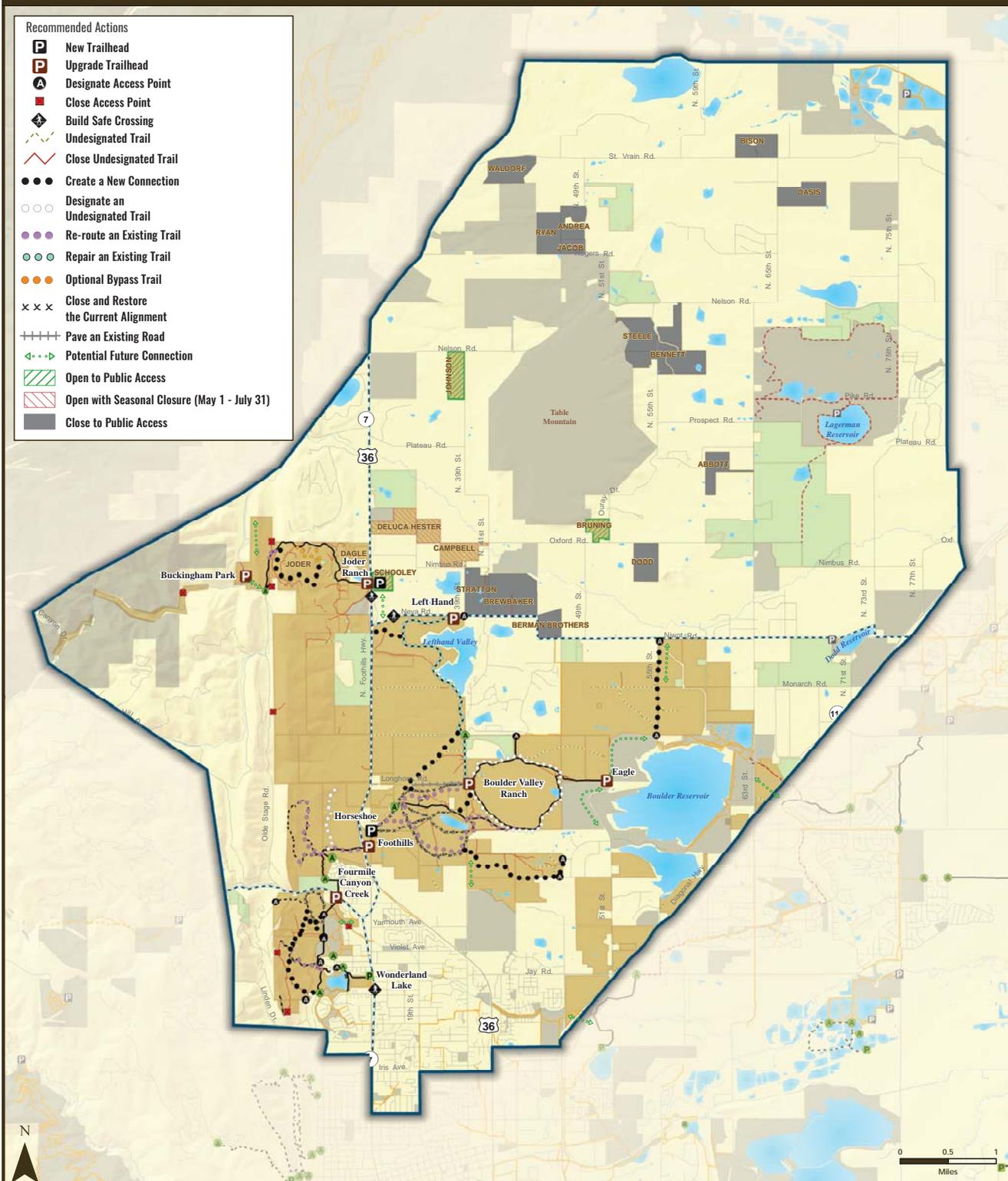
#	Motion	Draft Plan Change
1	Continue to follow the terms of the lease regarding public access to the Boulder Valley Ranch (BVR) equestrian arena and staff will concurrently develop options for nearby horse trailer parking and/or seek to provide an equivalent and suitable corral option that will be determined 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.	Added this as a new recommendation to the BVR subarea section of the plan.
2	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.	Added this as a new recommendation to the North Foothills subarea section of the plan.
3	Continue the current access status of the Northern Tier Properties as either open or closed, except that the Deluca, Hester, and Campbell Properties be closed May 1 – July 31 for protection of ground-nesting bobolink.	Modified the recommendations in the Northern Properties subarea section of the plan for open/closed properties. Added seasonal nesting closure for Hester, Campbell and Deluca.
4	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.	Added “Important Note” to page 102 of the plan. “Designated” is removed from online version of the plan. This only required correction in previously printed hard copies of the plan.
5	Add the following language 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.	Added language to page 7 of the plan.
6	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.	Modified primary goal language on page 36 of the plan.
7	Designate areas surrounding the Wrangler Trail (the trail is designated as Voice and Sight on-corridor) as leash required as similar management to Wonderland Lake.	Modified regulatory setting map for Boulder Valley subarea and TSA-wide in the plan.
8	The Open Space Board of Trustees approves the North Trail Study Area Plan as amended and recommend that the Boulder City Council approves the North Trail Study Area Plan as amended.	Adopted above changes to draft plan.
9	If City Council does not support the North Sky Trail, the OSBT recommends that City Council directs staff to revise a plan based on Scenario A as modified by OSBT votes at the Feb. and March Board meetings.	No changes required to the plan. Included statement in the North TSA memo to City Council.



North Trail Study Area Plan

Recommended Actions

- New Trailhead
- Upgrade Trailhead
- Designate Access Point
- Close Access Point
- Build Safe Crossing
- Undesignated Trail
- Close Undesignated Trail
- Create a New Connection
- Designate an Undesignated Trail
- Re-route an Existing Trail
- Repair an Existing Trail
- Optional Bypass Trail
- Close and Restore the Current Alignment
- Pave an Existing Road
- Potential Future Connection
- Open to Public Access
- Open with Seasonal Closure (May 1 - July 31)
- Close to Public Access



North Trail Study Area Alternative Scenario Recommendations

OSBT Changes Included

- | | | | | | |
|--|----------------------------------|--|----------------------------------|--|---|
| | North Trail Study Planning Area | | OSMP Hiking/Equestrian Trail | | OSMP Fee & Managed Property in the North TSA |
| | North Trail Study Subareas | | OSMP Multi-Use Trail | | OSMP Easement or Jointly Owned, County-Managed Land |
| | OSMP Trailhead | | OSMP Gliding Access | | Other Government Land |
| | OSMP Access Point | | Non-OSMP Managed Hiking Trail | | |
| | OSMP Recreational Feature Access | | Non-OSMP Managed Multi-Use Trail | | |
| | Boulder County Trailhead | | Non-OSMP Planned Trail | | |

Trail changes are depicted conceptually. Actual trail alignments will differ. 180



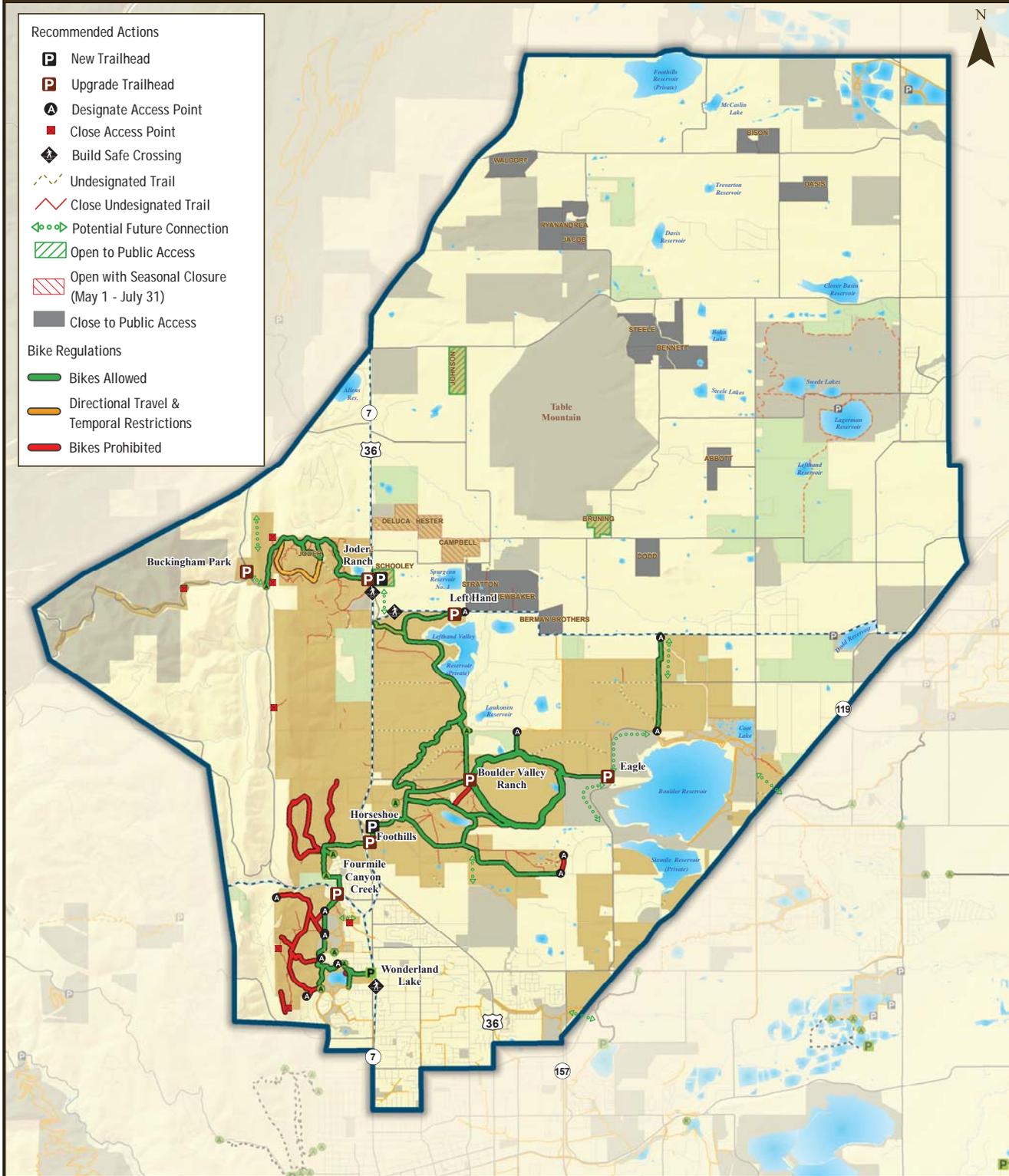
North Trail Study Area Plan

Recommended Actions

- New Trailhead
- Upgrade Trailhead
- Designate Access Point
- Close Access Point
- Build Safe Crossing
- Undesignated Trail
- Close Undesignated Trail
- Potential Future Connection
- Open to Public Access
- Open with Seasonal Closure (May 1 - July 31)
- Close to Public Access

Bike Regulations

- Bikes Allowed
- Directional Travel & Temporal Restrictions
- Bikes Prohibited



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

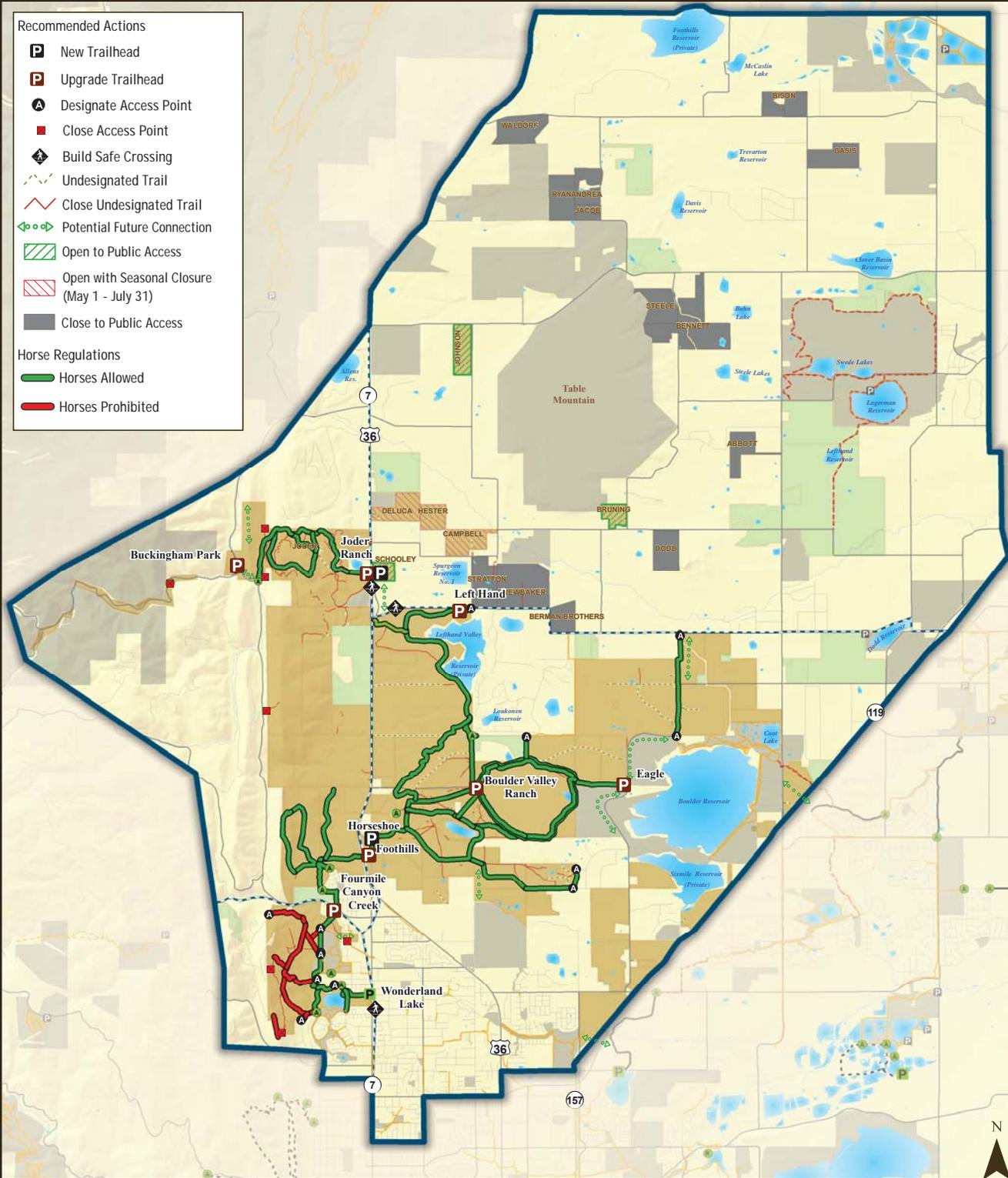
Other Government Land





North Trail Study Area Plan

- Recommended Actions**
- New Trailhead
 - Upgrade Trailhead
 - Designate Access Point
 - Close Access Point
 - Build Safe Crossing
 - Undesignated Trail
 - Close Undesignated Trail
 - Potential Future Connection
 - Open to Public Access
 - Open with Seasonal Closure (May 1 - July 31)
 - Close to Public Access
- Horse Regulations**
- Horses Allowed
 - Horses Prohibited



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

Packet Page 182
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

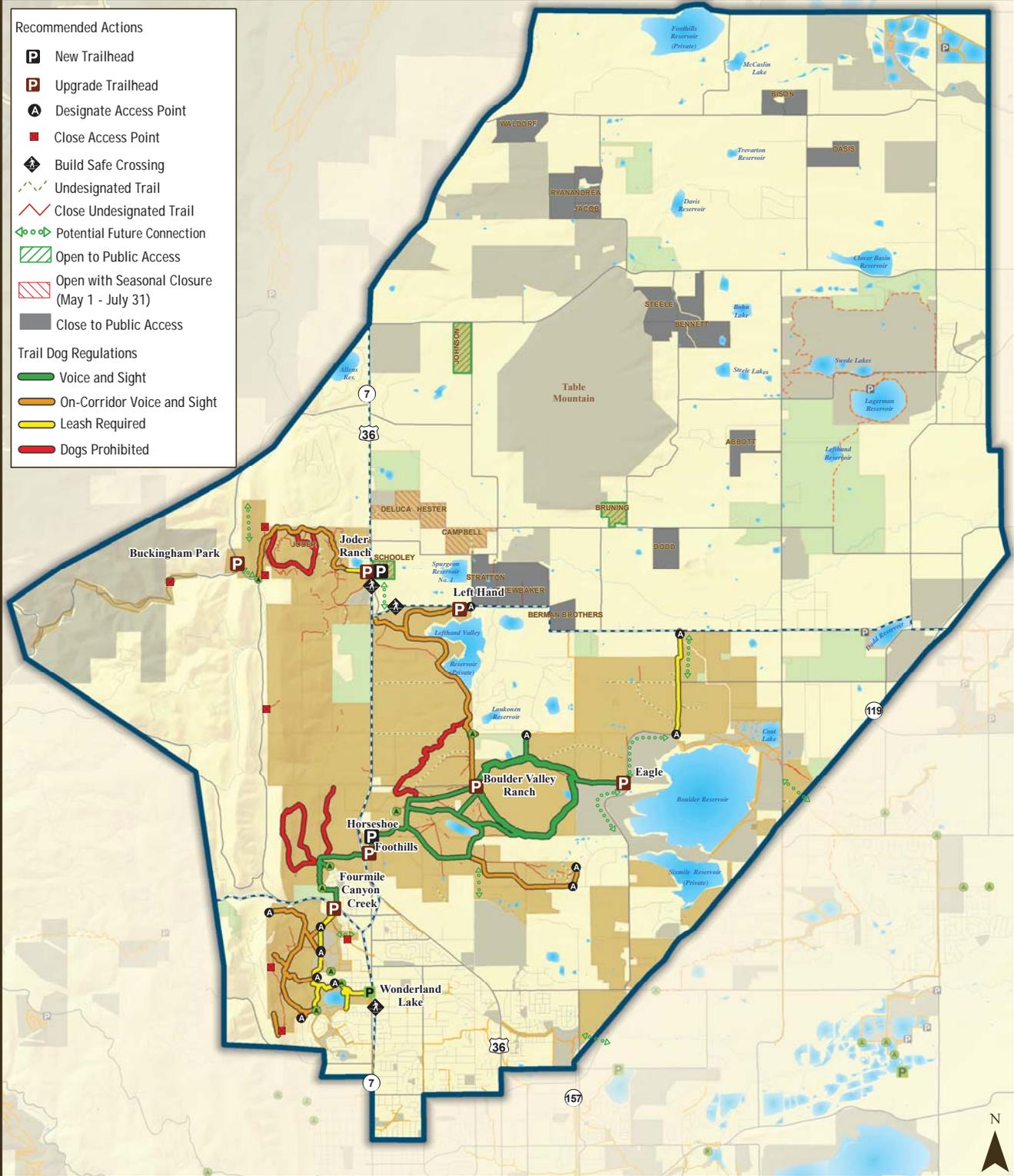




North Trail Study Area Plan

Recommended Actions

- New Trailhead
 - Upgrade Trailhead
 - Designate Access Point
 - Close Access Point
 - Build Safe Crossing
 - Undesignated Trail
 - Close Undesignated Trail
 - Potential Future Connection
 - Open to Public Access
 - Open with Seasonal Closure (May 1 - July 31)
 - Close to Public Access
- ### Trail Dog Regulations
- Voice and Sight
 - On-Corridor Voice and Sight
 - Leash Required
 - Dogs Prohibited



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



North TSA Recommended Actions and Alternative Comparison

ACTION	INCLUDED IN BOTH THE DRAFT PLAN AND ALTERNATIVE SCENARIO
Joder Trails (Mahogany Loop and Joder Ranch Trail)	<ul style="list-style-type: none"> • One loop trail (Mahogany Loop) on western section of property with spatial separation for dogs and temporal separation and directional regulations for bikes (<i>Bikes not allowed on Tuesdays and one alternating weekend day</i>).
Joder Trailheads	<ul style="list-style-type: none"> • Large vehicle parking and a limited number of passenger vehicle parking spots at Interim Joder Trailhead (Joder Ranch Trailhead)
Regional Trail Connections	<p>OSMP is interested in collaborating with partner agencies as opportunities arise to create regional connections that minimize natural resource impacts.</p> <ul style="list-style-type: none"> • 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 trail connection to Heil Ranch on the Buckingham property). • North TSA to Boulder County Parks and Open Space’s Lagerman/Imel/AHI Open Space Complex. • Boulder-to-Lyons trail including the efforts of the Rocky Mountain Greenway Project • IBM Connector Trail underpass and trail (<i>construction pending</i>) • Fourmile Canyon Creek Trail underpass to Cottonwood Trail (<i>construction pending</i>) • Eagle Trail to the planned Boulder Reservoir Trail
Local Trail Connections	<p>OSMP is interested in collaborating with partner agencies as opportunities arise to create local trail connections that minimize natural resource impacts.</p> <ul style="list-style-type: none"> • Joder Trail to Buckingham Park via Olde Stage Road (<i>in progress</i>) • 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. • City of Boulder’s Area III park site to the North TSA • Boulder Reservoir to Niwot Road • Fourmile Canyon Creek Greenway path to Foothills Community Park
Maintaining Habitat Block in Habitat Conservation Area (HCA)	<ul style="list-style-type: none"> • No off-trail permits for the area inside the Joder loop trail (Mahogany Loop) for two years following the trail’s construction.

BVR Trail Redevelopment	<ul style="list-style-type: none"> • Re-route west end of Degge Trail, close internal area of Degge and create a trail from Foothills to re-routed Degge Trail. • Replace internal area of Mesa Reservoir Trail and the Hidden Valley Trail with a new trail connection. • Replace Old Mill and Cobalt trails with a new trail connection and replace western section of Eagle and steep, downhill eastern portion of Eagle Trail with new trail connections. • Replace undesignated trails through sensitive shale barrens with one new designated trail for pedestrians and equestrians north of Mesa Reservoir that minimizes impacts to important shale barrens (Shale Trail). • Improve Lefthand Trail. • Designate a neighborhood connector trail from Lefthand Trail. • Collaborate with Parks and Recreation to assess opportunities to connect the proposed Boulder Reservoir Trail to the Eagle Trail. • Provide a trail connection from the Boulder Reservoir Trail to Niwot Road (Talon Trail). Work with partner agencies to determine the most feasible alignment with a preference for an alignment along 55th Street. • Create a trail from Foothills to Degge. • Create Papini connector trail (Wrangler Trail). • Designate and slightly re-route one parallel single track around Eagle and Sage trails, parallel to the road. • Provide nature viewing access at Mesa Reservoir.
BVR Trailheads	<ul style="list-style-type: none"> • Bring Sage Trailhead up to standards. • Condition closure of the BVR arena/ring to finding a suitable alternative with horse trailer parking. • Bring Foothills Trailhead up to standards to meet backing requirements. • Add a new trailhead including horse trailer parking at the Degge Trail access point. • Bring Eagle Trailhead up to standards and include horse trailer parking. • Bring Lefthand Trailhead up to standards and include horse trailer parking. • Pave Longhorn Road.
Wonderland Lake Loops	<ul style="list-style-type: none"> • Create loop trail connection including reroutes of existing trails, paragliding access trails and undesignated trails (Antler Loop). • Reroute portion of Wonderland Lake Trail just north of where it connects into Foothills South Trail to increase sustainability while minimizing impacts to the rare New Mexico feathergrass community in the area. • Create a more sustainable trail connection near the existing glider access trail to provide a small loop trail up Wonderland Hill (Glider Access). • Restore northern section of Old Kiln.
Wonderland Lake	<ul style="list-style-type: none"> • Fishing and educational pier. • Hardened access on peninsula for education. • Construct shade structure near Wonderland Lake Trailhead. • Provide access to the cattail marsh just north of the peninsula.
Northern Properties	<ul style="list-style-type: none"> • Twelve properties with no public access. • Seven properties with public access (three with seasonal bird nesting closure).

ACTIONS THAT DIFFER BETWEEN THE DRAFT PLAN AND ALTERNATIVE SCENARIO		
ACTION	DRAFT PLAN	ALTERNATIVE SCENARIO
Joder Trail Connection	<ul style="list-style-type: none"> • Joder connection located west of US 36 and Foothills Business Park (North Sky Trail). Staff is exploring the possibility of routing part of the trail on the neighboring conservation easement property. • Add a trailhead for passenger vehicle parking on the Dagle property to provide access to the Joder property. (Coyote Trailhead) 	<ul style="list-style-type: none"> • Joder connection located east of US 36 via trail connection from Cobalt Trail, across west end of Longhorn Road to Lefthand Trail. • Pursue an underpass to create a safe crossing of US 36 near Neva Road for visitors to access the Joder property from the Schooley property. • Add a trailhead for passenger vehicle parking on the Schooley property to provide access to the Joder property from east of US 36. • Collaborate with partner agencies to provide a connection from Beech Pavilion via Neva Road to the Schooley property. • Take over management of the Beech Pavilion. • Improve Lefthand Trail including efforts to make the trail more sinuous, fun and interesting for visitors.
Joder Trails and Trailheads	<ul style="list-style-type: none"> • Non rerouted Interim Trail (no bypass). • Connector trail from Dagle Trailhead to Interim Joder Trail. • Passenger-vehicle parking on Dagle property. (Coyote Trailhead) 	<ul style="list-style-type: none"> • Partially rerouted (add bypass) Interim Trail that would reduce steepness and create a small loop off the existing Interim Joder Trail. • Passenger vehicle parking on Schooley property.
Maintaining Habitat Block in North Foothills Habitat Conservation Area (HCA)	<ul style="list-style-type: none"> • Joder connector trail in North Foothills HCA. (North Sky Trail) • No off-trail permits allowed on either side of the Joder connector trail. 	<ul style="list-style-type: none"> • No Joder trail connection through North Foothills HCA. • Out and back trail created by designating a portion of the southern railroad grade (pedestrians and equestrians only). • Access to North Foothills HCA through off-trail permits.

REGULATIONS		
ACTION	DRAFT PLAN AND ALTERNATIVE SCENARIO	EXISTING REGULATIONS
Joder Trail Connection	Joder Trail Connection Draft Plan: west of US 36 connection (North Sky Trail) Alternative Scenario: east of US 36 connection *	
Dogs	Draft Plan: west connection (North Sky Trail) – Leash required; dogs prohibited May 1– July 31 Alternative Scenario: east connection (via Lefthand Trail) – On-Corridor Voice and Sight on Lefthand Trail; dogs prohibited on new trail connection from Longhorn Road to Lefthand Trail	West side – Dogs prohibited East side (Lefthand Trail) – Leash required
Bikes	Allowed	Allowed
Horses	Allowed	Allowed
Joder Loop (Mahogany Loop)	Joder loop trail	N/A
Dogs	Prohibited	
Bikes	Allowed, except for Tuesdays and alternating weekend days with directional restrictions that will change every two weeks	
Horses	Allowed	
Interim Joder Trail (Joder Ranch Trail)	Interim Joder Trail	
Dogs	On-Corridor Voice and Sight with Leash required for trailhead leash extent	Leash required
Bikes	Allowed	Allowed
Horses	Allowed	Allowed
BVR Trail Redevelopment	Reroute and improve trails	
Dogs¹	<ul style="list-style-type: none"> • Voice and Sight on most trails • On-Corridor Voice and Sight on Lefthand Trail and 	<ul style="list-style-type: none"> • Voice and Sight on most trails • Leash required on Lefthand Trail;

*The Alternative Scenario also includes a designated out-and-back trail section along the railroad grade on which Horses will be Allowed and Dogs and Bikes will be Prohibited.

REGULATIONS		
ACTION	DRAFT PLAN AND ALTERNATIVE SCENARIO	EXISTING REGULATIONS
	neighborhood connector into Lefthand Trail; dogs prohibited off trail <ul style="list-style-type: none"> • On-Corridor Voice and Sight on Papini connector (Wrangler Trail); Leash required off trail • Leash required on Niwot Road connector trail (Talon Trail) 	dogs prohibited off trail.
Bikes	<ul style="list-style-type: none"> • Allowed on most trails • Allowed on Papini connector trail (Wrangler Trail) • Prohibited on designated trail near shale barrens north of Mesa Reservoir (Shale Trail) 	<ul style="list-style-type: none"> • Allowed on Eagle, Sage and Lefthand trails
Horses	Allowed	Allowed
Hogback Trail	<ul style="list-style-type: none"> • Reroute and improve trail 	
Dogs	Prohibited	Prohibited
Bikes	Prohibited	Prohibited
Horses	Draft Plan – Prohibited Alternative Scenario – Allowed	Allowed
Wonderland Hill Loops (Antler Loop) and Old Kiln Trail	<ul style="list-style-type: none"> • Loop trail connection including reroutes of existing trails, paragliding access trails and undesignated trails (Antler Loop) 	
Dogs	On-Corridor Voice and Sight; Leash required off trail	Leash required
Bikes	Prohibited	Prohibited
Horses	Draft Plan – Allowed, but not designed for Alternative Scenario – Prohibited	Allowed
Northern Properties	<ul style="list-style-type: none"> • Twelve properties with no public access • Seven properties with public access (three with seasonal bird-nesting closure May 1 – July 31) 	<ul style="list-style-type: none"> • Twelve properties with no public access • Seven properties with public access
Dogs	Voice and Sight on properties where public access is allowed	Voice and Sight on properties where public access is allowed
Bikes	Prohibited	Prohibited
Horses	Allowed on open properties	Allowed on open properties

Joder Connector Comparison

Trail Design and Visitor Experience Comparison of the North Sky Trail and Alternative Scenario east of US 36 Joder Connector

The two conceptual Joder connector trails differ in visitor experience, diversity of terrain and views, sustainability, mileage, construction cost, and maintenance requirements. The North Sky Trail would be shorter and more direct than the conceptual eastern route at approximately three miles with less overall elevation gain and loss and would require no road crossings. By comparison, the conceptual eastern connector would be slightly longer at approximately four miles with greater gain and loss in elevation and would require five road crossings, including a new underpass for US 36 which would cost approximately \$2 million.

The North Sky Trail would use an existing, constructed railroad grade for approximately $\frac{3}{4}$ mile, which has long been used by the community as an out-and-back social trail. Minor improvements would need to be made to this existing undesignated trail to improve its sustainability, drainage, and width to accommodate the expected increase in visitation levels. In order to minimize impacts to Schneider Draw, the trail would in concept leave the railroad grade, lose elevation to the east, and cross Schneider Draw where there is currently a change in the riparian vegetation. To cross Schneider Draw and the 10 other drainages on the west side, several bridges would be needed which altogether could cost in the range of \$500,000. Some drainages may be crossed sustainably without the use of bridges; however, to minimize impacts to natural resources, bridges may be recommended at many of the drainage crossings. The section of trail near Schneider Draw would be fall-line (downhill) if it is determined to cross the draw below the existing railroad grade social trail. This section of trail would be more susceptible to erosion and much more challenging to maintain long-term. From there the trail would regain the lost elevation at a 3%-4% grade and tie back into the existing railroad grade. The North Sky Trail would then cross the existing railroad grade and begin to climb at a 6%-8% grade to gain the elevation needed to get above the private property of Foothills Business Park. From its highest point the North Sky Trail would begin a moderate descent down to the Joder property, using existing road beds where possible to minimize impacts to resources. Due to the varied terrain and vegetation, this trail would provide a high-quality visitor experience with remote and rugged terrain, diversity of landscapes, rock outcroppings, and sweeping views of the plains.

The conceptual eastside Joder connector trail would require visitors to descend the Foothills Trail (proposed to be rerouted), travel through the existing US 36 underpass at Foothills Trailhead and cross the unpaved portion of Broadway Street at grade where visitors would then connect to the redesigned trails in the Boulder Valley Ranch (BVR) complex. The terrain and cross-slope in the BVR area facilitates construction of a trail that meets OSMP's trail construction standards and would promote on-trail use. Visitors would cross Longhorn Road and travel a new diagonal link trail that would connect into the Lefthand Trail. This conceptual diagonal link would provide a more direct connection to the Joder property than solely using the

existing Lefthand Trail, and also creates a new loop trail opportunity for visitors. The remaining route would use Lefthand Trail and connect out to Neva Road through the Beech Pavilion access.

The east side new diagonal link trail would require construction of a bridge to cross a single drainage. The Lefthand Trail crossing of this same drainage would be replaced by this new crossing. The new link connector would require the importation of aggregate for surfacing because it would be located on a northwest-facing slope with heavy clay soils. Due to the soil conditions and slope, this conceptual trail would be subject to muddy trail closures to protect surrounding resources and city infrastructure. In contrast, the North Sky Trail would be located on east-facing slopes with slightly better soil which would allow the trail to dry faster. The North Sky Trail would still be part of the muddy trail closure program to help prevent damage to the trail and minimize impact to surrounding resources from off-trail travel.

The diversity in terrain and vegetation where the east side connector would be located is limited; therefore, it would provide a visitor experience similar to the one currently available on the Lefthand and BVR trails. Expansive views of the Boulder foothills are available from the trail. Visitor experience and safety on the conceptual east connector would be impacted by the need to cross numerous roads. Coordination with Boulder County Transportation, Lefthand Water Company and Colorado Department of Transportation (CDOT) would be required to determine the best way for visitors to safely cross US 36 and access the Joder property once they have made their way from the diagonal link to the Lefthand Trail and across Neva Road to the Schooley property. Initial conversations indicate that an underpass would be preferred for this highway crossing. Property acquisition would be necessary to complete this Alternative Scenario and provide an off-road visitor experience.

Trail Design and Visitor Experience Summary Comparison Table

<p align="center">Draft Plan (West Side Joder Connector)</p>	<p align="center">Alternative Scenario (East Side Joder Connector)</p>
<p align="center">Experience</p>	
<p>Mileage to Joder – approximately three miles from Foothills Trail intersection with railroad grade; less elevation loss</p>	<p>Mileage to Joder – approximately four miles from Foothills Trail intersection with railroad grade; greater elevation loss and gain</p>
<p>No road crossings</p>	<p>Five road crossings, one existing at US 36 (Foothills trail), four new (North Broadway Street, Longhorn Road, Neva Road, and US 36 near the Joder property). Need to coordinate with partner agencies to construct a new crossing at US 36 (likely an underpass)</p>

Remote, rugged, elevated with sweeping views of the plains and views down the length of the foothills	Views of the Boulder foothills. Conceptual diagonal connector has remote feel
New trail connecting from Foothills Trail to the Joder property	New loop trail opportunity using the new diagonal link trail and the trails in the BVR complex and new trail north to the Schooley property
Interesting terrain features with a diversity of plant and wildlife viewing opportunities	Limited diversity in terrain; similar to the experience available on Lefthand and BVR trails
East-facing aspect will dry faster and allow the trail to remain open more days each year	Northwest-facing aspect will dry at a slower rate and could require more frequent closures
Natural surface trail	Surfaced with imported aggregate material
Cost to Construct/Maintain	
Likely several bridges to cross drainages with wetland permit requirements.	Potential underpass under US 36; one bridge needed with wetland permit requirements.
Improved soil condition on larger cross slopes provides for better drainage and allows the use of natural surface	Clay heavy soils on shallow (less than 25%) cross slopes means poor drainage and a need to artificially surface the new diagonal link trail and the Lefthand Trail
Estimated cost of trail is \$805,000, including trail design, permitting and construction costs. Costs include estimates for several bridges.	Estimated cost for the trail is \$2.25 million. The cost of the new trail section including trail design, permitting and construction is \$250,000. One bridge is included in estimate. The cost estimate for a box culvert underpass at US 36 is \$2 million. Additional costs would be required for providing a trail connection between Niwot Road and the US 36 underpass.

Natural Resource Comparison of the North Sky Trail and Alternative Scenario east of US 36 Joder Connector

The two conceptual Joder connector trails differ in the type, quality, and quantity of habitats they cross. With respect to the quality of habitat, the North Sky Trail would cross land that has been noted by the Colorado Natural Heritage Program as a "very high biodiversity area" (B2); locally-

identified (by the Boulder County Comprehensive Plan (BCCP))¹ as "critical wildlife habitat" and an Environmental Conservation Area. The City of Boulder has designated the area as a Habitat Conservation Area (HCA). Though portions of the area are impacted by past ranching land use and invasive pasture vegetation, sections of the North Sky Trail would cross into landscape identified in the Grassland Ecosystem Management Plan (GMAP) as Best Opportunity Area for Conservation. Schneider Draw is one of two Best Opportunity Areas for Riparian Conservation in GMAP. The topography, extensive nature of these higher quality habitats, and private property boundaries make it challenging to design a trail that altogether avoids impacting resources.

The east side Joder connector trail would cross landscapes that are of somewhat lower habitat quality compared to that west of US 36. The eastern connection would similarly be located in a state-recognized "very high biodiversity area" (B2) and a county-designated Environmental Conservation Area. The conceptual route would cross the "very high biodiversity area" for its entire length though for portions on existing trails. The conceptual diagonal link would cross in and out of an extensive, globally rare needle and thread plant community. The area to the east of US 36 is identified as an OSMP Natural Area management designation (signifying a slightly lower natural resource quality) and is not recognized by the county as "critical wildlife habitat." The conceptual eastern connection would cross land identified as a Best Opportunity Area for Restoration in GMAP.

The differences in potential impacts from trail construction and use between the North Sky Trail and east side connectors are, to some extent, a reflection of the habitats present. The area where the North Sky Trail would be located borders larger blocks of xeric tallgrass prairie, a globally-rare ecosystem which provides habitat for three state-imperiled and globally vulnerable butterfly species; shale barrens, an uncommon habitat on OSMP which hosts populations of Bell's twinpod, a plant found only in Boulder and Larimer counties; New Mexico feathergrass community, a rare plant community at the northern end of its range is restricted to small patches in the OSMP-managed land system; and crosses several interesting riparian communities.

The North Sky Trail would be located in a concentration area for plains black-headed snakes, high-quality deer habitat; and proximate to prairie dog colonies which are habitat for rattlesnakes and foraging locations for raptors. The North Sky Trail would go through high-quality riparian and upland shrublands, which are important habitat for shrub-nesting birds such as the lazuli bunting. The trail would have to be designed to avoid several seep wetlands, which are uncommon on OSMP-managed lands. The area where the conceptual east side connector would be located does not support a similar overall diversity or quality of habitat types.

The new trail portion of the east side route would cross through a high-quality, globally rare, needle-and-thread grass community which is uncommon on OSMP-managed land; a small shale barren, an uncommon habitat on OSMP which hosts populations of Bell's twinpod, a plant found only in Boulder and Larimer counties; and would parallel a riparian and wetland drainage. The east side connector would be located near known concentrations of prairie rattlesnakes and

¹ The BCCP is not among the North TSA Sideboards. It is not a city-approved plan.

proximate to prairie dog colonies which are habitat for rattlesnakes and foraging locations for raptors.

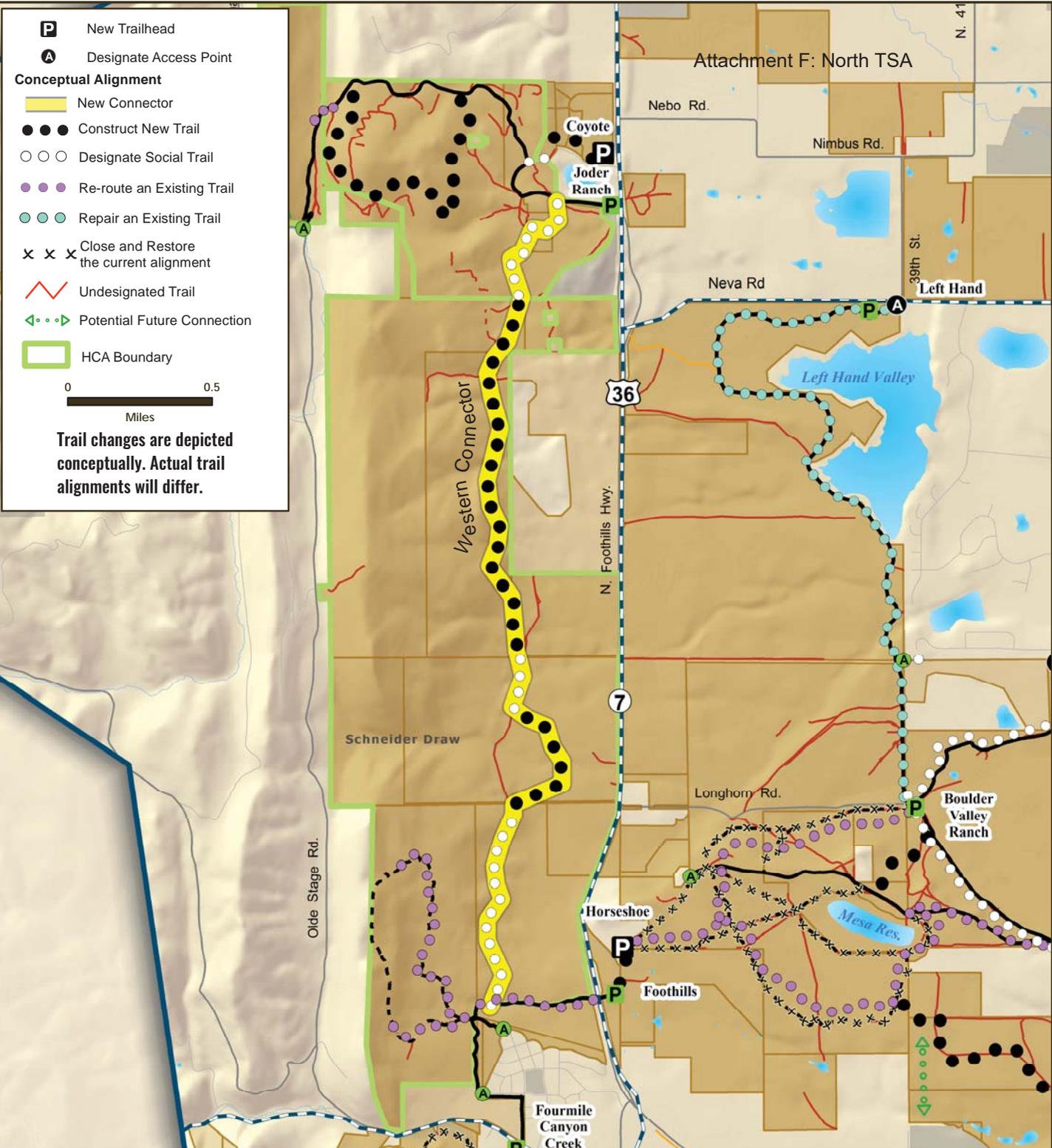
The proposed connections differ in how they affect continuity and connectivity of ecosystems and wildlife habitat. Although the railroad grade social trail already exists and partially intersects the area, a more sustainably designed trail and rise in usage would create new resource impacts in this habitat block. The North Sky Trail would cross 11 drainages while the east side connector would cross only six drainages (one new). The introduction of a multiple use trail crossing these riparian corridors could reduce the habitat continuity and connectivity for some species. The relative steepness of several of the drainages might require bridges or the need to contour into the riparian habitat on each side of the drainage to cross the drainage. The proposed eastern connection would require a single new drainage crossing replacing an existing crossing made by Lefthand Trail. Although the new diagonal link parallels a riparian corridor for its length, the single drainage crossing along the proposed eastern connection would require less trail length actually within riparian corridors and would require one bridge structure compared to several crossings and potential bridge structures required to cross drainages for the North Sky Trail.

Natural Resource Summary Comparison Table

Draft Plan (West Side Joder Connector)	Alternative Scenario (East Side Joder Connector)
Overall Impacts	
Crosses an area designated as an OSMP Habitat Conservation Area (HCA)	Crosses an area designated as an OSMP Natural Area (NA)
Crosses state-recognized "very high biodiversity area" and a county-designated Environmental Conservation Area (ECA)	Crosses state-recognized "very high biodiversity area;" and a county-designated Environmental Conservation Area (ECA) near other trails
Crosses "critical wildlife habitat" identified in the Boulder County Comprehensive Plan	Not located in an area identified in the Boulder County Comprehensive Plan as "critical wildlife habitat"
Eleven drainages would be crossed by the trail	Six mapped drainages would be crossed by the route (one new)
Crosses Schneider Draw, one of the two foothills riparian areas identified for Conservation in the Grassland Management Plan.	Borders a riparian area that was identified for Conservation in the Grassland Management Plan; with new trail section crossing a riparian area that was not identified for conservation or restoration in the Grassland Management Plan
Lies within a grassland complex designated as a Best Opportunity Area for Conservation in the Grassland Management Plan	Lies within a grassland complex designated as a Best Opportunity Area for Restoration in the Grassland Management Plan
Plant and Wildlife Impacts	
Intersects smaller stands of globally rare needle-and-thread grassland community	Is primarily situated in globally rare needle-and-thread grassland community

Proximate to intact blocks of xeric tallgrass, a globally-rare ecosystem, which provides habitat for three state-imperiled butterfly species	Lefthand trail is proximate to wetland habitat for a state-imperiled butterfly species
Proximate to two stands of rare New Mexico feathergrass community.	Not near any New Mexico feathergrass stands.
Proximate to several prairie dog colonies, which are highly suitable habitat for rattlesnakes and provide raptor foraging habitat	Proximate to several prairie dog colonies, which are highly suitable habitat for rattlesnakes and provide raptor foraging habitat
Proximate to shale barrens - an uncommon habitat on OSMP which supports Bell's twinpod, a plant found globally in only two Colorado counties	Proximate to small shale barrens - an uncommon habitat on OSMP which supports Bell's twinpod, a plant found globally in only two Colorado counties
Crosses into shrub communities in and adjacent to drainages	New trail section parallels riparian woodland communities and crosses drainage in area dominated by herbaceous plant species minimizing the length of trail in shrublands.
Wetland and Riparian Impacts	
Trail will need to cross riparian woodland communities	Trail parallels riparian woodland communities, with the new drainage crossing in an area dominated by herbaceous plant species that minimizes trail in or near riparian woodland communities.
Adjacent to seep wetlands which are uncommon on OSMP-managed land	Is not near seep wetlands
Several drainage crossings with steep slopes may require bridge structures with supporting foundations possibly impacting riparian vegetation	One new bridge structure with supporting foundations possibly impacting riparian vegetation. An existing bridge on Lefthand Trail will be removed.
Other Considerations	
Prairie dog colonies in area have a known high concentration of rattlesnakes	Prairie dog colonies in area have a known high concentration of rattlesnakes
Trail construction will require a wetland permit; permit application requires an evaluation of alternatives to minimize impacts to wetlands. Demonstration of minimization may be more challenging.	Trail construction will require a wetland permit; permit application requires an evaluation of alternatives to minimize impacts to wetlands. Demonstration of minimization may be less challenging.

Attachment F: North TSA



P New Trailhead
A Designate Access Point

Conceptual Alignment

- New Connector
- Construct New Trail
- Designate Social Trail
- Re-route an Existing Trail
- Repair an Existing Trail
- Close and Restore the current alignment
- Undesignated Trail
- Potential Future Connection
- HCA Boundary

0 0.5
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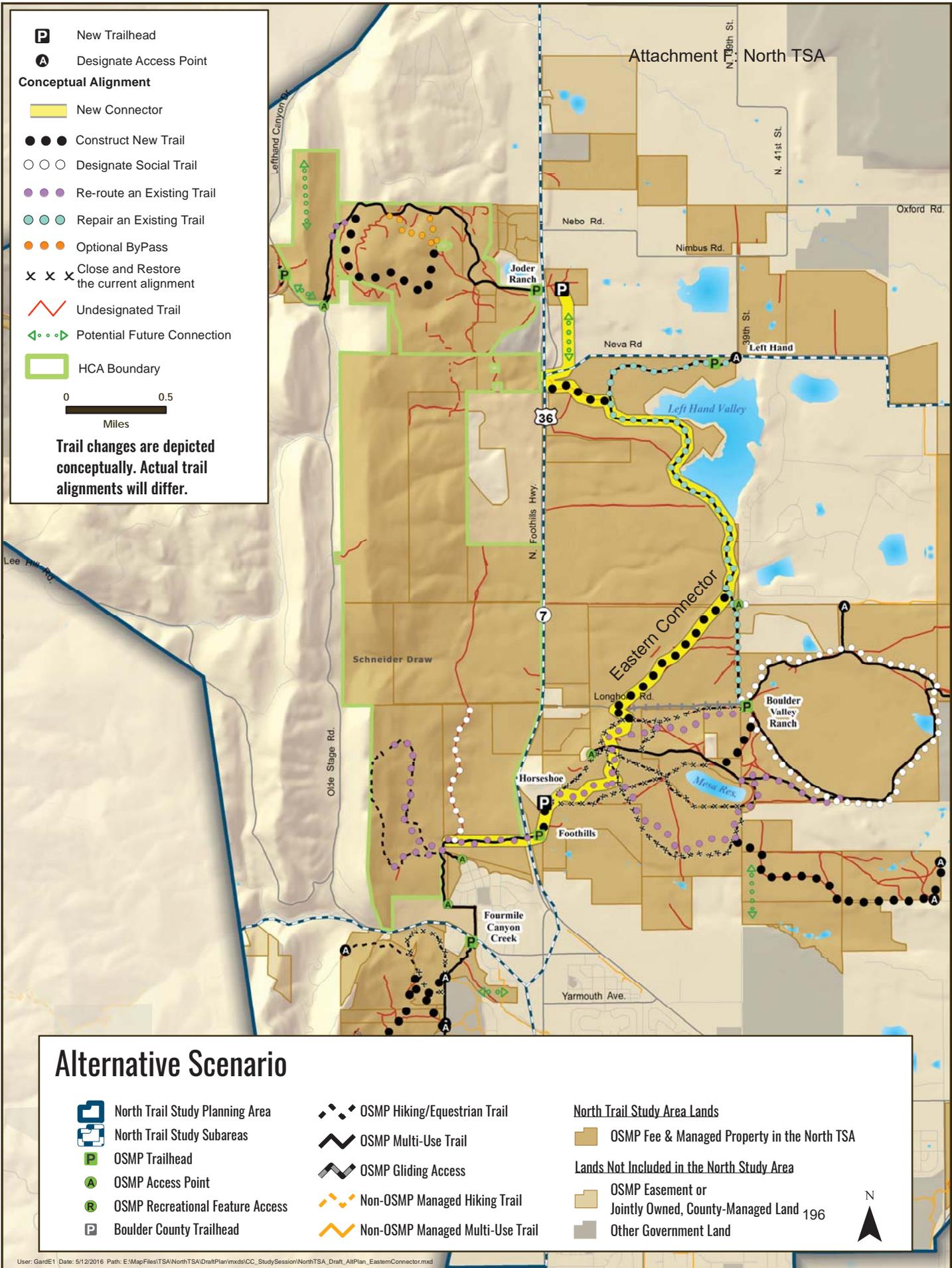
Trail changes are depicted conceptually. Actual trail alignments will differ.

Draft Plan

North Trail Study Planning Area	OSMP Hiking/Equestrian Trail	North Trail Study Area Lands
North Trail Study Subareas	OSMP Multi-Use Trail	OSMP Fee & Managed Property in the North TSA
OSMP Trailhead	OSMP Gliding Access	Lands Not Included in the North Study Area
OSMP Access Point	Non-OSMP Managed Hiking Trail	OSMP Easement or Jointly Owned, County-Managed Land 195
OSMP Recreational Feature Access	Non-OSMP Managed Multi-Use Trail	Other Government Land
Boulder County Trailhead		



User: GardE1 Date: 5/12/2016 Path: E:\MapFiles\TSA\North TSA Draft Plan\mxd\DC_StudySession\North TSA Draft Plan_WesternConnector.mxd



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