

# Appendix A





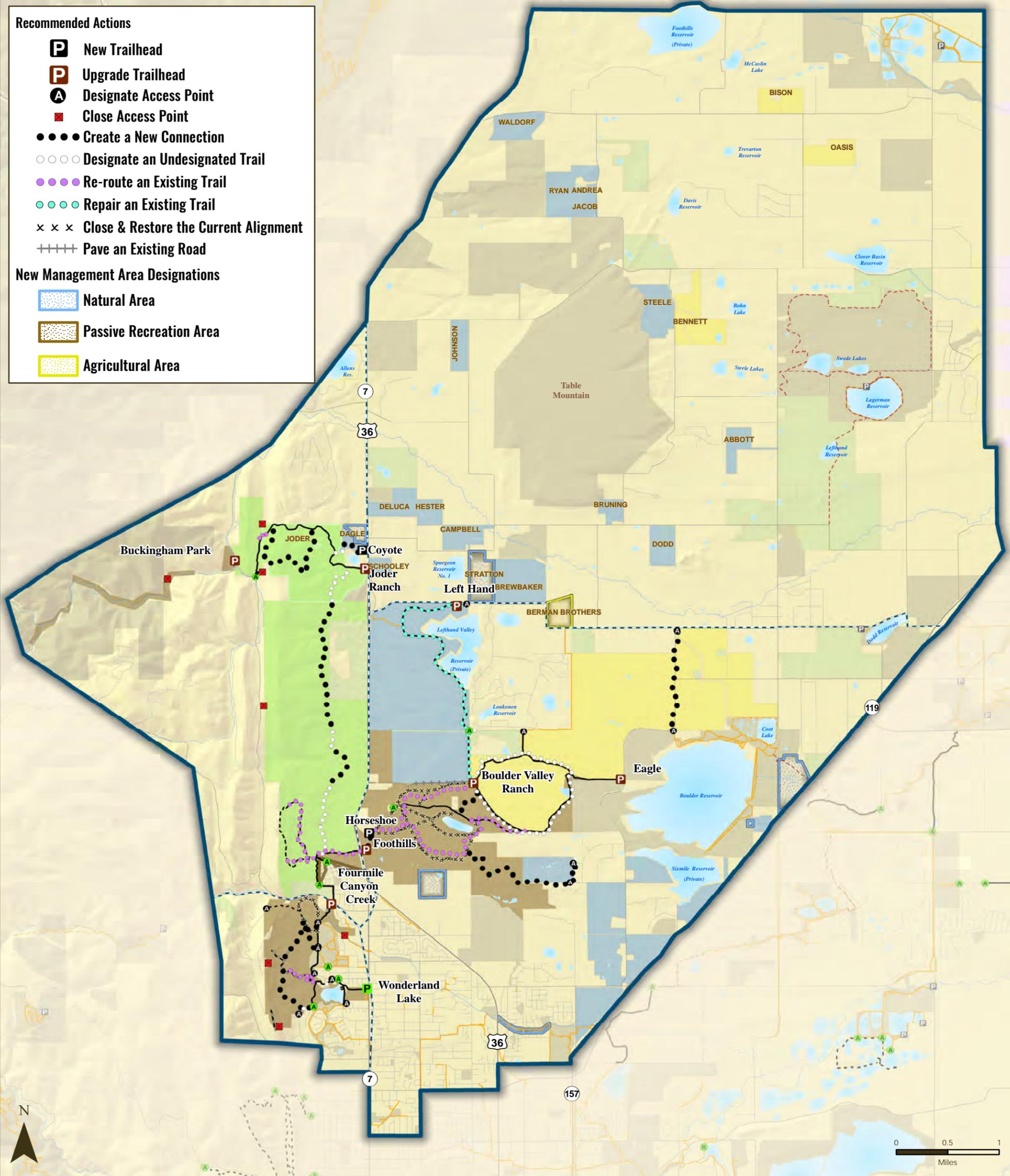
# North Trail Study Area Plan

## 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



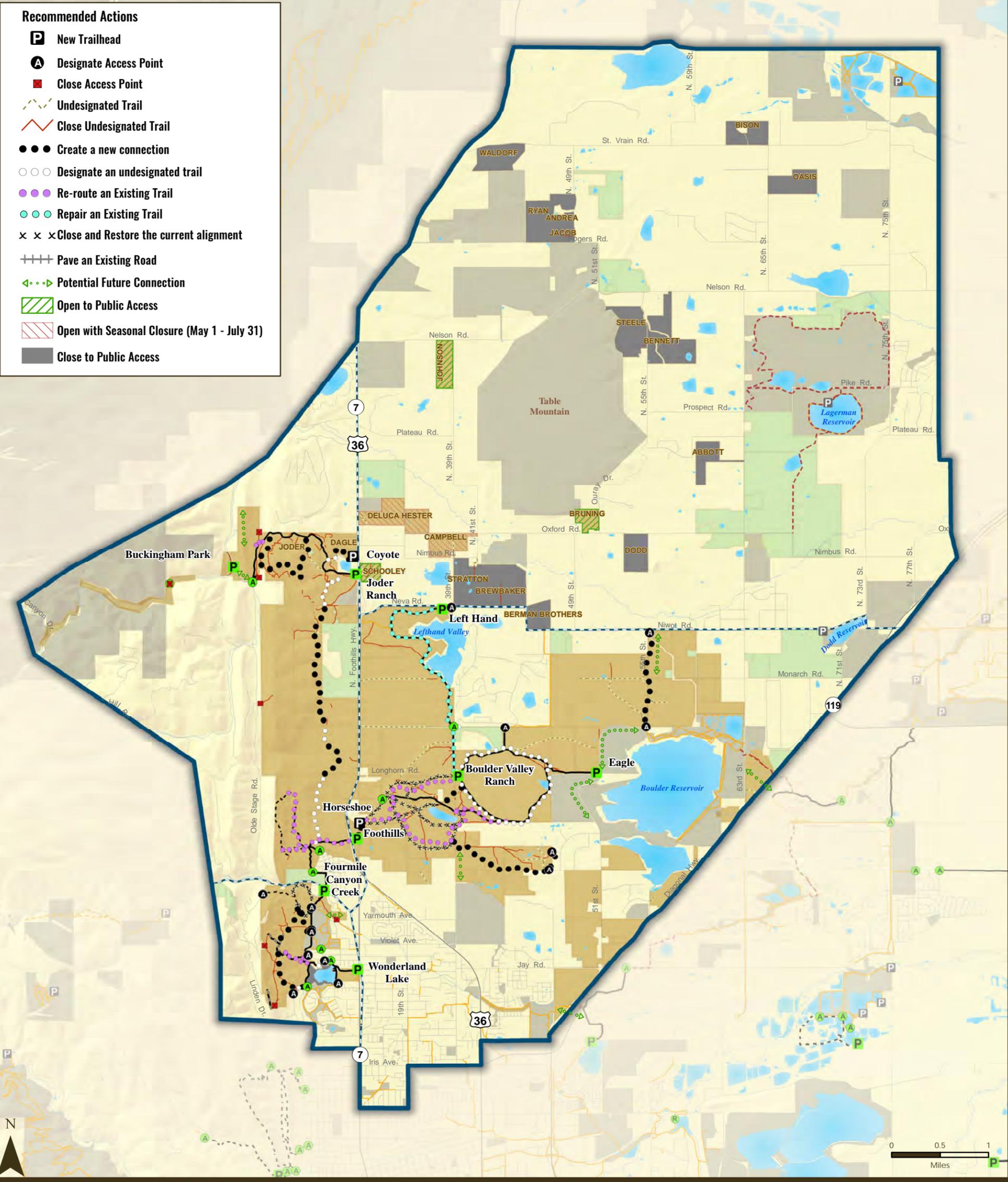
## Management Area Designations

- |  |                                  |  |                                  |  |   |
|--|----------------------------------|--|----------------------------------|--|---|
|  | 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. A-3

# North Trail Study Area Plan

- Recommended Actions**
- P New Trailhead
  - A 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

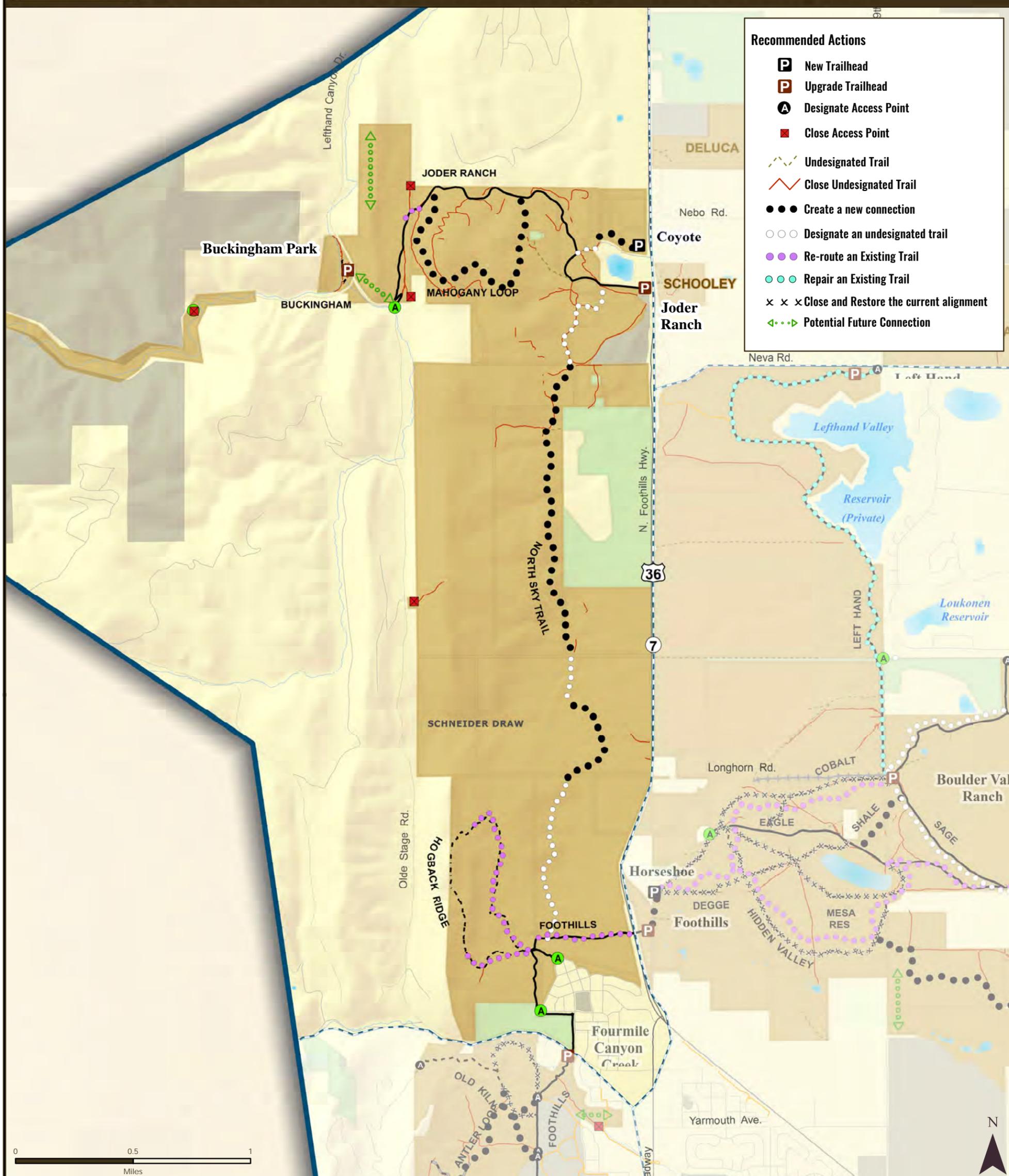


## North Trail Study Area Draft Plan Recommendations

- |  |   |  |
|--|---|--|
| <span style="border: 2px solid blue; padding: 2px;"> </span> North Trail Study Planning Area                     | <span style="border-bottom: 2px dashed black; width: 20px; display: inline-block;"></span> OSMP Hiking/Equestrian Trail     | <span style="background-color: #c08040; width: 20px; height: 10px; display: inline-block;"></span> OSMP Fee & Managed Property in the North TSA        |
| <span style="border: 2px dashed blue; padding: 2px;"> </span> North Trail Study Subareas                         | <span style="border-bottom: 2px solid black; width: 20px; display: inline-block;"></span> OSMP Multi-Use Trail              | <span style="background-color: #90c060; width: 20px; height: 10px; display: inline-block;"></span> OSMP Easement or Jointly Owned, County-Managed Land |
| <span style="background-color: #008000; color: white; padding: 2px;">P</span> OSMP Trailhead                     | <span style="border-bottom: 2px solid black; width: 20px; display: inline-block;"></span> OSMP Gliding Access               | <span style="background-color: #cccccc; width: 20px; height: 10px; display: inline-block;"></span> Other Government Land                               |
| <span style="border: 1px solid green; border-radius: 50%; padding: 2px;">A</span> OSMP Access Point              | <span style="border-bottom: 2px dashed orange; width: 20px; display: inline-block;"></span> Non-OSMP Managed Hiking Trail   |  |
| <span style="border: 1px solid red; border-radius: 50%; padding: 2px;">R</span> OSMP Recreational Feature Access | <span style="border-bottom: 2px solid orange; width: 20px; display: inline-block;"></span> Non-OSMP Managed Multi-Use Trail |  |
| <span style="border: 1px solid black; padding: 2px;">P</span> Boulder County Trailhead                           | <span style="border-bottom: 2px dashed red; width: 20px; display: inline-block;"></span> Non-OSMP Planned Trail             |  |

Trail changes are depicted conceptually. Actual trail alignments will differ. A-4

# North Trail Study Area Plan



### Recommended Actions

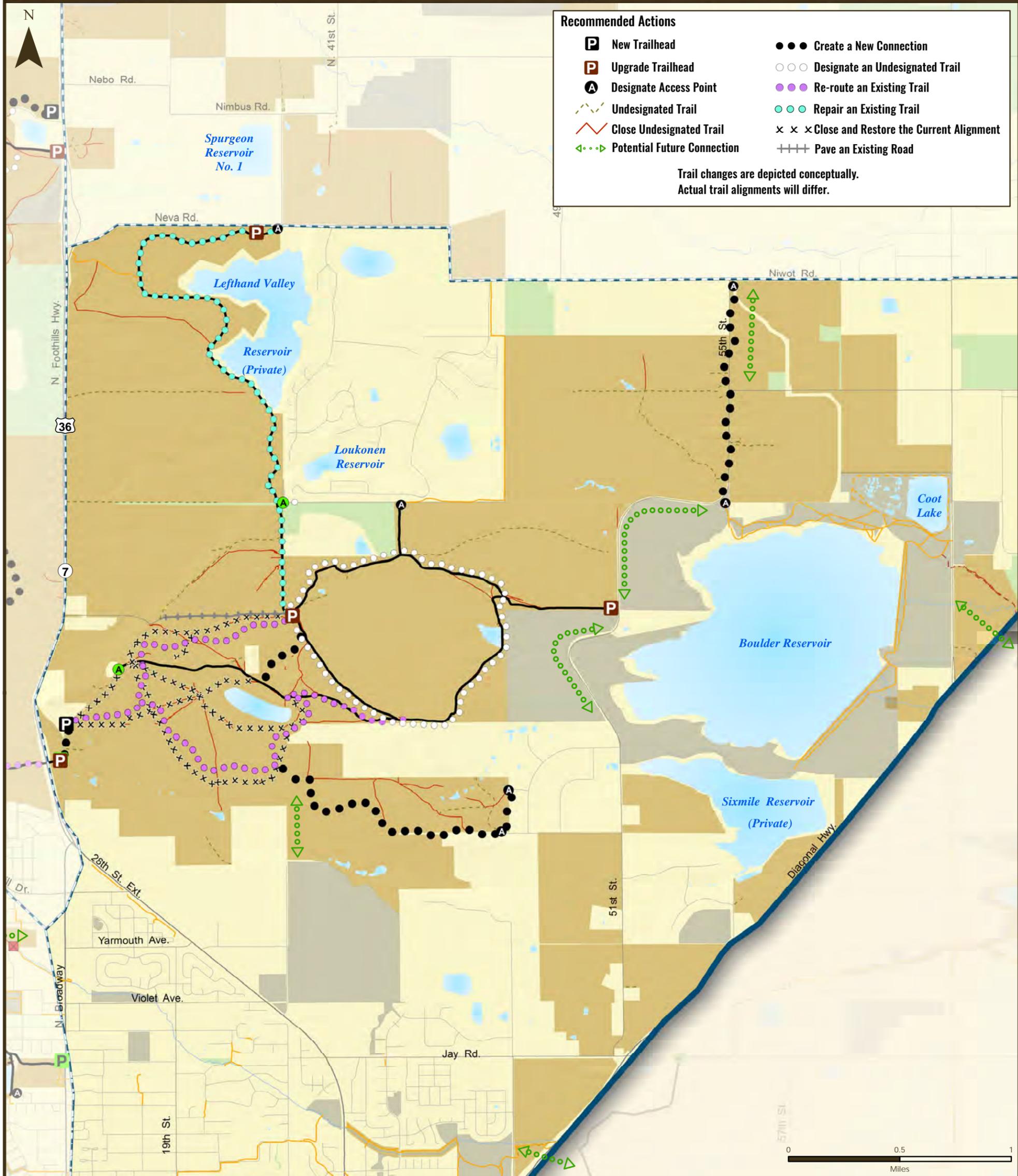
- P** New Trailhead
- P** Upgrade Trailhead
- A** Designate Access Point
- Close Access Point
- Undesignated Trail
- Close Undesignated Trail
- Create a new connection
- ○ ○** Designate an undesignated trail
- Re-route an Existing Trail
- ○ ○** Repair an Existing Trail
- × × ×** Close and Restore the 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. A-5

# North Trail Study Area Plan



**Recommended Actions**

|                                 |   |
|---------------------------------|---|
| <b>P</b> New Trailhead          | ●●● Create a New Connection                   |
| <b>P</b> Upgrade Trailhead      | ○ ○ ○ Designate an Undesignated Trail         |
| <b>A</b> Designate Access Point | ●●● Re-route an Existing Trail                |
| --- Undesignated Trail          | ●●● Repair an Existing Trail                  |
| --- Close Undesignated Trail    | × × × Close and Restore the Current Alignment |
| --- Potential Future Connection | ++++ Pave an Existing Road                    |

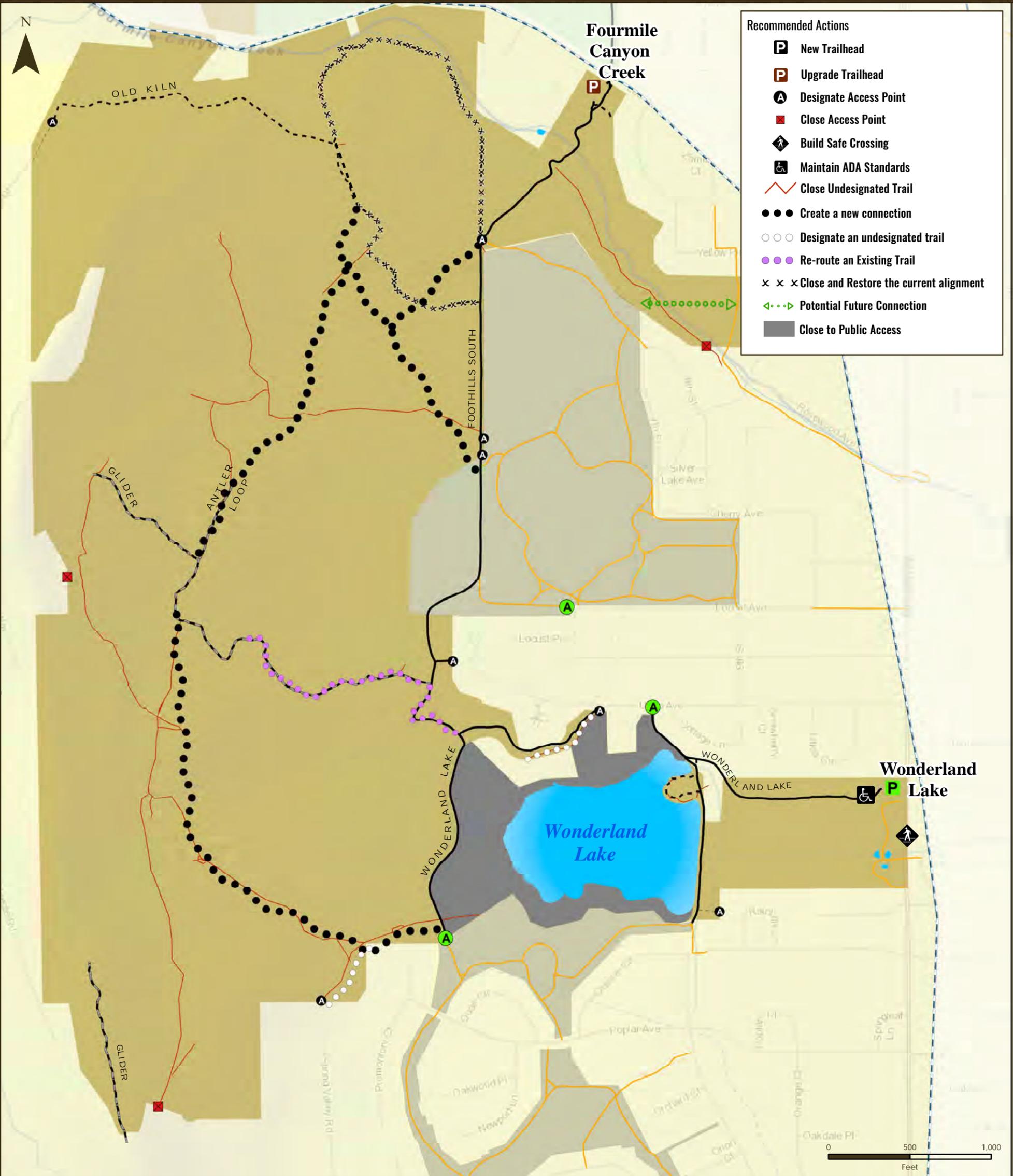
Trail changes are depicted conceptually.  
Actual trail alignments will differ.

## Boulder Valley Ranch Subarea Recommendations

|                                  |                                  |   |
|----------------------------------|----------------------------------|---|
| North Trail Study Planning Area  | OSMP Hiking/Equestrian Trail     | <b>North Trail Study Area Lands</b>                     |
| North Trail Study Subareas       | OSMP Multi-Use Trail             | OSMP Fee & Managed Property in the North TSA            |
| OSMP Trailhead                   | OSMP Gliding Access              | <b>Lands Not Included in the North Trail Study Area</b> |
| 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           |   |



# North Trail Study Area Plan



## Wonderland Lake Subarea Recommendations

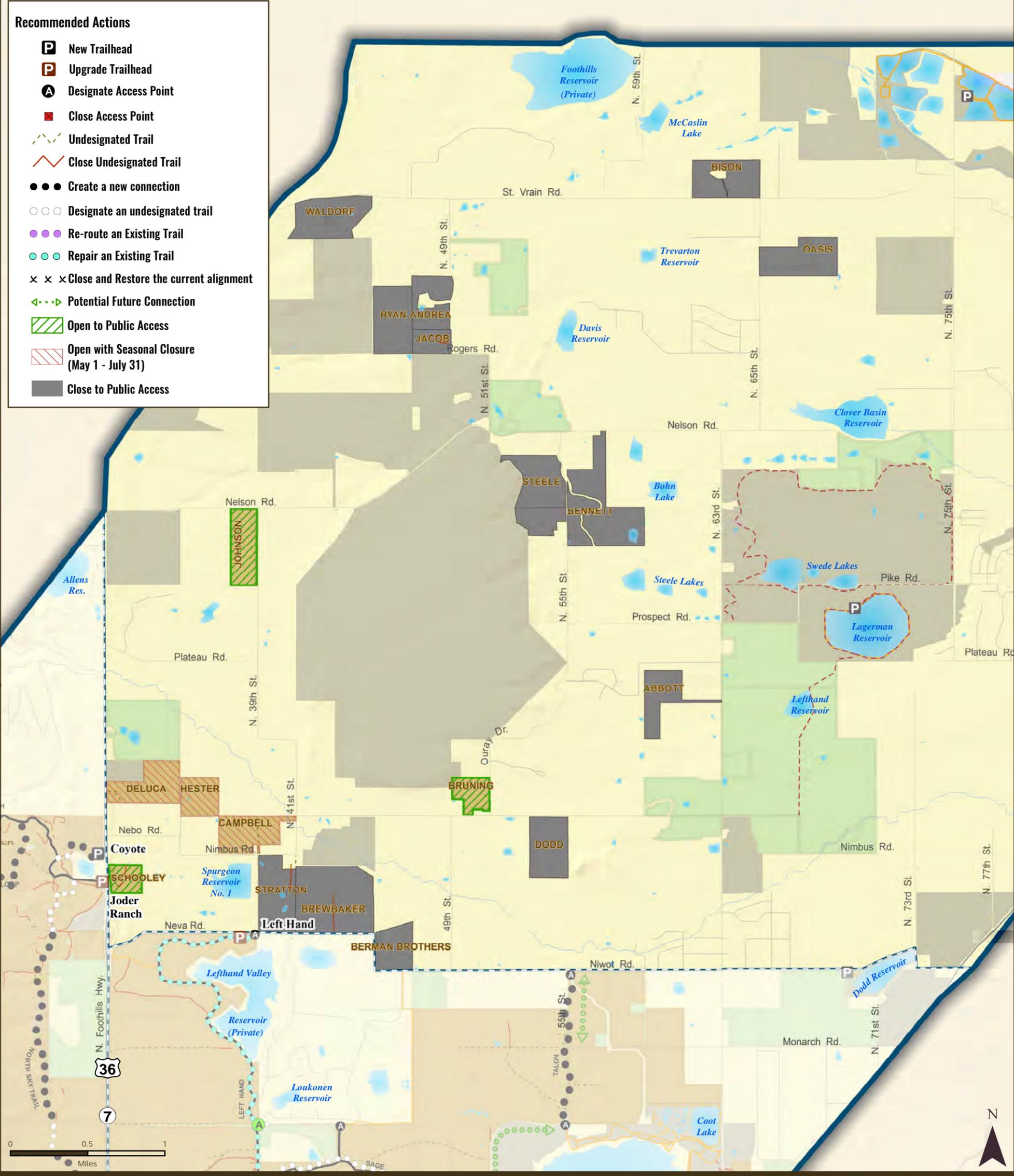
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|----------------------------------|----------------------------------|---|
| North Trail Study Planning Area  | OSMP Hiking/Equestrian Trail     | OSMP Fee & Managed Property in the North TSA        |
| North Trail Study Subareas       | OSMP Multi-Use 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
- Open to Public Access
- Open with Seasonal Closure (May 1 - July 31)
- Close to Public Access



## Northern Properties Subarea Recommendations

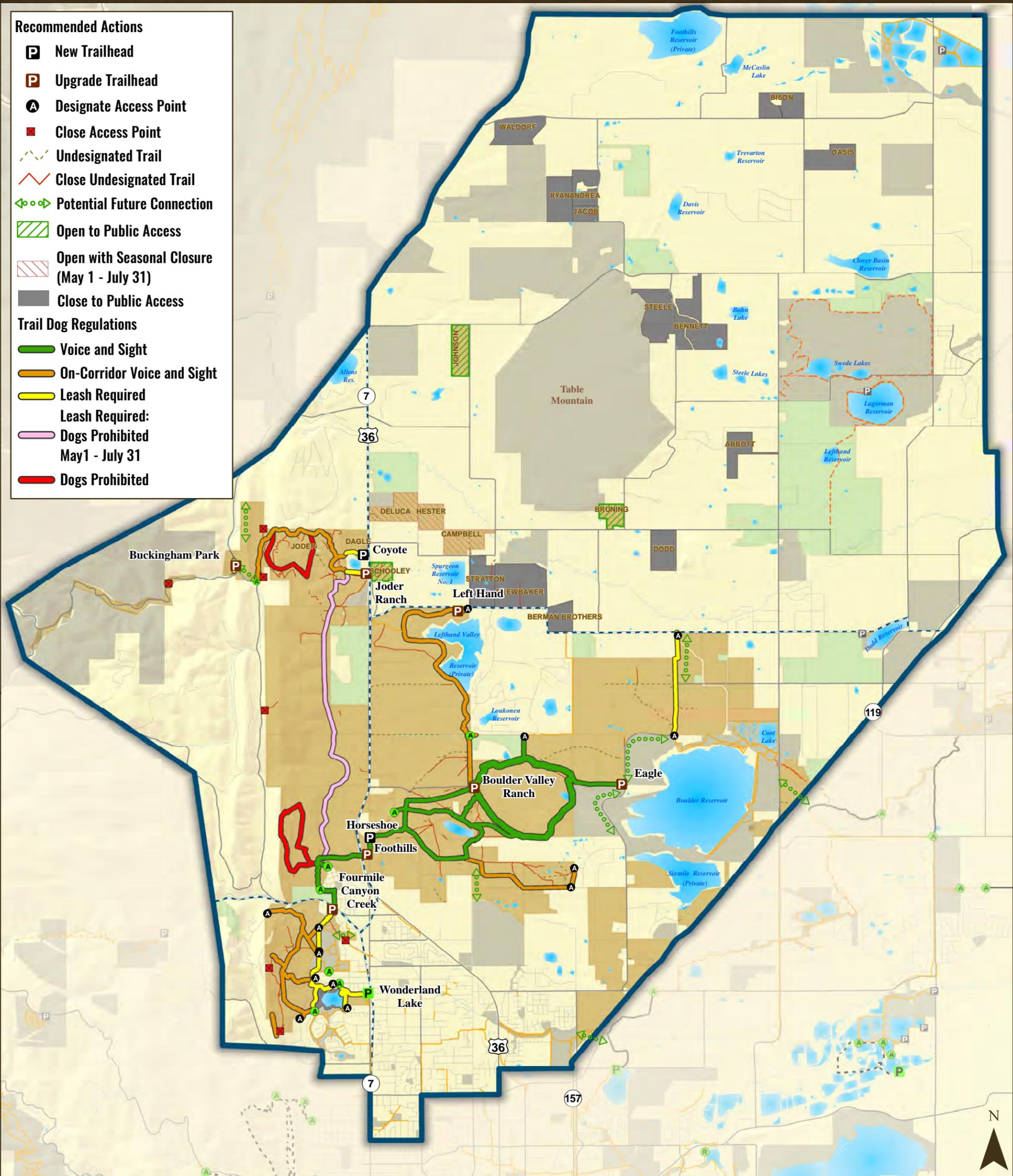
- |  |                                  |  |                                  |  |   |
|--|----------------------------------|--|----------------------------------|--|---|
|  | North Trail Study Planning Area  |  | OSMP Hiking/Equestrian Trail     |  | OSMP Fee & Managed Property in the North TSA        |
|  | 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 |  |   |
|  | Boulder County Trailhead         |  | Non-OSMP Planned Trail           |  |   |

Trail changes are depicted conceptually. Actual trail alignments will differ. A-8



# 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: Dogs Prohibited May 1 - July 31
  - Dogs Prohibited



## North Trail Study Area Dog Recommendations

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





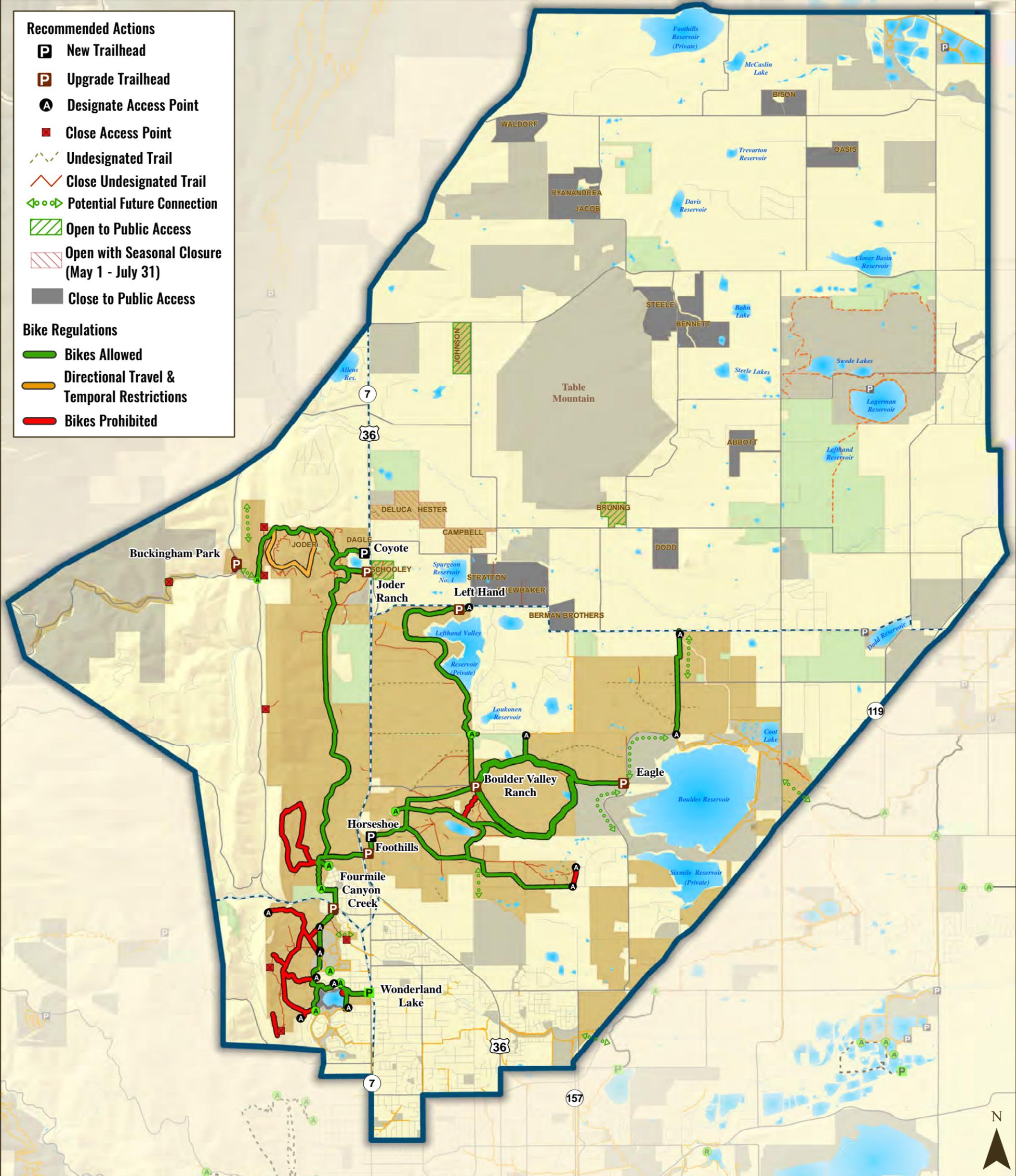
# North Trail Study Area Plan

## 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

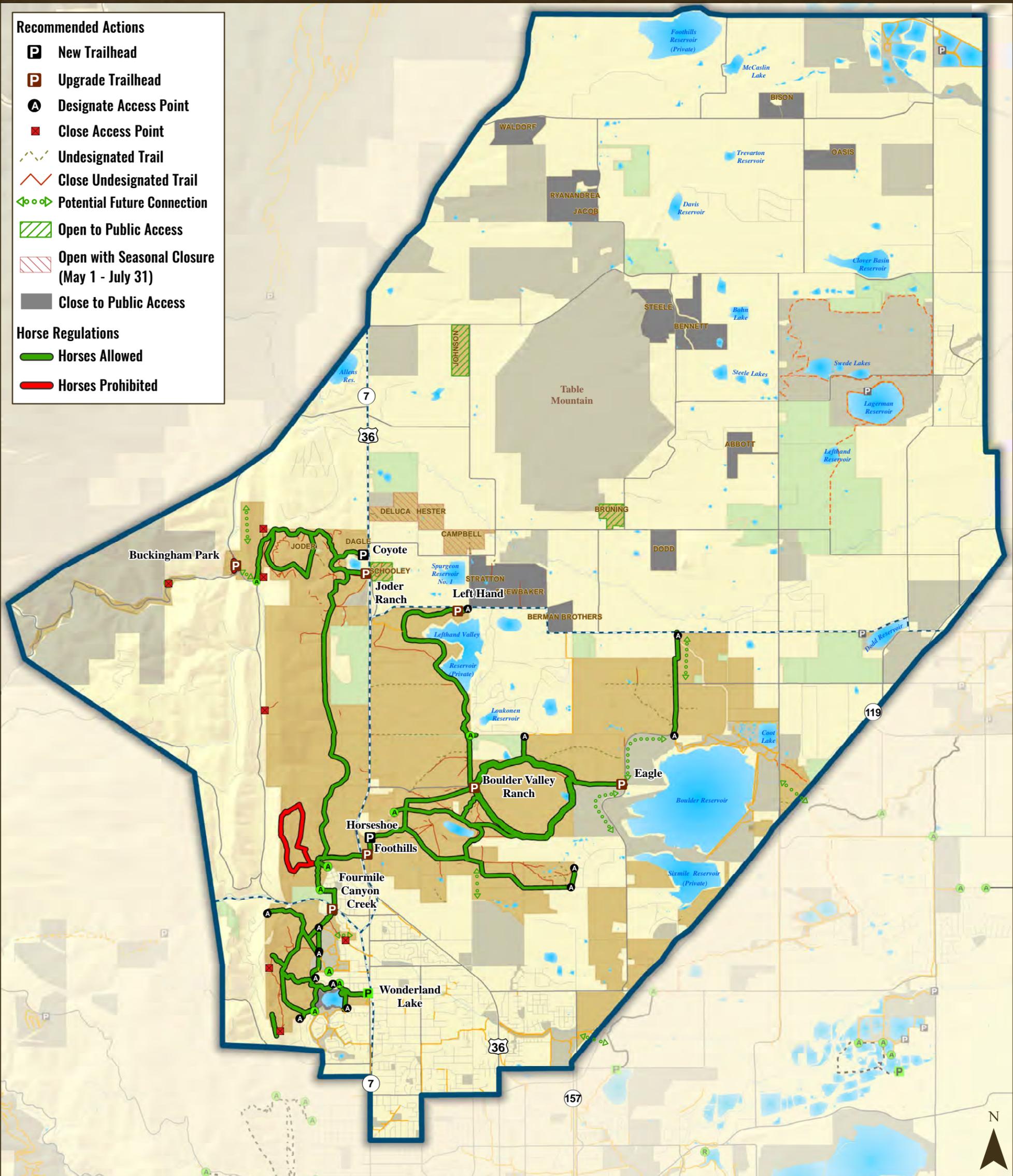
- |                                  |                                  |   |
|----------------------------------|----------------------------------|---|
| North Trail Study Planning Area  | Non-OSMP Managed Hiking Trail    | <b>North Trail Study Area Lands</b>                     |
| North Trail Study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





# 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



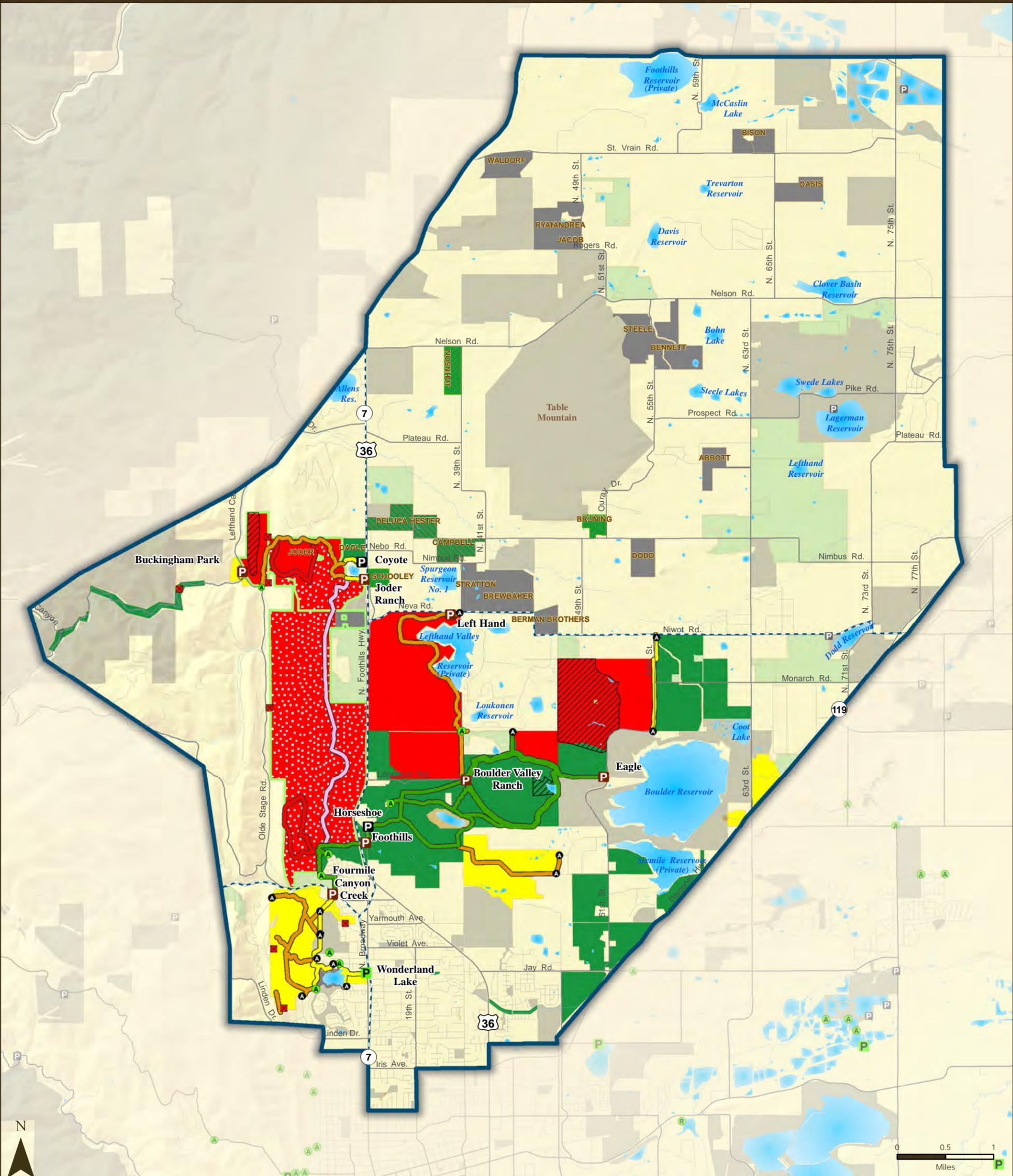
## North Trail Study Area Horse Recommendations

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





# North Trail Study Area Plan



## North Trail Study Area Regulatory Settings

- |   |  |  |
|---|--|--|
| <ul style="list-style-type: none"> <li> North Trail Study Planning Area</li> <li> North Trail Study Subareas</li> <li> HCA Boundary</li> <li> OSMP Access Point</li> <li><b>Visitor Access Regulations</b></li> <li> New Trailhead</li> <li> New Access Point</li> <li> Close Access Point</li> </ul> | <p><b>Trail Dog Regulations</b></p> <ul style="list-style-type: none"> <li> Voice and Sight</li> <li> On-Corridor Voice and Sight</li> <li> Leash Required</li> <li> Leash Required; Seasonal Closure May 1 - July 31</li> <li> Dogs Prohibited</li> <li> OSMP Easement or Jointly Owned, County-Managed Land</li> <li> Other Government Land</li> </ul> | <p><b>Dog Regulation Areas</b></p> <ul style="list-style-type: none"> <li> Voice and Sight Control</li> <li> Leash Required</li> <li> Dogs Prohibited</li> <li> Seasonal Raptor Closure</li> <li> Open with Seasonal Closure (May 1 - July 31)</li> <li> Closed to Off-Trail Public Access</li> <li> Closed to Public Access A-12</li> </ul> |
|---|--|--|

# 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<br>Dog Station<br>Dog Compost Station<br>Parking Bollard (wooden)<br>Bike Rack<br>Trash Can<br>Parking Spaces (5)<br>Horse Trailer Parking Spaces (2) | Reflector Sticks Near Large Rocks and Other Hazards<br>Fencing  |
| Lefthand                  | T1    | Kiosk<br>Fencing<br>Bike Rack<br>Trash Can<br>Parking Bollard (wooden)<br>Parking Spaces (36)   | Reflectors on Fence Parking<br>ADA Parking Space (1)<br>Vehicle Gate at Entry<br>Dog Station<br>Dog Compost Station |
| Sage/Boulder Valley Ranch | T2    | Kiosk   | Replace Outhouse  |

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

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

# Appendix D

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Appendix D: Recommended Actions and Interests Table

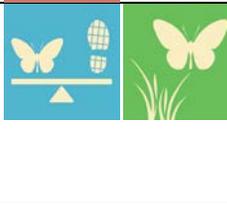
| North TSA Interests                                       |  |  |  |
|---|--|--|--|
| Improved Visitor Experience                               |  | Improved Connectivity                              |  |
| Conservation of Resources (Natural/Agricultural/Cultural) |  | Balance of Recreation and Resource 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"> <li>Retain the Joder and Cox property designation (T1) as a Habitat Conservation Area (HCA) and implement as part of the North Foothills HCA.</li> <li>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.</li> <li>Limit public access to on trail travel on IBM open space easement property.</li> <li>Designate Dakota Ridge Village (T3) property as a Passive Recreation Area.</li> <li>Designate Berman Brothers (T4) as an Agricultural Area.</li> </ul>   |           |
| 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"> <li>(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.</li> <li>(T11) North TSA to Boulder County Parks and Open Space's Lagerman/Imel/AHI Open Space Complex.</li> <li>(T12) A Boulder-to-Lyons trail connection including the efforts of the Rocky Mountain Greenway Project.</li> <li>(T13) IBM Connector Trail underpass and trail (<i>construction pending</i>).</li> <li>(T14) Fourmile Canyon Creek Trail underpass to Cottonwood Trail (<i>construction pending</i>).</li> </ul> |           |

| 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"> <li>• (T15) Eagle Trail to the planned Boulder Reservoir Trail.</li> </ul> <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"> <li>• (T16) Joder Trail to Buckingham Park via Olde Stage Road (<i>in progress</i>).</li> <li>• (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.</li> <li>• (T18) City of Boulder's Area III park site to the North TSA.</li> <li>• (T19) Boulder Reservoir to Niwot Road.</li> <li>• (T20) Fourmile Canyon Creek Greenway path to Foothills Community Park.</li> </ul> |    |
| 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.                            |   |     |
| <b>North Foothills Subarea</b>  |   |   |
| 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)  |   |     |
| <b>Boulder Valley Ranch Subarea</b>   |   |   |
| 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.  | <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"> <li>• (B5) City of Boulder’s Area III park site to the North TSA.</li> <li>• (B6) A Boulder-to-Lyons trail connection including the efforts of the Rocky Mountain Greenway Project.</li> <li>• (B7) IBM Connector Trail underpass and trail (<i>construction pending</i>).</li> <li>• (B8) Fourmile Canyon Creek Trail underpass to Cottonwood Trail (<i>construction pending</i>).</li> <li>• (B9) Eagle Trail to the planned Boulder Reservoir Trail.</li> </ul> |     |
| 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.  |   |     |

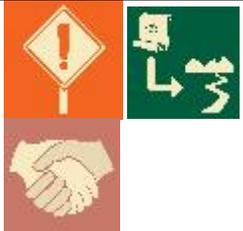
| Reference Number(s) and Action Title   | Action   | Interests   |
|--|--|---|
| B12 Bring Lefthand Trailhead up to standards.  | Include horse trailer parking at Lefthand Trailhead.   |    |
| B13 Improve Lefthand Trail.  |  |    |
| B14 Designate a connector trail from Lefthand Trail to the Lake Valley 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 <sup>th</sup> 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.   |  |  |
| <b>Wonderland Lake Subarea</b>  |  |   |
| 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:<br/>Regulation Change: Dogs allowed On-Corridor Voice and Sight access on Wonderland Hill loop. (Antler Loop)</p>                           |   |    |
| <b>Northern Properties Subarea</b>  |   |   |
| <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<br>0-1 = Low<br>2-3 = Medium<br>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<br>0-2 = Low<br>2-3 = Medium<br>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<br>0-3 = Low<br>2-3 = Medium<br>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<br>0-1 = Low<br>2-3 = Medium<br>4-6 = High |
|----------|------------|--|------------------|--------------------------|--------------------------|-------|------|------|------|----------------|---|
| 2        | T2         | Management Area Designation: Designate Dagle II as a Natural Area.   | Core Service     |                          |                          |       |      |      |      |                | Low   |
| 3        | T3         | Management Area Designation: Designate Dakota Ridge Village property as a Passive Recreation Area.   | Core Service     |                          |                          |       |      |      |      |                | Low   |
| 4        | T4         | Management Area Designation: Designate Berman Brothers property as an Agricultural Area.   | Core Service     |                          |                          |       |      |      |      |                | Low   |
| 5        | T5         | Management Area Designation: Designate Stratton as a Natural Area.   | Core Service     |                          |                          |       |      |      |      |                | Low   |
| 6        | T6         | Management Area Designation: Designate Lappin as a Natural Area.   | Core Service     |                          |                          |       |      |      |      |                | Low   |
| 7        | T7         | Management Area Designation: Designate IBM open space easement as a Natural Area. Limit public access to on trail travel on IBM open space easement property.  | Core Service     |                          |                          |       |      |      |      |                | Low   |
| 8        | T8         | Management Area Designation: Designate Hart-Jones Exchange as a Natural Area.  | Core Service     |                          |                          |       |      |      |      |                | Low   |
| 9        | T9         | Management Area Designation: Designate Palo Park as a Natural Area.  | Core Service     |                          |                          |       |      |      |      |                | Low   |
| 16       | T16        | As opportunities arise, collaborate with partner agencies to create local trail connections in a way that minimizes natural resource impacts. Joder Trail to Buckingham Park via Olde Stage Road (in progress)   | \$8,500 Underway |                          |                          |       |      |      |      |                | Medium  |
| 30       | W5         | Revegetate the flood damaged northern loop section of Old Kiln Trail.  | \$3,640 Underway |                          |                          |       |      |      |      |                | Medium  |
| 56       | B21        | Provide a sustainable connection with Sage Trailhead by replacing undesignated trails through shale barrens and rare plant habitat with one new designated trail with educational signs for pedestrians and equestrians north of Mesa Reservoir.             | \$140,000 Design | Build                    |                          |       |      |      |      |                | High  |
| 80       | NF20       | After City Council approval of the North TSA Plan, staff will return to the OSBT with monitoring recommendations for the North Foothills HCA, the North Sky Trail and the Joder property.  | Core Service     |                          |                          |       |      |      |      |                | Low   |
| 84       | NP4        | Prohibit public access on Waldorf, Ryan, Andrea, Jacob, Bison, Oasis, Steele, Bennett, Stratton, Brewbaker, Berman Brothers, Dodd and Abbott properties.   | \$3,000          |                          |                          |       |      |      |      |                | Medium  |
| 85       | NP5        | Allow public access on Deluca, Hester and Campbell properties with seasonal closure (May 1-July 31) for ground nesting bobolinks.  | \$1,000          |                          |                          |       |      |      |      |                | Medium  |
| 86       | NP6        | Allow public access on Johnson, Bruning, and Schooley properties.  | \$1,000          |                          |                          |       |      |      |      |                | Low   |
| 21       | T22        | Bring all trails up to standards. (South Foothills Trail)  |                  | \$100,000                |                          |       |      |      |      |                | Medium  |
| 28       | W3         | Construct a shade structure near Wonderland Lake Trailhead.  |                  | \$25,000                 |                          |       |      |      |      |                | Low   |
| 35       | W11        | Improve Americans with Disabilities (ADA) access on Wonderland Lake Trail.   |                  | \$9,000                  |                          |       |      |      |      |                | Medium  |
| 45       | B10        | Provide public access to portions of Lappin, Lousberg, Papini and B.L.I.P. properties while protecting sensitive natural resources. Protect aquatic and wetland resources in and around ponds on these properties by prohibiting public access to the ponds. |                  | \$9,000                  |                          |       |      |      |      |                | Medium  |
| 52       | B17        | Bring Foothills Trailhead up to standards.   |                  | \$12,500                 |                          |       |      |      |      |                | Medium  |
| 61       | B26        | Improve Americans with Disabilities Act (ADA) access on Eagle and Sage trails.   |                  | \$130,000                |                          |       |      |      |      |                | Medium  |
| 67       | NF7        | Close Cottonwood Recreation Area.  |                  | \$800                    |                          |       |      |      |      |                | Low   |
| 69       | NF9        | Construct one loop trail on the northwest section of the Joder property. (Mahogany Loop)   |                  | \$131,000 Design         | Build                    | Build |      |      |      |                | Medium  |
| 70       | NF10       | Construct a new trailhead for passenger vehicle parking on the Dagle/Wright properties. (Coyote Trailhead)   |                  | \$137,000 Initial Design | Final Design and Permits | Build |      |      |      |                | Medium  |
| 72       | NF12       | Retain Interim Joder Trailhead. (Joder Ranch Trailhead)  |                  | \$7,000 Initial Design   | Final Design             | Build |      |      |      |                | Low   |

| Action # | Plan Ref # | Action  | 2016 | 2017                        | 2018                        | 2019                               | 2020                     | 2021                               | 2022  | 2023 and Later | Benefit Rank<br>0-1 = Low<br>2-3 = Medium<br>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<br>Initial Design | Final Design and permitting | Build                              | Build                    | Build                              |       |                | Medium  |
| 76       | NF16       | Re-route Hogback Trail.   |      | Initial Design              |                             |                                    |                          | \$146,000<br>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<br>Final Design, Permits | Build |                | High  |
| 85       | NP5        | Allow public access on Deluca, Hester and Campbell properties with seasonal closure (May 1-July 31) for ground nesting bobolinks.   |      | \$1,000                     |                             |                                    |                          |                                    |       |                | Medium  |
| 36       | W12        | Prohibit boats and belly boats on Wonderland Lake.  |      |                             | \$500                       |                                    |                          |                                    |       |                | Low   |
| 37       | W13        | Prohibit ice skating on Wonderland Lake.  |      |                             | \$500                       |                                    |                          |                                    |       |                | Low   |
| 38       | W14        | Allow sledding on Wonderland Lake dam.  |      |                             | \$500                       |                                    |                          |                                    |       |                | Low   |
| 39       | W15        | Do not provide access to Wonderland Lake's south, west and north shores.  |      |                             | \$3,500                     |                                    |                          |                                    |       |                | Low   |
| 40       | W16        | Provide access to the cattail marsh on north side of peninsula.   |      |                             | \$8,000                     |                                    |                          |                                    |       |                | Medium  |
| 41       | W17        | Establish hardened pullout areas on the peninsula for educational programming and a hardened wading access. Provide increased beach access on the western edge of the peninsula.  |      |                             | \$14,000                    |                                    |                          |                                    |       |                | Medium  |
| 42       | W18        | Allow Wonderland Lake wading access from designated areas on the peninsula.   |      |                             | \$700                       |                                    |                          |                                    |       |                | Low   |
| 43       | W19        | Create Wonderland Lake fishing pier.  |      |                             | \$45,000                    |                                    |                          |                                    |       |                | Low   |
| 60       | B25        | Bring Sage (BVR) Trailhead up to standards. Improve restroom facilities.  |      |                             | \$71,500<br>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<br>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<br>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<br>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<br>Initial Design        | Final Design and Permits | Build                              | Build |                | High  |
| 57       | B22        | Provide nature-viewing access at Mesa Reservoir.  |      |                             |                             | \$2,500<br>Initial Design          | Final Design and Permits | Build                              | Build |                | Low   |
| 58       | B23        | Replace southern sections of Mesa Reservoir Trail and the Hidden Valley Trail with a new single trail connection.   |      |                             |                             | \$176,000<br>Initial Design        | Final Design and Permits | Build                              | Build |                | High  |
| 62       | B27        | Designate and slightly re-route in some locations one parallel single track tread adjacent to the Eagle and Sage loop at BVR.   |      |                             |                             | \$35,000<br>Initial Design         | Final Design and Permits | Build                              | Build |                | Medium  |
| 71       | NF11       | Construct a connector trail from the new trailhead (Coyote Trailhead) on the Dagle property to the Joder Ranch Trail.   |      |                             |                             | Complete with new Coyote Trailhead |                          |                                    |       |                | Low   |

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

# Appendix F

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

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